

BIG CUBE GAME: AN INSTRUCTIONAL MEDIUM USED IN STUDENTS' VOCABULARY MASTERY

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Abstract: The purpose of this research was to find out whether or not Big Cube was an effective medium to increase students' vocabulary mastery. The research was conducted at one State Junior High School (SJHS), South Tangerang, Indonesia. There were 40 students of grade 8 participated in this research. This study was a quantitative research with a pre-experimental approach design. In collecting the data, both pre and post-tests were used as the instruments. A manual statistical analysis of t-test revealed that the mean score gained by the participants in the pre-test was 60.62, while in the post-test, the mean score obtained was 78.75. These scores were then further calculated and revealed that t_0 (4.47) was higher than t-table at the significance level (p) of 0.05 (1.684). Thus, it can be concluded that the Big Cube game was an effective medium to increase vocabulary mastery of the eighth graders of Junior High School.

Keywords: *Big Cube Game, Teaching Medium, Vocabulary Mastery*

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INTRODUCTION

In the context of Teaching English as a Foreign Language (TEFL), vocabulary is considered as one of the complex language learning components that have to be mastered by English foreign learners due to its significance and use for communication. Vocabulary contributes to understanding written and spoken texts since those who learn vocabulary will not only gain new words but also the functions and applicability of those words (Viera, 2016). Vocabulary mastery will affect students' way of thinking and creativity in the language learning process so that the quality of their language learning can also be improved. As Alqahtani (2015) said that adequate bank of words should be owned by second language learners to impede effective and meaningful communication.

However, most students are still lack of vocabulary mastery. According to Saputra and Hadi (2019), the students experienced some problems in the process of mastering words in terms of interest, knowledge about word functions and appropriate teaching materials and media. The students will easily get bored and lost their interest during the learning process if they find something difficult and the teacher does not give them good motivation on why they need to possess sufficient words in learning a

language. While in relation to word functions, the students thought that discussing words is limited to knowing the meaning of those words only, while words should be used correctly based on their forms and functions. Regarding teaching materials and media, the factors such as inappropriate materials taught and teaching media utilized by the teachers will also hamper the process of learning new vocabulary. Therefore, teachers should do their best to solve these problems. Teachers must be well-prepared in delivering the materials in order to develop students' vocabulary mastery (Zaitun & Wardani, 2018).

Lucardie (2014) argued that fun and enjoyment do play a role in the learning process since having fun and enjoying experience are strong motivators that affect learners' outcomes. And using games and fun activities in vocabulary teaching assist students to be more active to create meaningful learning (Honarmand & Rostampour, 2014).

There were numerous studies being conducted to measure the effectiveness of games to increase students' vocabulary mastery. Romero (2012) proved that digital games gave satisfactory results to students' scores of English learning, including English vocabulary. The students achieved higher scores in the post-test. In 2016, Gruss applied games to teach English to young learners. After several weeks of her experimental research, she found out that students' vocabulary mastery improved in their post-test. They understood the lesson more and managed to increase their recent scores. The mixing of several games in the teaching of vocabulary was also conducted by Marius (2018) in his study. Simple games such as a puzzle, card-games, and story-telling were combined by him during the research to avoid boredom atmosphere. By the end of the investigation, the findings of the study revealed that students' post-test scores were better than their pre-test; besides, they also became more active in learning the subject discussion. Another study that measured the effectiveness of game was also carried out by Saputra and Hadi (2019). They applied "Fly Swatter Game" to improve students' mastery of English vocabulary. Their research concluded that this game was effective to be implemented because students performed better on their post-test than the pre-test and they were also able to understand the lesson faster.

The previous research, including those aforementioned above, explored various games except 'Big Cube', a game named according to its shape. The writers proposed this game be used as vocabulary teaching medium in conducting this experimental study. The idea of creating this craft was to change the atmosphere of the learning process by providing the students with something that can promote their active engagement and motivation through interesting instrument. This Big Cube was filled by several pictures and names of each picture to be played in a group like the word-guessing game. Mart (2012) described that guessing the meaning of new words and deducing the meaning of context help more to improve vocabulary. Meanwhile, Jazuli et al. (2019) explained that colourful picture-game is easy to be remembered by the pupils since these young learners are more interested in visual pictures.

Therefore, the purpose of this research was to find out whether or not Big Cube, as one of the games proposed by the writers, was an effective medium to increase students' vocabulary mastery. In this pre-experimental study, Big Cube was designed and created and also applied as vocabulary teaching and learning medium to 8 graders. This means were used as the main instrument to play 'words and pictures guessing' game by involving all 40 learners as the subjects of the research.

METHODOLOGY

Subjects

The research was conducted at one State Junior High School (SJHS) in South Tangerang, Indonesia in the second semester of 2019/2020 academic year. The method applied was quantitative with a pre-experimental design. Creswell (2014) gave his best opinion that 'quantitative' is a research methodology used by researchers to measure related quantification analysis of variables through the statistical calculation to get the results. In addition, he also explained that a pre-experimental design refers to research includes pre-test, treatment, and post-test.

A total number of 40 students of grade 8 became the subjects of the research. This sample was chosen through the technique of cluster random sampling in which this one class was randomly selected out of 10 classes of the whole class of 8th graders. Wilson as cited in Taherdoost (2016) defined cluster random sampling as a technique of selecting a sample from a randomly selected group as a population.

Design and Procedures

As it was previously described, a medium called 'Big Cube' was used as a game in the instructional process of vocabulary to 40 students of grade 8. First, the materials related to the subject discussion were firstly prepared. From those materials, the several words were chosen and the pictures to represent each of the words were made. The words were names of food, animals, things, and adjectives. These various words were then put into the cube to be played by the teacher (who was also the writer of this study and the class.

In playing the game, the following procedures were applied:

- 1) The teacher prepared the words and pictures in the Big Cube related to the subject matter to be discussed.
- 2) The teacher explained to the class about the competencies to be achieved from the lesson.
- 3) The teacher grouped the students into 4; each group consisted of 10 individuals.
- 4) The teacher explained the techniques and procedures to play the game.
- 5) The teacher invited one group and all its members to guess the words in turn.
- 6) The teacher started to drop the Cube and asked the group members one by one to guess any word fell.
- 7) If one member guessed the words correctly and related to what was on the Cube, this group got scores; and however, if their guessing was wrong, then another member should try again until the group got the score and all participants got their turn.

Data Collection and Analysis

In collecting the data, both pre-and post-tests were used as the instruments. The pre-test was held in order to measure students' prior mastery of vocabulary, while the post-test was carried out to see the progress the learners made after six meetings of the treatment. Both tests comprised of 20 questions which were divided into two sections. The first section was multiple choice type of 'choosing correct word' while the other section was completing sentences. The materials were related to Regular and Irregular verbs in the simple past tense. The students were given 30 minutes

maximum to accomplish each session of the test, pre and post-test. Each correct answer was converted to 5 points; hence, totally correct answers of those 20 questions got 100 of the score.

The effectiveness of the 'Big Cube' game was concluded from the comparison between students' scores both in those tests. If the students reached higher scores in the post-test, then it could be interpreted that the 'Big Cube' game used as a teaching medium in the pedagogical process of increasing the 8th graders' vocabulary mastery was effective. The calculation of t-test at the significance level of 0.05 was applied in finding statistical results of the students' tests' achievements. The numbers analysed by using this formula were based on the mean scores of those two tests. The final results of students' test results were concluded after the value of that being compared to that of the t_{table} at the significance level of 0.05. If t_{cal} value was higher than t_{table} , then the hypothesis was accepted, and vice versa.

FINDINGS AND DISCUSSION

This research applied a quantitative study with pre-experimental research design. The instruments used to collect the data were pre-test and post-test. The following table 1 showed the lowest, highest, and mean scores gained by the students at those two tests:

Table 1. Students' Pre and Post-tests Scores

Tests	Lowest Score	Highest Score	Total Score	Mean Score
Pre-test	45	90	2425	60.62
Post-test	65	100	3150	78.75

N = 40

It can be seen from Table 1 above that the total score reached by the students in pre-test was 2425, with the mean score of 60.62. The lowest score gained was 45, and the highest one was 90. While in the post-test, total score hit by the students in post-test was 3150, with an average of 78.75. The lowest score achieved was 65, and the highest one was 100.

The description of students' achievements confirmed that only one student was in the category of 'excellent' (2.5%), nine students were at 'enough' level (22.5%), 30 students were 'poor' (75%), and no student was at the ranks of 'good' and 'very poor.' From the post-test, the results revealed that three students were categorized as 'excellent' (7.5%), 20 students were included to 'good' level (50%), 14 students were at the rank of 'enough' (35%), three students were 'poor' (7.5%), and none of them performed 'very poor'.

The results of the t-test calculation showed that t_{cal} 4.47 and t_{table} with degrees of freedom (df) 40 obtained 1.684. The significance value was less than 0.05 and $t_{cal} > t_{table}$. This gave the meaning that the research was considered valid or successful and the hypothesis was accepted. In other words, there is a significant improvement between before and after students learned by applying Big Cube Game.

The results above reveal that Big Cube Game could be an alternative in teaching vocabulary mastery. The Big Cube Game is pretty attractive for the eighth graders as it provides colorful pictures (Jazuli et al, 2019). The eighth graders were generally visual learners who took advantage from visual medium when learning vocabulary. Besides, activity in using Big Cube Game allows students to guess meaning of new

words and then construe the meaning of the context (Mart, 2012). This mechanism assist the students' vocabulary development. This study also confirms that game (Big Cube Game, Fly Swatter Game, Digital Game, or other simple games are still preferred for teaching English vocabulary since it is successful in supporting students' learning.

CONCLUSION AND SUGGESTIONS

The research aimed to prove whether or not Big Cube, as one of the games used in the process of vocabulary teaching and learning at one class of grade 8 of one State Junior High School (SJHS) in South Tangerang, Indonesia, was effective to increase students' vocabulary mastery. The results of both pre-and post-tests showed that the students reached higher mean score (78.75) in the post-test compared to the one they achieved in the pre-test (60.62).

Besides, the statistical analysis of t-test also revealed that the results of t_{cal} were 4.47 and t_{table} with degrees of freedom (df) 40 obtained 1.684. The significance value was less than 0.05 and $t_{cal} > t_{table}$. From these findings, it can be concluded that Big Cube, as one of the games, was an effective instructional medium in increasing 8-grade students' vocabulary mastery.

This research confronted many barriers, and the most significant one was the pandemic of Covid-19, in which the writers must do the experiment fully online. Thus, it is strongly suggested for further researchers who are interested in doing similar research to investigate the effectiveness of this game applied in the real classrooms. The participation of the students while playing the game will be more optimum since they will be engaged actively.

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