THE EFFECT OF COMPUTER-ASSISTED HIDDEN OBJECT GAME ON VOCABULARY MASTERY OF STUDENTS IN SMP N 3 SUKASADA ACADEMIC YEAR 2017/2018

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui apakah ada pengaruh yang signifikan terhadap kemampuan menguasai vocabulary Bahasa Inggris siswa kelas VII yang diajar dengan Computer-Assisted Hidden Object game. Penelitian ini merupakan penelitian eksperimen semu. Sampel penelitian diperoleh dengan cara random sampling dan diperoleh kelas VII B di SMP Negeri 3 Sukasada sebagai kelompok eksperimen dan kelas VII C di SMP Negeri 3 Sukasada sebagai kelompok kontrol. Kelompok eksperimen diajar dengan menggunakan Computer-Assisted Hidden Object game, sedangkan kelompok kontrol diajar dengan menggunakan strategi konvensional. Instrumen yang digunakan dalam penelitian ini adalah post-test dalam bentuk tes pilihan ganda. Penelitian experimen ini mengimplementasikan desain penelitian post-test only control group. Data yang diperoleh kemudian dianalisis secara deskriptif dan inferensial. Hasil penelitian menunjukkan bahwa kelompok siswa di kelas eksperimen mampu menunjukkan hasil yang lebih baik daripada kelompok siswa kelas control. Hal ini dapat dibuktikan dari hasil t-test dimana nilai tobs adalah 3.3883, sedangkan nilai tov adalah 1.677 (tobs > t_{cv}). Hal ini berarti bahwa penggunaan Computer Assisted Hidden Object game mampu memberikan pengaruh yang signifikan pada kemampuan menguasai vocabulary Bahasa Inggris pada siswa kelas VII SMP.

Kata-kata kunci: Computer Assisted Hidden Object game, game vocabulary, penguasaan vocabulary

ABSTRACT

This study aimed to investigate whether or not there was a significant effect on the use of Computer Assisted Hidden Object game towards the seventh grade students' vocabulary mastery. This study was a quasi experimental study. The sample of this study was administered using random sampling technique and concluded that VII B students as a experimental group while VII C students as a control group. The experimental group was taught by using *Computer-Assisted Hidden Object* game, while the control group was taught by using conventional strategy. The instrument used in this study was post-test in a form of multiple choice test. This experimental research implemented post-test only control group design. The obtained data were analyzed descriptively and inferentially. The result showed that the group of students in experimental group could perform a better result rather than the group of students in the control group. It could be proven from result of the t-test in which the tobs was 3.3883, meanwhile the t_{cv} was 1.677 (t_{obs} > t_{cv}). It means that the use of *Computer-Assisted Hidden Object* game gives significant effect toward the seventh grade junior high school students' English vocabulary mastery.

Key words: Computer Assisted Hidden Object game, vocabulary game, vocabulary mastery

INTRODUCTION

Word knowledge in learning a language is very important because it will make people understand the meaning of something. According to Hornby (1974, as cited in Algahtani 2015), vocabulary is the total number of words which makes up a language. Further, Nation (2001) explains that vocabulary plays a vital role which can make the children could speak, listen, read, and write. In line with this statement. vocabulary learning is also integrated in four learning skills. Thus, the students have to develop their vocabulary mastery from the early age. If the students do not know the vocabulary, students cannot master the language. Algahtani (2015) also states that it is almost impossible for students to learn a language without words.

Students in Indonesia learn English as a foreign language. They learn English because English is one of the most important subjects in Indonesia which exists in the curriculum. According to Indonesian Republic Law number 20 year 2003 about the national education system in article 37, it is stated that foreign language especially English is an international language which is very important to be acquired and useful in the global association. However, EFL students still have problem in learning English. One of the common problems of the EFL students is memorizing the word meanings (Thuy, 2013). They are hard in memorizing the words because English is new for them and it is not their native language. Thus, the students have to be taught about how to learn English Vocabulary effectively by the teacher.

Teacher has a responsibility to make students acquire English vocabulary effectively. In Junior High School, the students categorize as children. This statement supported by Harmer (2006) who states that students in the age between 2 -14 are still categorized as children. Thus, teachers need to consider about the way to teach the appropriate vocabulary items that will be learned by students in Junior high school level so that they can develop their knowledge about vocabulary. Williams and

Burden (1999 as cited Gomez, 2010) state that children only understand concrete aspects and topics rather than abstract ones. Thus, the teacher of Junior High school students have to teach vocabulary in a concrete aspect. There are nine effective techniques for teaching vocabulary according to Brewster, Ellis, and Girard (1992). They are teaching by using object, using drawing, using illustration and pictures, using contrast, using enumeration, using mime, expression and gestures, using guessing from context, using eliciting and using translation. All of those techniques are effective to be used for teaching vocabulary. Besides, teacher can also integrate those techniques by using game strategy. Lewis (1999 as cited in Bakhsh, 2016) argued that games are popular among children because they like to play.

Game is an activity which involves a person or a group of people to compete each other. Dalton (2005) states that game is a type of activity involving a competitive element and/or scoring (either of individuals or of teams). A game activity will make the students participate actively in the learning process. Besides, game will also make the situation in the class more attractive and not boring. Thus, by applying game in the class, students will have more attention in the learning process. Game also has many types. Hadfield (1999 as cited in Tuan, 2010) classified games into seven types, they are Sorting, Information gap games, Guessing games, Searching games, Matching games, Exchanging games, Board games and Role playing games. Those games can be implemented by using a computer to assist the teaching learning process. According to Prensky (2007) although computer and games are most often thought of as pure entertainment, it is important to understand that they are enormously powerful learning tools as well.

Computer-Assisted refers to mode of instruction in which a student directly interacts with a computer and learns through lessons programmed into the computer (Bhalla, 2013). Thus, by using computer-assisted game, the students could lean the material by playing a game in a computer. Taylor (1980 as cited in Bhalla, 2013) believed that the computer can be used as a tutor to teach students, as a tool for students to use as they would use other educational tools, and as a tutee that students can teach to programme instructions in a computer. The game that is used in this study is Hidden Object Game in which Hidden Object Game will be assisted by using computer.

Hidden Object Game is a game which uses a picture as the main media. Oei (2013) states that hidden object game is a game about finding any objects in a picture which are often camouflaged among other objects to reduce saliency. He also states that in this game the players are instructed to point the object on the picture when they locate it. Hidden Object Game can be said as an effective strategy because it can increase students' willingness to try this game or it can be said that it will motivate students to learn in a fun way. This statement supported by Feng, Dong, Wang & Yan (2012) who states Hidden Object Game can make the people enjoy playing the game because it inserts localizing object into enjoyable playing game process and it attracts many people to try the game. Hidden object game can be categorized as illustration and picture vocabulary teaching technique based on Brewster et al.(1992). Hidden object game is also one type of searching game based on Hadfield (1999 as cited in Tuan, 2010).

Hidden object game can be said as an education game. A study about it was conducted by Saleh in 2013. He made an educational game which is called Hidden Object for Kindergarten. The result of his study is the game was able to make kindergarten children recognize and distinguish each of the surrounding objects and increase memory of children. Another study was conducted by Feng et al in 2012. His study is about making a design of purposive hidden-object-game (P-HOG), which imperceptibly embeds localizing objects into enjoyable playing game process and thus attracts many people to make voluntary contribution to annotating images. The result shows that the P-HOG appeals to

general players, and is effective for collecting massive object locations with satisfactory accuracy, which further boosts the algorithmic performances for both tag refinement and image annotation tasks.

Based on the previous studies related to Computer-assisted Hidden Object Game. It was found that the game was done in kindergarten level and university level. The researcher did not find any other study about computer-assisted hidden object game in junior high school or SMP level. SMP N 3 Sukasada is one of junior high schools in Singaraja. SMP N 3 Sukasada has also never used this game. SMP N 3 Sukasada only used non-ICT game based learning. The English teachers in SMP N 3 Sukasada were familiar with several media by using picture and illustration in teaching learning process. Therefore, this current study, Computer-assisted Hidden Object Game was implemented to the seventh grade students in SMP Negeri 3 Sukasada in order to find out the effect of Hidden Object Game whether hidden object game can give a positive effect upon students' vocabulary mastery. This study focused on the effect of computer-assisted hidden object game on vocabulary mastery of students in SMP N 3 Sukasada academic year 2017/2018.

RESEARCH METHODOLOGY

This study is an experimental study using post-test only control group design. This study is using random sampling technique. The sample of this study were selected randomly in which based on the result of the lottery, VII B class was determined as the experimental group and VII C class as the controll group. As the experimental group, VII B was treated using Computer Assisted Hidden Object game. Meanwhile, VII C class as the experimental group was treated using conventional way.

There were three kinds of instruments in this research, namely instrument for collecting data, instrument for supporting data and instrument Try-Out. The data collection instrument in this research was post-test which is used to measure the effect of computer-assisted hidden object towards students' vocabulary mastery in both control group and experimental group. This test was proposed in order to measure students' vocabulary mastery after doing different treatment to each group samples. The post-test is in the form of multiple choices test.

Teaching scenarios (lesson plan) is used as the instrument for supporting data. It is used to support and guide the researcher in giving treatment to both control group and experimental group. The researcher used try out test in order to determine the validity and reliability of the post-test items. The researcher conducted the try out test in the same school but different class which was not belonging to the sample of the research. In addition, tryout instrument was in the form of test which was made by researcher considering the certain topics in the syllabus, time allotment, students' grade, basic competence, material, and indicators of the learning. After giving the treatment, both groups were given post-test. The result of the post-test was analyzed using t-test to figure out whether there was a significant effect on the use of Computer Assisted Hidden Object to 7^{th} the students' English vocabulary mastery.

RESULT AND DISCUSSION

After conducting the post-test after the treatment, the researcher furthermore analysed the students' score. Below is the table of the students' vocabulary mastery of both experimental and control group seen from the mean, median, mode, variance, standard deviation, minimum score, and maximum score.

Table 1. Students' vocabulary mastery

Group	Statistic		
Experimental group	Mean	74.56	
	Median	73.00	
	Mode	83	
	Variance	106.673	
	Range	40	
	Minimum	53	
	Maximum	93	
	Std. deviation	10.328	
Control group	Mean	62.55	
	Median	60	
	Mode	60	
	Variance	132.661	
	Range	40	
	Minimum	43	
	Maximum	83	
	Std. deviation	11.518	

From the data above, the mean score of the students' English vocabulary mastery in experimental group was 74.56, while the mean score in control group had lower mean which was 62.55. Besides, the median of the students taught by Computer Assisted Hidden Object was 73.00 and the median of the students taught by conventional teaching media was 60. Moreover, the mode of the experimental group was 83 and the mode of the control group was 80. In addition, the variance of experimental group was 106.673 and the variance of control group was 132.661. Further, the result of standard deviation of experimental group was 10.328. Meanwhile, the standard deviation of control group was 11.518. In terms of minimum and maximum score, the experimental group also gained higher score than the control group. The minimum score of experimental group was 53 while the control group was 43. Furthermore, the maximum score of experimental was 93 and the control group was 83. Thus, it can be assumed that the experimental group achieved higher score than the control group. On the other hands, the experimental group achieved better achievement in learning English than control group.

The normality of the data was analyzed before doing independent t-test. In testing the normality of the data from posttest of both experiment and control group, the researcher used Kolmogorov-Smirnov statistic by using SPSS 21.0. Besides, the researcher should consider that the significance value of normal distribution was 0.05 (5%). Therefore, the result of Kolmogorov-Smirnov statistic should be beyond the significance value of 0.05 to be assumed that the data was normally distributed. The result of normality test of the variance using SPSS 21.0 can be presented in Table 2

Tests	of	Normality	v
10010	U.	Normant	y .

Croup		Kolmo Smii	goi no	rov- v ^a	Shapiro-Wilk		
GIOU	h	Statis tic	d f	Si g.	Statis tic	d f	Si g.
sco re	experim ent	.153	2 5	13 4	.960	2 5	41 0
	control	.148	2 5	16 3	.947	2 5	21 3

a. Lilliefors Significance Correction

The table above shows that the result of normality tests of both groups was having normal distribution since the significance value of experiment and control group was beyond the significance value of 0.05. The obtained data from normality test of experimental was 0.134 and the normality of control group was 0.163. Thus, it can be stated that the data of post-test from both groups were normally distributed.

In determining the homogeneity, the researcher was tested the data by using Levene statistic in SPSS 21.0 program. The data from experimental and control group can be categorized as homogeneous when the significant value of those data above 0.05. The result of the homogeneity test can be seen in Table 3

Table treatm	3 Result nent	of homo	genei	ty test at	fter
		Leve ne Stati stic	d f 1	df2	Si g.
sc ore	Base d on Mea n	.421	1	48	52 0
	Base d on Medi an	.328	1	48	57 0
	Base d on Medi an and with adjus ted df	.328	1	47.0 47	57 0
	Base d on trim med mea n	.413	1	48	52 4

The table shows that the result of homogeneity test was higher than significance value of 0.05. The significance value based on mean was 0.520, based on median was 0.570, based on median and adjusted degree of freedom was 0.570, and based on trimmed mean was 0.524. From

these result, the data can be categorized as homogeneous in terms of variance. It means that the independent t-test can be conducted to make the generalization whether or not Computer-assisted hidden object game gives a significant effect towards the seventh grade students' Vocabulary mastery in SMP N 3 Sukasada in academic year 2017/2018.

The alternative hypothesis proposed in this research was "there is significance effect of using Computer Assisted Hidden Object game on students' vocabulary mastery". If the significance (two tailed) calculated is smaller than 0.05, then Ha is

Table 4. Result of independent t-test

		Le er Te fo Ec ali c Va ar e	ev set or qu ity ari s	t	-tes	t fo №	r Eq lean	uali IS	ty o	of
		F	Sig.	t	df	Si g. (2 - tai le d)	M ea Di ff.	St Er ro Di ff.	95 Co Int al th Dif en Lo w er	5% onfi nce erv of fer nce Up pe r
S	Equ al vari anc es ass um ed	4 2 1	5 2 0	3. 8 3	48	00 0	12 .0 14	3. 0 9 4	5. 7 9 3	18 .2 35
c or e	Equ al vari anc es not ass um ed			3. 8 8 3	47 .4 41	00 0	12 .0 14	3. 0 9 4	5. 7 9 1	18 .2 37

accepted. The result of t-test can be seen in Table 4.

Considering the results of two types of analysis that had been conducted by the researcher, it can be concluded that there was a significant effect on the use of Computer Assisted Hidden Object game toward seventh the grade students' vocabulary mastery. This consideration was proven by the data above that the students' mean scores of the experimental group were higher than those in the control group. Hence, by considering that fact, the statistical hypothesis of this study that was "Computer Assisted Hidden Object game" can be accepted.

CONCLUSION AND SUGGESTION

This study was conducted to investigate the use of ICT game for learning English especially English vocabulary by using computer-assisted hidden object game in SMP N 3 Sukasada. Therefore, the purpose of this study is to investigate whether or not there is a significant effect on the use of computer-assisted hidden object game toward seventh grade students' vocabulary mastery of SMP N 3 Sukasada in academic year 2017/2018. The design of this study was a quasi-experimental research which used post-test only control group design. The population of this research was the seventh grade students of SMP N 3 Sukasada in academic year 2017/2018. The samples of this study were 25 students of VIIB in SMP N 3 Sukasada and 25 students of VIIC in SMP N 3 Sukasada which was selected using simple random sampling technique. The findings showed that the mean score of experimental group was higher than the control group (74.56>62.55). Besides, the result of hypothesis testing (independent ttest) showed the tobs was 3.3883 and tcv= 1.677 with ($\alpha = 0.05$) which means that there is a significant effect of computerassisted hidden object game towards the students' vocabulary mastery. The result of findings and discussion of the data analysis in this research showed that Computerobject game assisted hidden gives significant effect on Vocabulary mastery of the seventh grade students in SMP N 3

Sukasada academic year 2017/2018. It is already supported by the result of descriptive and inferential statistics analysis. The descriptive analysis indicates that the mean score of VIIB which was taught by using Computer-assisted hidden object game was 74.56, while the mean of VII C which was taught without using Computerassisted hidden object game was 62.55. It can be inferred that the mean score of the VII B (experimental group) was higher than VII C (control group), which means the experimental group could achieve better achievement rather than the control group related to the mean score both groups.

More importantly, based on the inferential analysis which conducts the hypothesis testing (independent t-test) showed that the t-observed of the data was higher than the t critical value. The researcher found that the comparison between t-observed and t critical value was 3.3883 > 1.677. It means that the value of t-observed was higher than the value of t critical value. Moreover, the significance value of the data was 0.000 < 0.05. Thus, these findings proved that there was a significant effect of Computer-assisted hidden object game on students' vocabulary mastery

In conclusion, Computer-assisted hidden object game affected significantly the seventh grade students in SMP N 3 Sukasada academic year 2017/2018. The students who were taught by using Computer-assisted hidden object game in teaching English achieve better vocabulary mastery than those students who were taught without using conventional game. It can be concluded that Computer-assisted hidden object game are useful in teaching learning process which provide enjoyable activity and make them easier memorizing the vocabulary.

Referring to the results of this current study, there are a number of suggestions which can be proposed by the researcher as the following.

Firstly, it is expected that the result of this study can be used to enrichment computer-assisted game in supporting English teaching and learning process that emphasize on the interesting and fun activity which provides the students learning through enjoyable environment, such as by providing Computer-assisted hidden object game.

Secondly for the students, it is expected that the result of this study can give benefits to students in improving vocabulary mastery by using Computerassisted hidden object game.

Thirdly, it is expected the result of this research can be used as a reference for further similar research related to the use of computer-assisted game in teaching English to improve students' English vocabulary master.

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