

THE EFFECT OF E-CALF ON THE FIFTH GRADE STUDENTS' READING COMPREHENSION AT SD LAB UNDIKSHA

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Abstrak

E-CALF adalah akronim dari electronic-Contextual, Attractive, Logic, and Fun – sebuah permainan elektronik yang dikembangkan sebagai media pembelajaran untuk memfasilitasi pemahaman membaca siswa. Penelitian ini menerapkan post-test only control group sebagai desain. Populasi dari penelitian ini adalah siswa kelas 5 SD Lab Undiksha. Terpilih 12 orang siswa dari kelas 5A sebagai kelompok eksperimental dan 12 orang dari kelas 5B sebagai kelompok kontrol. Data dikumpulkan menggunakan instrumen post-test dalam bentuk pilihan ganda. Dari hasil analisis SPSS diperoleh hasil bahwa nilai rata-rata pemahaman membaca siswa kelompok eksperimental lebih tinggi dari pada nilai rata-rata pemahaman membaca siswa kelompok kontrol.

Kata kunci: permainan digital, e-CALF, pemahaman membaca.

Abstract

e-CALF is an acronym for Electronic-Contextual, Attractive, Logic, and Fun - an electronic game developed as a learning medium to facilitate students' reading comprehension. This study aims to determine the effect of e-CALF on the reading comprehension of grade 5 elementary school students at SD Undiksha Lab. This study applies a post-test only control group as a design. The population of this study was the 5th grade students of Undiksha Elementary School. Selected 12 students from class 5A as an experimental group and 12 people from class 5B as a control group. Data were collected using a post-test instrument in the form of multiple choice. From the results of the SPSS analysis, the results showed that the average reading comprehension of the experimental group students was higher than the average reading comprehension of the control group students.

Keywords: e-CALF, digital game, reading comprehension

1. INTRODUCTION

The use of digital games have been very crucial nowadays. It is used as the learning media for supporting the teaching-learning process. As the learning media, they are not only effective because of what they are, but because of what they embody and what learners are doing as they play a game (Eck, as cited in Fitri, 2013). Digital games create environment where education is mostly learner-centered, with a good opportunity for socialization when they are well-organized. Students think and understand better when they learn something they have familiar with. Digital games provide opportunities to continue practice despite repeated failure. It means that through using digital games for learning, the students can repeat to play the game if they failed so that the students learn from their mistakes.

As mentioned above that digital game is used for education, for instance in teaching and learning language such as English. This is in line with the opinion stated by Korkmaz (2013) that teaching English through digital games is one of the best ways to provide entertainment when learning a language. Learning language deals with learning of how to speak, listen, read, and write. The most crucial skill the students should be able to have is reading comprehension.

According to Duke in Gilakjani&Sabouri (2016), reading comprehension is a process in which readers make meaning by interacting with text through the combination of prior knowledge and previous experience, information in the text and the views of readers related to the text. The purpose of reading comprehension is to get an understanding of the text rather than to acquire meaning from individual words or sentences. Reading will be a more meaningful process if it is taught by using interesting media. Because the students will be more enthusiastic and will remember the information in their long term memory. So that learning through digital games will promote a new learning environment for the students.

In addition, learning English also deals with vocabulary and structure of language. Masri&Najar (2014) add that the use of games in learning vocabulary cannot be denied. Learning vocabulary will be easier and more fun by using games. So that the use of digital games is important for learning language.

Furthermore, digital games were beneficial for students in number of way. Felicia (2009) indicates that the use of digital games can foster the students' cognitive skill, ICT skill, and motor skill. She adds that digital games can be used to learn more complex structure such as grammar. It can increase the students' confidence by providing challenging learning environment. Digital games can involve the students' emotions when learning.

Since learning English is fun by using games, thus Mahayanti (2017) conducted a study to develop media which can be used to facilitate group work learning. The media is called CALF. This media is the foundation in the creation of e-CALF itself. Mahayanti et al. (2019) defines e-CALF as electronic, contextual, attractive, logic, and fun learning media that was developed for facilitating reading comprehension. The game was developed in form of prototype which had an excellent quality based on expert judgment. The game was developed for every grade of elementary students, and one of them is for the 5th grade.

Gunottama (2018) argued that the e-CALF for the 5th grade was designed with four topics which were related with the students' English subject at classroom. In each topic of the game, the students have to pass 6 levels. In first-two levels, the students have to answer question about vocabulary. In next-two levels the students have to answer fill in the blank questions. Then, in the last-two levels, the students have to answer questions related with passages given.

The present study aimed at investigating the effect of e-CALF on the 5th grade students' reading comprehension at SD Lab Undiksha. This school was selected as the place for conducting study because the students in this school had not used digital games in their learning yet. The digital game e-CALF was used as the media for giving treatment to the experimental group. In addition, the teacher also wanted to improve the students' reading comprehension.

2. METHOD

This quasi-experimental study employed posttest only control group. The sample of this study was the fifth grade students in SD Lab Undiksha. The sample was selected by using random sampling. The students in 5A were selected as experimental group and students in 5B were selected as control group. The purpose of this study was to know whether there is any significant effect on the use of e-CALF for the 5th grade students' reading comprehension. The study administered posttest instrument in form of multiple choices to collect data. The students' were given treatment in 4 meetings and after that they were given posttest. The post-test was given to both group to know whether there is any significant effect on the use of e-CALF. The data that were obtained from the posttest were analyzed by using SPSS 24.00. This research had null and alternative hypothesis. The null hypothesis is the is no significant effect on the use of e-CALF for the 5th grade students' reading comprehension and the alternative hypothesis is there is significant effect on the use of e-CALF for the 5th grade students' reading comprehension.

3. FINDING AND DISCUSSION

The treatment of for the groups was given in 4 meetings. In each meeting the students played different topic of the game. In the first meeting, the students played the first topic of the game which is about public places. In this topic, the students found six levels. Each level promotes different challenge. The first level asks students to answer question based on picture given. They are asked to match picture with the answer. This level is about vocabulary building. In the level 2, the students are still asked to answer the same type of question namely vocabulary. In the third and fourth level the students are asked to answer fill in the blank questions. Then, in the fifth and sixth level the students were asked to answer questions related with the text or passage given in each level.

In second meeting, the students played the game with the second topic of the game. It is about things and transportation. As well as the first topic, this topic also consists of 6 levels. Then, in the third meeting, the students are asked to played the third topic of the game which is about family tree. And in the last meeting, the students are asked to played the last topic of the game which is about descriptive job of people.

After the experimental group was given treatment, then the posttest was administered to the experimental and control group. The results of the students' posttest were compared to look for whether there is any significant effect on the use of e-CALF for the 5th grade students' reading comprehension. The posttest was in form of multiple choice as much as 20 items. The items of the posttest were developed based on the topics of the game.

After the posttest was done, descriptive and inferential analysis were conducted to analyze the data. The analysis was done using SPSS 24.

The result of the posttest for the groups is presented in Table 1.

Table 1. The Result of Students' Posttest

N	Group	
	Experimental	Control
Student 1	70	65
Student 2	95	70
Student 3	100	75
Student 4	95	75
Student 5	80	70
Student 6	85	65
Student 7	95	85
Student 8	70	80
Student 9	95	75
Student 10	80	90
Student 11	90	80
Student 12	75	85

The table above shows the result of the students' posttest. The highest score of the experimental group is 100 and the lowest score is 70. Meanwhile, the highest score of control group is 90 and the lowest score is 65. The result of the students' posttest was analyzed by using SPSS. The result of posttest can be seen in Table 2.

Table 2. The Result of Posttest Analysis

Group	Mean	Median	Mode	Range	Variance	Standard Deviation
Experimental	85.83	87.50	95.00	30.00	112.879	10.624
Control	78.25	75.00	75.00	25.00	64.205	8.0127

From the table above the mean for the experimental group is 85.83. The median is 87.50, the mode is 95.00, the range is 30.00, the variance is 112.879, and the standard deviation is 10.624. Meanwhile, the result of the mean of the control group is 78.25. The median is 75.00, the mode is 75.00, the range is 25.00, the variance is 64.205, and the standard deviation is 8.0127. In addition, t-

test analysis is also conducted to measure whether there is significant effect on the use of e-CALF for the students' reading comprehension. The result of the t-test can be seen in Table3.

Table 3. The Result of Independent t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Score	Equal variances assumed	2.205	.152	2.495	22	.021	9.583	3.841	1.617	17.550
	Equal variances not assumed			2.495	20.455	.021	9.583	3.841	1.582	17.585

From the table above, it can be seen that the value of the Sig. is .152. The value of the t_{obs} is 2.495 and the df is 22. The value of the Sig. (2-tailed) is .021. This value is lower than the level of standard ($\alpha=.05$). This value means that there are significant difference on the mean score between experimental and control group. Moreover, to determine the hypothesis, first of all the value of the t_{obs} and t_{cv} were compared. The value of the t_{cv} is determined by looking at the df. The t_{cv} for df 22 is 2.086. The value of the t_{obs} is higher than the t_{cv} . This value indicated that the H_0 is rejected and the H_a is accepted. Thus it can be concluded that there is significant effect on the use of e-CALF on the 5th grade students' reading comprehension.

This result means that there is significant difference on the mean score between the experimental and the control group. This result meant that the treatment that was given for the experimental group gave any effect to the students' reading comprehension in experimental group. The result of this research supported the experimental research conducted by AlNatour

&Hijazi (2018) that resulted there was any significant difference between the experimental group and control group after the experimental group was treated by using online games in form of digital.

Furthermore, the result of this research also indicated that the use of digital game in learning environment had successfully influenced the students' achievement for the experimental group rather than using traditional teaching method that was employed to the control group. The result of the study indicated that using different learning media is more attractive than using conventional learning media such as whiteboard, picture, or flashcard. This was in accordance with the previous research

administered by Kao (2014) which resulted that the use of digital game learning task in English was more effective than using traditional teaching method such as grammar translation method or audio lingual method.

In addition, the since the game is also promoted learning vocabulary because two of the levels in game contain vocabulary mastery. Unconsciously, the students' vocabulary mastery is also increased by using e-CALF game itself. It is in line with the research conducted by Jafarian&Shoari (2017) that resulted the use of digital game increased the students' word acquisition because it promoted the atmosphere of making relaxed, enjoyable, less stressful, and cheerful.

As the consequence of applying e-CALF for the 5th grade students, it obviously affected the reading comprehension as well as the students' vocabulary mastery unconsciously. Then, the use of e-CALF in helping the learning is highly recommended since it has successfully affected the groups of the study.

4. CONCLUSION

After the implementation of the e-CALF game, the students in both group were given post-test. The result of the post-test showed that there was any significant effect on the implementation of e-CALF toward the 5th grade students' reading comprehension. It was seen from the value of the t_{obs} compared to the value of t_{cv} , $2.495 > 2.086$. This result meant that the e-CALF game was effective in influencing the students' reading comprehension. It might be because the students found that using e-CALF was an interesting learning activity. The design and the learning material which formed the game made the students more passionate in learning English using e-CALF.

IMPLICATION

The present study has some points that are to be taken into consideration that the use of conventional learning media nowadays is less attractive, so that the educators must make revolution by applying digital learning media such as digital games. This study recommends applying digital game e-CALF as learning media because it can increase the students' reading comprehension and vocabulary mastery as well.

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