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The Effect of Using Crossword Puzzle on the Eighth Grade Students' Vocabulary Achievement

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Abstract: This research was intended to investigate the effect of using crossword puzzle on the eighth grade students' vocabulary achievement. The design of this research was quasi-experimental research with post-test only design. The research area was chosen by using purposive method that was SMP Plus Darus Sholah. The research respondents were determined through cluster random sampling based on the results of the homogeneity test. The numbers of the respondent were 59 students, consisting of 30 students of VIIIC as the experimental group and 29 students of VIIIG as the control group. The experimental group was taught by using crossword puzzle game. The research data were analyzed by using independent sample T-Test in SPSS program. The result of the analysis showed that the sig. Value of t-test was 0.036 (less than 0,05). It indicated that there was a significant effect of using crossword puzzle on the eighth grade students' vocabulary achievement.

Keywords: Vocabulary Achievement, Crossword Puzzle

I. Introduction

One of the requirements of having the ability to communicate in English is by having adequate vocabulary. Vocabulary, according to Prasarntong and Dennis (2015: 1), is a central of a language and is important to the learners. Without vocabulary, the process of language learning cannot be achieved as the students are unable to express their ideas in both written and oral form effectively. Thus, vocabulary is considered valuable to learn as it gives contribution to the students to perform or practice their language skills well. It helps them easier in listening to

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what speakers say, comprehending the text, constructing the paragraphs and communicating to each other. In addition, Njoroge (2013: 1) points out that the students get most improvement if they learn more words. They can say little with grammar but they almost can say nothing without words.

From the statements above, how well their skills can be developed truly depends on how many vocabularies they have. In short, the wider vocabularies they master, the higher chance they will get to produce a language. Therefore, it is very important for them to quickly enlarge their vocabulary which is considered as an important key in language learning.

The researcher believes that teaching vocabulary should not be meaning-free, but be facilitated by an interesting technique to provide the students opportunities to enrich their vocabulary effectively. Allen (1983: 52) states that English teachers are responsible for creating condition to help the students expand their vocabulary and a game to encourage them in acquiring English words. Game can help the learners to learn the target language more easily. It also helps the English teacher to create an activity in which the target words are important and meaningful for them. Besides, game is advantageous in learning vocabulary to involve the students in cooperative learning, so the students have an opportunity to work together In accordance with Allen's idea, there are some games available for teaching vocabulary and one of them is crossword puzzle (Gilbert, 2011: 178).

Teaching and learning process should be able to help the students master the vocabulary stated in the curriculum. The English teacher of SMP Plus Darus Sholah teaches vocabulary by using conventional technique as she only assigns the students to find some unfamiliar words from the text and to look for the meanings in the

dictionary, but sometimes she let the students ask her for the meanings they are still confused. She clarrified that she never changes the learning habits. Hence, the researcher attempted to study the use of crossword puzzle to find out wether or not it affected the students' vocabulary achievement.

2. Literature Review
2.1 *Crossword Puzzle in English Vocabulary Teaching: the theoretical framework*
Vocabulary is considered as an important language component as it provides much for how well the students speak, listen, read and write (Richards and Renandya: 255). The definitions of vocabulary can be defined in various ways. According to Takac (2008:5), vocabulary is a meaningful unit of a language. In addition, vocabulary is a list of words for that an individual might use (Hatch and Brown, 1995: 1). In brief, vocabulary can be defined as a stock of words which carries meaning and is used in communication.

The importance of learning vocabulary is to encourage the researcher to change the passive learning into the active learning. The passive learning deals with the condition in which the students only listen to what their teacher explains whereas the active learning refers to the students being involved in teaching and learning process by their own. Schmitt (2000: 163) adds that vocabulary needs to be assessed if it is considered important. Along with Schmitt, Linse and Nunan (2005: 122) further point out that teacher should teach the learners some important words and help them figure out the meanings by themselves. Therefore, it is teacher's responsibility to seek an interesting technique to motivate students in learning vocabulary. One of techniques the researcher implemented was by using a language game.

Among many games, crossword puzzle seems to be more attractive than others. It is an attractive vocabulary game which requires the players to fill the blank squares

with the accurate words (Orawiwatnakul, 2013: 6). The words are arranged horizontally and vertically, so each word crosses one another through the same letter (Cheryl: 2014). In order to finish a crossword puzzle, the players should fill accurately the blank squares with the words based on the clues which can be sentences or pictures. The writer decided to implement crossword puzzle using sentences as clues in which it makes the students draw the conclusion by themselves of what is being asked in the clues.

2.2. *Teaching Vocabulary by Using Crossword Puzzle: the conceptual review*
Crossword puzzle is a word game in which provides the clues for the students to identify the correct vocabulary fitted into the blank squares. As a game should be enjoyable and interesting, this situation would invite the students to concentrate in vocabulary learning.

Crossword puzzle has some strenghts and weaknesses. Njoroge et al. (2013) mentions 3 strengths of using crossword puzzle in classroom which are it reduces boredom in learning, it makes the students enjoy learning the target language and it offers a challenge that motivates the students to fulfil the puzzle. In addition, Orawiwatnakul (2013) argued that crossword puzzle can help the students extend their vocabulary by its definition and spelling. Thus, the students can be more interested in their learning which will make the students give their attention to the lesson. It is such a good chance for both the English teacher and the students to practice this technique.

In contrast to its positive effects, Njoroge et al. (2017) also cites that crossword puzzle is the most difficult and time consuming to prepare. In addition, most students consider an easy crossword puzzle as a waste of time and a difficult one will make them turn the exercise off (Mills et al., 2009). Thus, the English teacher should anticipate these conditions by having herself prepare crossword puzzle by

creating her own on the online website considering the students' capability and the suitable materials stated in KTSP.

This research applied crossword puzzle game by adopting the steps mentioned by Karim and Hasbullah (1986). The procedures of teaching vocabulary by using crossword puzzle game was 1) giving explanation about nouns, adjectives, verbs and adverbs; 2) distributing the text to the students; 3) assigning them to read the text; 3) asking them to classify the underlined words into the table of vocabulary; 4) showing the example of crossword puzzle; 5) explaining how the students should complete the crossword puzzle; 6) asking the students to work in groups consisting of 4 students and 6) giving the students crossword puzzle exercises related to nouns, verbs, adjectives, and adverbs.

The words used in crossword puzzle were taken from the reading text as it was integrated with reading skill. The researcher also showed the example of how to fill it to make the instruction clear. Moreover, it involved groups of students to do the exercise to promote deeper understanding of the material as it encouraged the problem solving (Mills et al. : 2009). Besides, the time allocation of each meeting was only 70 minutes so that they would make it on time to finish the exercise given within group

2.3. Review of Previous Research Findings

Some previous studies have been carried out and given   attention to the use of crossword puzzle in students' learning. One of them is Davis et al. (2013) who investigated how crossword puzzle as an exam review influenced the students'scores through comparative analysis. The implementation of crossword puzzle was applied in two classes of an Introduction to Sociology which consisted of eighty seven college students in total. Both classes experienced the crossword

puzzle exam review and non-crossword puzzle review in four sections. A test was conducted at the end of each section. After the test being conducted, the results revealed that the students' exam scores in class A were higher when they were given crossword puzzle as an exam review (Exam 1 = 73.30; Exam 3 = 71.463) than when they were given keyterms review (Exam 2 = 71.463; Exam 4 = 68.575). Meanwhile, in class B, their scores were lower when they were given crossword puzzle as a review aid (Exam 2 = 73.605; Exam 4 = 70.744) rather than given non-crossword puzzle review (Exam 1 = 77.512; Exam 3 = 75.860).

Those results indicated that the students in class A got most improvement in their exam scores when given crossword puzzle and class B showed a decrease in their scores when given the same review tool. Since the result of this study indicated that class A benefited while the other one did not when they were given crossword puzzle as an exam review, the future research needs to be conducted to explore how crossword puzzle may positively impact students' score as study aids, not for reviewing the materials.

Yunita (2012) conducted a classroom action research related to the use of crossword puzzle in increasing the fourth grade students' English vocabulary mastery. As the result, teaching vocabulary using crossword puzzle made the teaching-learning activities effective. The average of the first test result is 7.47 while the second one is 8.33. Therefore, she claimed crossword puzzle as appropriate media to teach English, especially for young learners because the crossword puzzle game provided them with joyful activity that made them easily learnt when they also played the game.

Njoroge et al. (2013) conducted quasi experimental with pre-test and posst-test design on the effect of using crossword puzzle on the second language students'

vocabulary learning. The participants of their study were divided into two groups of experimental and control. In the experimental group, they used crossword puzzle game, whereas in the control group, they were taught through traditional lexical pedagogy. At the end of each period, post-test was administered to measure their scores. The scores were analyzed quantitatively by using SPP and indicated that the mean score for the xperimental group is higher at 20.89 than the control's (19.60). The finding has shown that the class which used crossword puzzle did better in the post test than the one which was exposed to the traditional lexical pedagogy. This created an excitement for the learners and help them practice vocabulary well.

Another study found crossword puzzle helpful to promote medical students' learning in an undergraduate course through descriptive design (Mills et al. : 2009). The data were collected from 2 different classes on different occasion (2003 and 2004) through surveys. It was indicated that most of the students (37 of 39 in 2003 and 24 of 41 in 2004) mentioned that crossword puzzle was useful and contributed to their learning.

Tambun (2014) conducted a research in order to find out the influence of using crossword puzzle toward students' vocabulary mastery at grade seven of SMP PGRI 6 Bandar Lampung by using pretest-posttest experimental design. Crossword puzzle was administered to experimental group and traditional teaching was applied to the control one. After having analyzed the data, the results indicated that the use of crossword puzzle had a positive influence towards the students' vocabulary mastery as the p-value (2.64) was smaller than t-value (7.620).

Referring to the discussion above, there were several differences between the previous studies and the present one. Whereas the above studies implemented

descriptive study, classroom action research and experimental research with pre-test and post-test design, in this research, the researcher used experimental with post-test only design. The research participants of two reseaches were university students, seven grade students and young learners instead of the eighth grade students as the research participants of the present study. In addition, Tambun used the steps in teaching vocabulary by using crossword puzzle offered by soeparno while the researcher adopted the procedures written by Karim and Hasbullah.

3. Research Method

3.1 *Research Context*

The research was conducted at SMP Plus Darus Sholah Jember. In addition, the research area was purposively selected due to some reasons. First, the researcher had permission given by the school principal to conduct her research. Second, there was no research that has ever been conducted regarding to the use of crossword puzzle on students' vocabulary achievement. The last, this school had never applied crossword puzzle in teaching vocabulary.

3.2 *Research Design*

The researcher used experimental research as she wanted to figure out the possible effect that might occur between two variables, in which crossword puzzle was as an independent variable and students' vocabulary achievement was as a dependent one. Since this research could not create groups for this study, the design of this research then categorized as a quasi-experimental research. It involves the groups of subjects, rather than assigning subjects randomly (Creswell, 2012: 309). Precisely, quasi experimental with posttest-only design was adopted.

There were two groups involved in the research, namely experimental group and control group which were taken from grade VIII. The researcher did the research by teaching two groups using different techniques. The experimental group received treatment by using crossword puzzle game in learning vocabulary, whereas the control group implemented question and answer technique. However, post-test was given to both groups to measure the scores after the treatment and to test how crossword puzzle affected the students' vocabulary achievement.

3.3 *Research Participants*

The participants of this research were taken by using cluster random sampling based on the results of the homogeneity test which was given to the population. Since the population of the whole eighth grade classes were homogeneous, sampling was done by lottery to choose experimental and control group. As the result, VIIIC was selected as experimental group whereas VIII G was chosen as the control one.

3.4 Research Data and Analysis

An interview section was carried out in 2017 with the English teacher of SMP Plus Darus Sholah. The English teacher mentioned that English is taught twice a week with approximately 2x35 minutes for each meeting. The curriculum being applied for the eighth grade was KTSP. In teaching vocabulary, she usually asks the students to find meanings of the difficult words found in the text or let them ask for the meanings to her. She also uses the vocabulary exercises available in students' book. She clarified that she never implemented crossword puzzle as her technique in teaching vocabulary.

The data were collected from the results of both experimental and control groups which were given vocabulary achievement test based on the materials suitable for

the curriculum being used. After collecting the data, the scores of post-test were analyzed by using independent sample t-test in SPSS program. The t-test was used to determine whether or not there was a significant effect of crossword puzzle on the students' vocabulary achievement at 5% significant level.

4. Research results and discussion

After presenting the materials to both experimental and control groups, the researcher measured the students' vocabulary achievement by administering the post-test. The researcher analyzed the results of post test by using Independent sample t-test in SPSS program to reveal the mean difference between two groups.

Table 1. The Output of Group Statistics of Post-test

Group Statistics					
	Class	N	Mean	Std. Deviation	Std. Error Mean
Score	Experimental	30	79.20	6.161	1.125
	Control	29	75.17	8.168	1.517

The table above presented the scores of post-test along with its standard deviation. It could be seen that the mean score of the experimental group was 79.20 while the control group got 75.17 as its mean score.

Table 2. The Output of The Independent Sample t-test of Post-test

Independent Samples Test									
		Levene's Test for Equality of Variances		t-test for Equality of Means					
								95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Score	Equal variances assumed	.642	.426	2.143	57	.036	4.028	1.879	.264	7.791
	Equal variances not assumed			2.133	52.063	.038	4.028	1.888	.238	7.817

As described in the table above, the value of siginificance column of Levene's Test was 0.426, which meant that it was higher than the significant degree (0.05). Therefore, the first row of t-test column should be read by the researcher. The significance value was 0.036. As it was lower than 0.05, it means that the null hypothesis was rejected. Thus, the alternate hypothesis stating, "There is a significant effect of using Reciprocal Teaching Strategy on students' reading comprehension achievement" was accepted.

Teaching vocabulary using crossword puzzle was considered as an effective technique in helping the students enrich their vocabulary. The researcher reported that the students of experimental group who were taught vocabulary by using crossword puzzle got better scores than the group who was only taught by using question and answer technique. It was proved by the result of computation that the mean score of the experimental group was higher than the control one (79.20 > 75.17).

Based on the teaching and learning in the first and the second meeting in the experimental group, the students were interested in learning vocabulary through the crossword puzzle. They paid more attention to the materials as it was new for them. Crossword puzzle promoted them to the better memorization since the students were required to spell the vocabulary correctly to complete the puzzle and to guess the answer based on the definitions provided. Furthermore, the crossword puzzle was a challenge that got themselves working hard to find the right words based on the clues provided. The students found it motivating because if the word did not fit to the squares, they should look for another correct word. Crossword puzzle facilitated the students with a collaborative work in which they could learn from each other and build their passion in learning. Besides, it encouraged the students to learn in enjoyable learning environment as they also gained knowledge at the same

time. The analysis above were in line with Njoroge et al. who stated that 1) Crossword puzzle helps the students reduce boredom in learning, 2) Crossword puzzle makes the students enjoy learning the target language, 3) Crossword puzzle offers a challenge that motivates them to fulfill the puzzle. It also supported the theory proposed by Orawiwatnakul (2013: 6) that crossword puzzle helps them extend their vocabulary thorugh its definition and spelling. Therefore, it strongly stressed that learning vocabulary through a game like crossword puzzle was good for them which resulted to the higher scores they got in post-test.

Besides, the students in the control group did not get the benefits as much as the experimental group gained. It was due to the unvaried technique they faced, which was question and answer technique that make them less active in teaching and learning process. They also often asked the researcher about the meanings of the word instead of working by themselves in doing the exercises given.

During the treatment in the first meeting, the researcher caught seven students cheated to their friends as they did not know which word should be put into the crossword puzzle. Few of them took a long time to complete crossword puzzle as they wrote the wrong vocabularies to the blank squares. The researcher anticipated the obstacle by informing the students that the words used in the crossword puzzle were taken from the text they just read before. However, almost all of the students worked well in the second meeting because they were already familiar with it. Moreover, the students in the control group for both in the first and in the second meetings were not motivated in learning the materials as they were given the similar technique commonly used by their English teacher. Some of them asked the teacher for help to finish the exercise given because they were lazy to do it. Consequently, it was quite difficult for them to absorb the material given.

The result of this research was parallel with the studies carried out by several researchers. The first study was done by Njoroge et al. (2013) who focused on the application of crossword puzzle in teaching vocabulary. Its result showed a positive contribution to the students of Kenyan Secondary School. They believed that puzzle solving was an active type of learning that engaged the students learning vocabulary by themselves. Besides, Davis et al. (2013) also investigated how crossword puzzle as an exam review affected the success of students' learning at college level positively. It was due to the enjoyable and less threatening activity that crossword puzzle offered in which it made the students retain the materials well. Another study which conducted to the medical students as the participants proved the same results that crossword puzzle was helpful for practicing and identifying the vocabulary as it lightened the class atmosphere by providing the students an interesting activity (Mills et al. : 2009). Tambun (2014) claimed that crossword puzzle had a positive influence towards the seventh grade students' vocabulary mastery because it motivated the students to participate and focus on their vocabulary learning. Moreover, Yunita (2012) noted that the implementation of crossword puzzle improved the students' vocabulary mastery of the fourh grade. The students in grade four were more enthusiastic in learning vocabulary which helped them understand and memorize the vocabulary more easily.

Based on the explanation above, the use crossword puzzle was effective in teaching vocabulary as the mean scores of experimental group was higher than the ones achieved in control group. In addition, the finding of this reseach was supported by the previous reseaches which reported the same results dealing with the positive impact of crossword puzzle on the students' vocabulary achievement. Although this research was carefully prepared, the researcher is still aware of its limitation. First, the future researchers should consider the items arrangement in constructing the

test. Second, because of the regulation from the school principal, this research was conducted in two weeks. Thus, it will be better if it is done in a longer time in hope it may give the differest results.

Conclusion

Based on the results of hypothesis verification and discussion in the previous chapter, the researcher concluded that learning vocabulary through crossword puzzle was one of the best ways to enlarge their stocks of vocabulary as they were motivated to learn English when the researcher provided them with enjoyable learning environment. Hence, the research finding proved that there was a significant effect of using crossword puzzle on the eighth grade students' vocabulary achievement.

Since crossword puzzle had a significant effect on students' vocabulary achievement, the researcher proposed some suggestions to the English teacher and the future researchers. The writer suggested the English teacher to deliver the materials by using crossword puzzle to stimulate the students' motivation in learning vocabulary. The technique suggested should bring fun to the students as it helped the students retain new words easily. In addition, the English teacher should prepare the materials properly to avoid any obstacles encountered in teaching and learning process. The writer hopes that the result of the research could be used as consideration for the future researcher who wants to investigate the use of game, especially crossword puzzle on students' learning either in a different research area or design.

REFERENCES

Allen, V.F. 1983. *Teachniques in Teaching Vocabulary*. Oxford University Press.

Cheryl, J. 2012. *Educational Tool for Kids and Adults*.http://cherylj.hubpages.com/Crossword-Puzzles-Educational-Tools-for-Kids-and-Adults. [Retrieved on February 18th, 2017]

Creswell, J.W. 2012. *Educational Research :Planning, Conducting, and Evaluating Quantitative and Qualitative Research, Fourth Edition.* Boston: Pearson Education, Inc.

Davis, T.M., Shepherd, B and Tara, Z. 2009. Reviewing for Exams: Do Crossword Puzzles Help in the Success of Student Learning?. *The Journal of Effective Teaching, 9 (3), pg 4-10.*

Fraenkel, J., & Wallen, N. 2009. *How to Design and Evaluate Research in Education.* New York: McGraw-Hill, Inc.

Gilbert, G.G., Sawyer, R.G and Elisa, B.M. 2011. *Health Education: Creating Strategies and Community Health (Third Edition).* United Kingdom: Jones and Bartlett Publishers International.

Hatch, E. and Brown, C. 1995. *Vocabulary,Semantics and Language Education.* Cambridge: Cambridge University Press.

Hughes, A. 1989. *Testing for Language Teachers (Second Edition).* Cambridge: The Press Syndicate of The University of Cambridge.

Mcmillan, J.H. 1992. *Educational Research: Fundamentals for the Consumer.* Harper Collins Publisher.

Mills, S., Anurag, S., Raenelle, N. and Pahwa, P. 2009. Crossword Puzzles; Active Learning in Undergraduate Pathology and Medical Education. *Arch Pathol Lab Med, 133(. 1457-146)*

Njoroge, C.M, Ndungu, R.W and Moses, G.G. 2013. The Use of Crossword Puzzleas as a Vocabulary Learning Strategy: A Case of English as Second Language in Kenyan Secondary Schools. *International Journal of Current Research. 5 (1).*

Orawiwatnakul, Wiwat. 2013. Crossword Puzzles as a Learning Tool for Vocabulary Development. *Electric Journal of Research in Educational Psychology, 11(30), pg 413-328.*

Prasarntong, N., and Dennis, N.K. 2016. The use of Pop-up Dictionary for English Vocabulary Learning for Primary School Level. *International Journal of Researc-Granthaalayah. 4(7).*

Richards, J.C. and Reynanda, W.A. 2002. *Methodology in Language Teaching.* Cambridge: Cambridge University Press.

Schmitt, N. 2000. *Vocabulary in Language Teaching*. Cambridge: Cambridge university Press.

Tambun, R.A. 2014. The Influence of Using Crossword Puzzle towards the Students' Vocabulary Achievement. *The Second International Conference on Education and Language (2nd ICEL). 2 (pg. 416-421).*

Williams, C.B and Quirk, R. 1970. *Style and Vocabulary*. London: Hafner Publishing Company.

Yunita, I. 2012. The Implementation of Using Crossword Puzzles Game to Increase Students' Vocabulary of The Fourth Grade Students of SD Negeru Bapangsari in the Academic Year 20