

The Effectiveness of Teaching English Vocabulary in the theme of “Animals And Plants” Using Crossword Puzzle

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ABSTRACT: The objective of this study was to find out whether or not it was effective teaching English vocabulary in the theme of “Animals and Plants” using crossword puzzle. The population of this study was the seventh grade students of Junior High School Sriwijaya of Palembang in the academic year 2013/2014. The sample was taken from one class that consists of 30 students through convenience non-random sampling. The method of this study was the pre-experimental method with one group pre-test and post-test design. The data were obtained by means of the test, the result were analyzed through matched t-test formula. Based on the study, it was found that teaching English vocabulary in the theme of “animals and plants” using crossword puzzle to the seventh grade students of Junior High School Sriwijaya of Palembang was effective. The students’ score has increased from 67.7 in the pre-test to 85.08 in the post-test and it was found that t-test was higher than t-table ($7.3 > 1.697$). It means that teaching English vocabulary in the theme of “animals and plants” using crossword puzzle was significantly effective.

Key words: *vocabulary, animals and plants theme, crossword puzzle*

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INTRODUCTION

The term of vocabulary has a range of meanings. For example, some teachers use the term to mean sight-word vocabularies, referring to students' immediate recognition of words in print; other teachers refer to words students understand as their meaning vocabularies. Content teachers use the term academic vocabulary to refer to content-specific words. Within this section, we use the term vocabulary to refer to students' understanding of oral and print words.

Students' vocabulary knowledge is a building process that occurs over time as they make connections to other words, learn examples and non-examples of the word and related words, and use the word accurately within the context of the sentence (Snow, Griffin, & Burns, 2005). Furthermore, Kamil and Hiebert (2005) state that vocabulary is generically defined as the knowledge of words and word meanings. More specifically, we use vocabulary to refer to the kind of words that students must know to read increasingly demanding text with comprehension.

Vocabulary is one of five core components of reading instruction that are essential to successfully teach

children how to read. These core components include phonemic awareness, phonics and word study, fluency, vocabulary, and comprehension (National Institute of Child Health and Human Development, 2000). In learning English, the students should not only learn four skills such as listening, speaking, reading, and writing, but they also should learn the four components too such as vocabulary, grammar, spelling, and pronunciation. We cannot read, speak, listen, and write without understanding the meanings of the words. It is clear that vocabulary is one of the important components to develop the ability to communicate in language.

In the class, students were surely get difficulties such as the students are difficult to memorize new word and the students difficult to pronounce the word correctly. For this reason, students must develop their vocabulary by using various methods and techniques, and the students should learn a lot of words to fit the needs of the worlds and we cannot help enlarging their vocabulary stock from one dictionary only.

Similarly, Biemiller (2003) suggests that children with low vocabularies would have to learn words

much faster than their peers, at a rate of three to four root words per day, if they were to catch up within five or six years. Furthermore, to enlarge the students' vocabulary stock, the teachers of English should know the condition of their students and their students' problems in vocabulary. To motivate the students in learning English, the teacher can use teaching aids to give different atmosphere to classroom situation that make the students love the subject. One of the teaching aids that can be used in teaching learning process is crossword puzzle.

Many studies indicate the effectiveness of using puzzles in teaching different school subjects; including English language teaching and its role in developing thinking process on the part of students. Edge (2011) clarifies that puzzles have long been a favorite learning toy of kids, moms and educators. Giving children a variety of puzzles enhances their early childhood educational experience both at home and in school. Walter (2004) believes that riddles are an excellent vehicle for introducing students to poetry and poetry writing. Moreover, Raizen (1999) discusses the benefits of logic puzzles in the foreign language

classroom include helping students develop higher order thinking skills and repetition of words and sentence segments in a limited, well-defined context and at a frequency that in all other circumstances may be perceived as unreasonable and may generate boredom. Similarly, Michalewicz (2007) believes that the main reasons behind most students' enthusiasm for the puzzle-based learning approach are: Puzzles are educational, as they illustrate many useful and powerful problem-solving rules in a very entertaining way.

One of the puzzles that can be given by the teachers to make the students interested in studying English especially vocabulary is crossword puzzle. Crossword puzzle plays an important role is established the students vocabulary mastery. Crossword puzzle can be used as a technique in teaching vocabulary to the Junior High School students. It can be found in newspaper, magazine, or even in computer programs, and it also found students textbook. It is easy to design by considering students. Every crossword puzzle uses clues to find out the answer, it could be down and across. Most of the students in junior

high school have difficulties in increasing vocabulary, because the vocabulary is not similar or different from the one in the native language. However, using crossword puzzle, teachers can create students' interest to learn English vocabulary.

Sadariana (2007) states that crossword puzzle was effective in teaching vocabulary to the eighth grade students of State Junior High School 26 of Palembang. This is based on her research that crossword puzzle made the students interested in studying English especially vocabulary.

The reason that encourage the researcher to conduct this research because: firstly, the motivation of the students in learning English especially vocabulary is still low because the lack of vocabulary or they did not have enough vocabulary. Secondly, the researcher found that many students of Junior High School Sriwijaya of Palembang do not know the meaning of the words in English.

Based on the statement above, the researcher is interested in doing this study entitled "The Effectiveness of Teaching English Vocabulary in the theme of "Animals and Plants" Using Crossword Puzzle".

Concept of Vocabulary

Vocabulary consists of individual words that have meanings. Reading vocabulary comprises those words that we know and understand as we read. Because reading involves decoding, we can know the meaning of the word when we hear it spoken but still not be able to read it in print. This is common for beginning readers, whose oral vocabulary-that is, their speaking and listening vocabulary is often larger than their reading vocabulary. The depth of person's knowledge of individual words can also vary. We may have a deep understanding for words we use frequently, knowing many or even all of their dictionary definitions.

Hornby (2000) in Oxford Advanced Learner's Dictionary of Current English states that vocabulary is all the words that someone knows or uses, the words that are typically used when talking about a particular subject or a list of words with the explanation of their meanings in a book for learning foreign language. In addition, Saputra (2007) gives a comprehensive definition of vocabulary and describes it as all the words that are used in a language, have meanings and consist of some parts like

verbs, idioms, pronunciation, etc. Then, Graddol, et. al (1987: 93) indicate that words can be regarded as symbols.

From all the definitions mentioned above, it is clear that the concept of vocabulary as the most important part for learning any language. It is impossible for the learners to read, write, speak and listen to any foreign language without having enough knowledge of vocabulary. Thus, the researcher defines vocabulary as a collection of words in the language; every word has its own meaning and is understood by others.

Types of Vocabulary

Nation (2001) divided vocabulary based on its usage into two types: receptive and productive / expressive vocabulary.

- a. Receptive vocabulary means words that learners can recognize and comprehend in the context of reading and listening material.
- b. Productive/ Expressive vocabulary means words that learners can recall and use appropriately in speaking and writing to expressive themselves and to convey their messages.
- c. Passive and Active

Cairns and Redman (1986) state that receptive and productive

vocabularies are often called passive and active vocabulary. Most researchers nowadays construe lexical knowledge as a continuum consisting of several levels and dimensions of knowledge, starting with superficial familiarity with a word and ending with the ability to use the word correctly in free production (Laufer & Goldstein, 2004; Nation, 2001). Vocabulary on the continuum may shift from passive to active vocabulary when being properly activated. Therefore, the view of a continuum appropriately expresses the dynamic complexity of vocabulary knowledge (Zhiying, Teo & Laohawiriyanon: 2005). We understand "receptive" vocabulary to mean language items which can only be recognized and comprehended in the context of reading and listening, and listening material "productive" vocabulary to be language items which the learner can recall and use appropriately in speech and writing (Cairns & Redman, 1986:64). Passive vocabulary knowledge involves receiving the form of a word while listening or reading and retrieving its meaning.

Productive vocabulary knowledge, on the other hand, means to express a meaning through speaking or writing and retrieve or produce the appropriate spoken or written word form (Nation, 2001). Thus, passive vocabulary knowledge involves a process from form to meaning and productive vocabulary knowledge involves a process from meaning to form.

The Importance of Vocabulary

According to Pikulski and Templeton (2000:1), it seems almost impossible to overstate the power of words; they literally have change and will continue to change the course of world history. Perhaps the greatest tools we can give students for succeeding, not only in their education but more generally in life, is a large, rich vocabulary and the skill for using those words. Our ability to function in today's complex social and economic worlds is mightily effected by our language skills and word knowledge.

In addition to the vital importance of vocabulary for success in life, a large vocabulary is more specifically predictive and reflective of high levels of levels of reading achievement.

Concept of Puzzle

According to Moursund (2006:8), a puzzle is a type of game. Puzzle is problem designed to challenge one's brain and to be entertaining. Puzzle helps in the acquisition and learning of new words as well as increase students' familiarity with them in terms of meaning. Puzzles change the atmosphere of the class, motivate the students in learning English and make them love the subject. Learners in the process of using puzzles have the opportunity to use language in order to convey meaning and use their knowledge to do something.

Puzzle is defined as a game that tests your knowledge, skill, intelligence (Oxford Wordpower, 2002). In a basic puzzle, one is intended to put together pieces in a logical way in order to come up with the desired solution Oxford Reference Premium defined a puzzle as " a problem having one or more specific objectives, contrived for the principal purpose of exercising one's ingenuity and/or patience". According to Farlex (2009) puzzle is something, such as a game, toy, or problem that requires ingenuity and often persistence in solving or assembling. The researcher defines puzzle as a confusion situation

which requires a solution. One of the puzzles that can be given by the teacher to make the students interested in studying English especially vocabulary is crossword puzzle.

Kinds of Puzzle

Chamberlian (as cited in Sasmita, 2007:6) states that there are three kinds of puzzle for different purposes, they are :

1. Crossword Puzzle

The crossword puzzle is merely examples of the kinds of vocabulary in which words have to be guessed from clues and written in space in a grid. Crossword puzzle are divided into two questions, across and down that are difficult to understand or confused to answer.

2. Production Puzzle

Production puzzle is a game practice, which has a wider range of language. Point giving the students opportunity to produce more imaginative language, less carefully predicated and controlled by the nature of puzzle. This puzzle needs to find the word that does not belong with its group.

3. Language Point Puzzle

Language point puzzle is a game aimed to give extensive practice that is as structures as well as providing welcome relief for the students from more rigorous methods of learning. This puzzle needs to rearrange the word listed form a sentence that says the same thing as the given sentence.

Crossword Puzzle

A crossword is a word puzzle that normally takes the form of a square or a rectangular grid of white and black shaded squares. The goal is to fill the white squares with letters, forming words or phrases, by solving clues which lead to the answers. In languages that are written left-to-right, the answer words and phrases are placed in the grid from left to right and from top to bottom. Crossword puzzle can be used as a technique in teaching vocabulary to the Junior High School students. It can find in newspaper, magazine, or even in computer programs, and it also found students textbook. It is easy to design by considering students. Every crossword puzzle uses clues to find out the answer, it could be down and across.

METHODOLOGY

The method of this study was pre-experimental method with one group, pre-test and post test design. According Fraenkel and Wallen (1990:269), in the one group pre-test and post-test design, a single group was measured or observed not only after being exposed to treatment of some sort, but also before.

In this study, the researcher took the Seventh Graders at Junior High School Sriwijaya of Palembang in academic year 2013/2014 as the population with the total number of 64 students. There were two classes, they were Class VII- A and Class VII B. The sample of this study were Class VII- A that consisted of 30 students through convinience non-random sampling.

In collecting the data, the researcher used written test. He gave pre-test and post-test. He gave exactly the same test materials for the pre-test and post-test. In this test, the students were asked to fill in the puzzle about “Animals and Plants”. They were asked to answer the questions.

The test consisted of 40 questions about “Animals and Plants”. 15 questions were essay, 15 questions were arrange the unscreamble words and 10 questions were essay. Furthermore, in analyzing the data, the researcher used percentage analaysis, conversion of percentage range, and matched t-test.

Percentage Analysis

Percentage analysis was applied to find out the percentage of the students individual score of the test.

$$S = \frac{R}{NI} \times 100\%$$

Where :

S : Individual score

R : Number of student correct answer

N : Number of the test items

Conversion of Percentage Range

No	Percentage Range	Level of achievement
1	91-100	Excellent
2	81-90	Very Good
3	71-80	Good
4	61-70	Fair
5	51-60	Enough
6	41-50	Low
7	0-40	Poor

Matched T-test

Matched t-test used to significance difference between the pre-test and post-test. The formula was as follows:

$$t = \frac{\overline{X}_1 - \overline{X}_2}{SD}$$

Where:

t : the value by which the statistical significance of the mean difference are judged

X_1 : the mean of post-test

X_2 : the mean of pre-test

SD: standard deviation

FINDINGS AND DISCUSSION

The findings of the study consisted of the students' scores in the pre-test, the students' scores in the post-test and the result of matched t-test. In the pre-test the average score of the students' was 67.7. In the post-test the average score of the students' was 85.08. Based on the scores of the pre-test and post-test above, the result of matched t-test was 7.3. On the other hand, the significance level was 0.05 with $df=29$, and the critical value of the table was 1.697. It indicates that "t" obtained is higher than than "t" table. It also indicates that the null

hyphothesis was rejected and the alternative hyphothesis was accepted.

The Students' Scores in Pre-test

The students were given the pre-test which consisted of 15 items in essay question, 15 items in arrange the unstreamble of the words question, and 10 items in essay question , total is 40 items.

From the result of the pre-test, the researcher found that the highest score was 90 reached by one student and the lowest score was 37.5 reached by three students. To get the mean score pre-test, the total score (2030) was divided by the number (30), the result of the average score was 67.7. It means that the average score in the pre-test was fair.

Besides, there were 5 students (16.6%) who got very good scores, 10 students (33.3%) who got good scores, 7 students (23.3%) who got fair scores, 2 students (6.6%) who got enough scores, 3 students (10%) who got low scores, and 3 students (10%) who got poor scores.

The Students' Scores in the Post-test

Based on the result of the post-test, it was found that highest score was 100 that was reached by three students and the lowest score was 62.5 that was reached by one student.

To get the mean score post-test-test, the total score (2552.5) was divided by the students number (30), the result of the average score was 85.08. It means that the average score in the post-test was very good.

Moreover, based on the percentage of the post-test, there were 10 students (33.3%) who got excellent scores, 8 students (26.6%) who got very good scores, 10 students (33.3%) who got good scores, 2 students (6.6%) who got fair scores.

CONCLUSION

The researcher concluded that teaching English vocabulary in the theme of “animals and plants” using crossword puzzle to the Seventh Graders of Junior High School Sriwijaya of Palembang was effective. The students’ score increased from 67.7 in the pre-test to 85.08 in the post-test. To compare the students’ score in the pre-test and post-test, matched t-test was used. It was found that t-test was higher than t-table ($7.3 > 1.697$). This indicated that null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted. The increasing of the students’ score in post-test and

value t-test higher than t-table obtained from the calculation of matched t-test indicated that teaching English vocabulary in the theme of “animals and plants” using crossword puzzle was effective.

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