

**A COMPARATIVE STUDY ON THE EFFECTIVENESS OF CROSSWORD GAME
AND LECTURING METHODS TO TEACH VOCABULARY**
(An Experimental Study at the Third Grade of SDN Sumber 3 Surakarta in the Academic
Year of 2012/ 2013)

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Abstract: The objectives of this research are: (1) to find out whether there is significant difference in effectiveness between crossword game and lecturing methods to teach vocabulary (2) to find out which one is more effective, crossword game or lecturing methods to teach vocabulary to the third grade of SDN Sumber 3 Surakarta in the academic year of 2012/ 2013. The writer took the sample by using cluster random sampling. The research instrument used to collect the data in this study is tests. Related to the purposes of the study, the research design used in this study was comparative study. Besides, the writer finds that teaching vocabulary using crossword game gives better achievement than lecturing method. In other words, crossword game is more effective than lecturing method to teach vocabulary.

Keywords: comparative, vocabulary, crossword game, lecturing method

English is one of the international languages learned in many countries all over the world. Indonesian government has decided to choose English as a subject from the first grade of Junior High School up to the third year of Senior High School. Moreover, many elementary schools, even several kindergartens teach English as a compulsory subject, in order to develop the students' English competence.

There are four language skills: listening, speaking, reading, and writing. All the four skills are closely interdependent, but before the students master all of the skills, they must master vocabulary first. Bowkly (1972: 216) states that language is a means of expressing meaning through grammar and vocabulary. Teaching vocabulary is intended to support the students' skill in listening,

speaking, reading, and writing. Knowing an adequate vocabulary really can help the English learners solve many problems in all language skills. However, the students may have many problems when their vocabulary is very poor. Most of the students have difficulties in spelling, pronouncing, remembering the meaning of the words, and using the words in the sentence.

Teachers know that there are several characteristics of young learners which we have to care about in order to choose the best method to teach them. They still have difficulties to differentiate between concrete and abstract things; they are imaginative and active, egocentric, but getting bored of something easily so that stories and games become the things which they love to get and to do, because their lives are colorful and

cheerful. Children need to be involved in games so that they are excited in learning English.

Based on their characteristics, games may be helpful for children because they can learn vocabulary cheerfully by playing. Games provide context for playing, reasons for playing, and routines for playing. Teachers of young learners should know the natural tendencies and desire of children to play and incorporate games into classroom activities in a well-ordered and purposeful way to be an effective strategy, so that children can learn English more effectively without realizing that they are learning English. Young in Brumfit (1995: 145) states to play a game is to enjoy competing alone or in groups against other players, against time or against the challenge of the game, and not to think consciously about the language involved in doing so. In other words, games may be seen as tasks. If they successfully engage the learners' attention as a proper children's game should, then learning will be supported. The use of specially devised communication games and out-of-classroom games to supplement a traditional syllabus; using games in this way as a supplementary activity in order to give children the opportunity to use language purposefully and playfully may be a comfortable and sensible route to follow.

Lecturing is the most frequently used method of instruction. However, presenting a lecture without games for interaction with students can be ineffective despite of the teacher's skill as a speaker. The use of games during the lecture for direct oral questioning creates interaction between teacher and the students. Unfortunately, when classes are large,

the teacher cannot possibly interact with all students on each point. The learning effectiveness of the lecture method has been questioned because of the lack of interaction, so that lecturing may not be suitable for teaching vocabulary.

Based on the problem in the background above, the writer formulates the problems as follows: 1) Is there any difference in effectiveness between crossword game and lecturing methods to teach vocabulary to the third grade students of SDN Sumber 3 Surakarta?; 2) Which one is more effective, crossword game or lecturing methods, to teach vocabulary to the third grade students of SDN Sumber 3 Surakarta?

RESEARCH METHODS

The method used in this research is comparative study. The writer wants to know whether or not teaching vocabulary using crossword games learn better than lecturing in teaching vocabulary to the third grade students of SDN Sumber 3 Surakarta. The research uses experimental method. Nazir (1988: 74) states that an experimental research is done by giving manipulation to the object of research and which has a control. The manipulation group (3A) is taught using crossword game and the control group (3B) is taught using lecturing.

The aim of experimental method is investigating whether there is a cause – effect relation and how big the relation is by giving a certain treatment for the experimental group and preparing a control group to be compared. It means that there are two groups, namely control and experimental groups. The control group is the class taught using lecturing and the experimental group taught using crossword game. In this research, the writer uses 'Non – equivalent before and after design', this

design is used when we want to compare two groups that are likely to be different even before the study begins. (<http://allpsych.com/researchmethods/quasi>

experimentaldesign.html). The figure of the design can be seen at the following figure:

Group	Pre – test	Treatment	Post - test	Difference	Comparison
Experimental (A)	Y_1	Crossword Game	Y_2	$Y_2 - Y_1$	
Control (B)	X_1	-	X_2	$X_2 - X_1$	

Based on the design, both experimental group (A) and control group (B) were given a pre-test. The writer, then, gave different treatments to them for five weeks (nine meetings). The groups, after that, were given post-test which has the same form as the pre-test. The writer, next, compared the difference of the result (the scores of the two groups) to find out whether

the use of game in the teaching English vocabulary yields significantly different results.

The research is conducted in SDN Sumber 3 Surakarta in the academic year of 2012/ 2013. The time of the study used for the research includes title proposal until research report can be seen in the table 1 as follow:

Table 1 : Time of the Study Plan

No	Activities	2012						
		May	June	July	Sep	Oct	Nov	Des
1	Title Proposal							
2	Research Proposal							
3	Research Licenses							
4	Instrument Try-out							
5	Collecting Data							
6	Analizing Data							
7	Arranging Report							

Population is the total elements, subjects, or members that possess a specified set of one or more common characteristic that define it (Wiersma, 2000: 459). The population of this research is the students of SDN Sumber 3 Surakarta. They consist of 402 people of six grades. Each grade consisted of two classes, class A and class B.

Allison, et al. (1998: 24) defines sample as a sub-group of population selected according to particular criteria and taken to represent the whole group. The sample of this research is two classes, the third grade A and third grade B each class consisting of 30 students.

The writer took the sample by using cluster random sampling. Cluster sampling is a probability sampling procedure in which elements of the population are randomly selected in naturally occurring groupings (clusters). The sampling units or clusters may be space-based, such as naturally occurring geographical or physical units (e.g., states, counties, census tracts, blocks, or buildings); organization-based, such as units as school districts, schools, grade levels, or classes; or telephone-based, such as area codes or exchanges of telephone numbers (http://www.sagepub.com/upm-data/40803_5.pdf). Cluster random sampling will be used to choose 30 students of each class.

To collect the data, the writer used test, that is, vocabulary test. According to Crowl, et al. (1997: 310), a test is an instrument containing items whose answers are right or wrong. Testing is an important part of the teaching and learning process. A test is useful to measure the students' achievement, to know the students' progress, to motivate and direct student learning, to evaluate the teaching process, whether it is good or not.

There are two types of test, that is, essay and objective test. In collecting the data about the students' vocabulary mastery, the researcher used the objective test type in the form of multiple choices consisting of 50 items. The students were asked to choose the correct answer by crossing out A, B, C, or D on the answer sheet. The highest score of the test was 100.

Before the test was given, the writer tried out it to measure the validity and reliability.

Validity as Azwar states, is the ability of the instrument to do its function, that is, to measure what is going to be measured,

which is relevant with the goal of the measurement (1997: 5). The formula that was used to measure the validity was the product moment formula, as follows:

$$r_{xy} = \frac{\overline{X_i} - \overline{X_t}}{s_t} \sqrt{\frac{p_i}{q_i}}$$

The item is valid if $r_o > r_t$

where

r_{xy} = reliability

$\overline{X_t}$ = mean of X

$\overline{X_t}$ = numbers of items

s_t = root of sigma x square

divided by denominators

p_i = proportion of the correct answers

q_i = proportion of the wrong answer divided by the number of students

Reliability refers to the consistency of scores achieved by the same persons when they are examined with the same test or different occasions or with different sets of equivalent item (Anastasi and Urbina, 1997: 84). To test the reliability, the researcher uses Alpha Cornbach Technique.

$$r_{kk} = \frac{k}{k-1} \left(1 - \frac{\sum pq}{s_t^2} \right)$$

where

r_{kk} = coefficient of reliability

k = the number of items

$\sum pq$ = the sum of item variance

s_t = the variance of the total

composite

T-test of independent sample is used to compare differences between separate groups (psychologyaustralia.homestead.com). In this research, the writer compares the

differences between group taught using crossword game and that taught using lecturing.

$$S_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{\sum x_1^2 + \sum x_2^2}{n_1 + n_2 - 2} \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}$$

RESULT AND DISCUSSION

The purpose of this research is to know whether there is difference in effectiveness between crossword game and lecturing methods to teach vocabulary and which one is more effective, crossword game or lecturing methods to teach vocabulary. This research was conducted at the third grade of SDN Sumber 3 Surakarta in the academic year of 2012/ 2013. The writer chose class 3A as the experimental group to be taught using crossword game and class 3B as the control group to be taught using lecturing.

The data of this research are the result of the tests. Before and after giving treatments to the groups, the researcher gives a test to the students. In this research, the researcher used vocabulary test. The scores of the students are compared using t-test formula to prove whether there is any significant difference between the two groups in achievement and to find which group has higher achievement.

The result of the research shows that there is a significant difference in vocabulary achievement between the students taught using crossword game method and those taught using lecturing method ($\mu_1 \neq \mu_2$). Crossword game method gives higher improvement than lecturing method ($X_1 > X_2$).

The result of t computation shows that t- observation (t_o) is 4.145 while the t- table (t_t) for the degree of freedom of 62 and the level of significance $\alpha = 0.05$ is 4,00. So,

$$t = \frac{\bar{x}_1 - \bar{x}_2}{S_{\bar{x}_1 - \bar{x}_2}}$$

t_o is higher than t_t . It means that H_o is rejected. It can be concluded that there is a significant difference in vocabulary achievement between students taught using Crossword Game method and those taught using Lecturing method.

The second hypothesis of this research is that the students taught using crossword game method have higher achievement than those taught using lecturing method. In this case, to test the second hypothesis, the writer needs to compare the post-test mean scores of the two groups. The mean of the scores of the experimental group is 72.06, while the mean of the scores of control group is 62.94. The mean score of the experimental group is higher than control group. It can be concluded that crossword game method is more effective than lecturing method.

The result of analysis can be clarified by the following reasons. It has been explained that crossword game method which is students-centered makes students strengthen their intelligence, concentrate to the lesson, identify and understand the terms being used. Another benefit of using crossword puzzles in the classroom is that they are associated with recreation, and can be less intimidating for students as review tools. Students who might normally balk at practice tests, flashcards, or review sessions with the teacher find solution of puzzle much less threatening and more like game play. Puzzle solving is a much more active type of learning, and will engage students

with the material more than passive types of review techniques do.

According to Kilickaya (2007) in a journal of Teaching English with Technology, crossword puzzles are excellent way to review vocabulary, as students will immediately know their answers are incorrect if they do not fit the puzzle. In addition, if the students cannot figure out the answer, they can simply count the squares in the puzzle, find words of equal length and then try to deduce the correct answer. Paul (2003: 99) says that crossword puzzle can be used at any level, and is wonderful way to bring together vocabulary from many different lesson. Paul adds that the combination of puzzle solving and fun can create a powerful learning tool.

Crossword puzzles also have the advantage of appealing to different learning styles. Visual learners often have strong puzzle-solving skills, and feel great satisfaction when they complete one. Auditory learners enjoy step-by-step reasoning, so they also benefit from the sequential steps of completing a crossword. Even kinesthetic learners enjoy the multi-task strategies required to solve a crossword. Finally, crossword puzzles have the benefit of being customizable to study content.

On the contrary, lecturing method which is teacher-centered makes the students more passive in the class because the teacher is more active. In this method, the teacher gives oral presentation to teach the students. So, it requires a considerable amount of unguided student time outside of the classroom to enable understanding and long-term retention of content. Lecturing is mainly a one-way method of communication that does not involve significant audience participation

(<http://en.wikipedia.org/wiki/Lecture>).

Therefore, lecturing is often contrasted to active learning.

The explanation above recommends the result of this research that there is a significant difference in vocabulary achievement between the students taught by using crossword game method and those taught using lecturing method, and teaching vocabulary using crossword game method is more effective than using lecturing method.

CONCLUSION AND SUGGESTION

Based on the result of the research, it can be drawn some conclusions as follows: (1) there is a significant difference in teaching vocabulary between students taught using crossword game method and those who are taught using lecturing method; (2) Crossword game method is more effective to be applied in teaching vocabulary than lecturing method.

The result of the research shows that crossword game can give higher achievement in vocabulary than lecturing method. It means that crossword game is appropriate to be applied in teaching vocabulary for students in SD Negeri Sumber 3 Surakarta. The selection of crossword game method is reasonable because it is based on the condition of the students. They are more active, cooperative, and independent in classroom. The conclusion has some implication dealing with the steps of crossword game as follows:

1. Introduction

To turn a usually crossword puzzle into a speaking activity for pairs, the clues are removed all together and then each student is given a copy of the crossword with half the words filled in. Combining their words with their partner's words will complete the crossword, but they are not

allowed to say the words directly, they have to give explanations or hints so that their partner can guess the word.

2. Preparation

The next step is to obtain a suitable crossword puzzle. There are two ways to do this. The teacher can either devise the crossword, or take one from somewhere else such as a magazine (but that would probably exceed the vocabulary of the students) or a textbook (such as a book of vocabulary exercises).

3. Procedure

Explain the concept of a crossword if necessary. Draw a two-word example crossword on the blackboard (two copies, one on each side of the board, with half the words filled in on each), and use this to explain the activity: two people work together; each has a different sheet; they can't show the sheet to their partner or say the word, instead they must use English to explain it.

Invite one of the students to help the writer demonstrates the activity using the example on the blackboard.

4. Variation

Instead of dividing the crossword between two people, it could be split into three or even more sheets. This might be appropriate if the words are very hard to guess (<http://waze.net/oca/activities/18>).

Crossword game method can be applied to teach vocabulary to the students of elementary school especially for the third grade students. Crossword Game method makes the students strengthen their intelligence, concentrate to the lesson, identify and understand the terms being used. Crossword game method builds more effective teaching learning activity because it is associated with recreation, and can be

less intimidating for students as review tools. Puzzle solving is a much more active type of learning, and will engage students with the material more than passive types of review techniques do. They do more activities. Students are actively involved in teaching learning process.

Related to the result of the study, the writer would like to give suggestions as follows:

Teaching English is relatively difficult for some English teachers. They find difficulties to make students interested on this subject. The teacher should use various methods in teaching vocabulary to make the students interested in this subject. Teacher can choose appropriate method and technique based on the situation. Since this research shows that Crossword Game is better than Lecturing method for teaching vocabulary, it is recommended for teacher to use Crossword Game in teaching vocabulary.

The students should be active in the teaching learning process and do much more practices in the class. Each student must have a responsibility to their competence of vocabulary by simply working on some crossword puzzles on a daily basis.

It is hoped that the result of the study can be used as additional reference for further research in different context especially dealing with the use of lecturing and crossword game that will give contribution in teaching English.

BIBLIOGRAPHY

- Bowkly. 1972. *Introduction to Applied Linguistics*. New York: Longman.
- Brumfit, Christoper. 1995. *Teaching English to Children from Practice to Principle*. Harlow: Longman.

- Burns and Broman. 1975. *The Language Arts in Childhood Education*. Chicago: Rand McNally College Pub. Co.
- Coady, James and Huckin, Thomas. 1997. *Second Language Vocabulary Acquisition*. Cambridge: Cambridge University Press.
- Cross, D. 1996. *A Practical Handbook of Language Teaching*. London: Longman.
- Crowl et al. 1997. *Educational Psychology: Windows on Teaching*. New York: The McGraw-Hill Companies, Inc.
- Gerlach. 1980. *From Teaching and Media: A Systematic Approach, Second Edition*. Boston: Pearson Education.
- Harimurti Kridalaksana. 1993. *Kamus Linguistik*. Jakarta: Gramedia.
- Heffner Quote in The Virtual Psychology Classroom. 2011. Research Methods. <http://allpsych.com/researchmethods/quasiexperimentaldesign.html>. Retrieved on June 8, 2012.
- Jones, Kerry. 2008. *Teaching with Crossword Puzzle*. Cambridge: Cambridge University Press.
- Jones. 1993. *Diary of a Crossword Fiend*. Cambridge: Cambridge University Press.
- Keller Quote in Crossword. 2012. Crossword Theme. <http://en.wikipedia.org/wiki/Crossword>. Retrieved on May 1, 2012.
- Lado, Robert. 1967. *Massive vocabulary expansion in a foreign language beyond the basic course: The effects of stimuli, timing and order of presentation*. Washington, D.C.: U.S. Department of Health, Education, and Welfare.
- Lado, Robert. 1979. *Language Teaching: A Scientific Approach*. New Delhi: McGraw Hill Co. Ltd.
- Lewis, M. 1996. *The lexical approach*. Hove, England: Language Teaching Publications.
- McCarthy, Michael. 1990. *Vocabulary*. United Kingdom: Cambridge University Press.
- Mitchell. 1998. *Pedagogical possibilities for argumentative agency in academic debate*. American Forensic Association Science Press.
- Paul, David. 2003. *Teaching English for Children in Asia*. Hongkong: Longman Asia ELT.
- Read, J. 2000. *Assessing vocabulary*. Cambridge: Cambridge University Press.
- Schmitt. 1997. *Vocabulary: Description, acquisition and pedagogy*. Cambridge: Cambridge University Press