The Influence of Using Duo Lingo Games Toward Students'
Vocabulary Mastery at the Seventh Grade of SMPN 2 Kota Serang

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THE INFLUENCE OF USING DUO LINGO GAMES TOWARD STUDENTS' VOCABULARY MASTERY AT THE SEVENTH GRADE OF SMPN 2 KOTA SERANG

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ABSTRACT

The objective of the research was to find out The Influence of Using Duo Lingo Games. In this research, the researcher conducted quantitative method by implementing true experimental design. The population of this research all of the students of seventh grade at SMPN 2 Kota Serang, and the sample were the students of VII B as experimental class and VII C as control class. The classes were chosen by cluster random sampling. The instrument used in collecting the data was test, In analyzing the data the researcher used T-test. The result of the calculation showed that in the significance degree of 5% was t_{count}(4,61) was higher than t_{table}(1,99). It means the null hypothesis (Ho) was rejected and alternative hypothesis (Ha) was accepted and it can be seen score of experimental class is higher than those of control class. Therefore, it can be concluded that Duo Lingo Game is effective on the students' vocabulary mastery text at the seventh grade of SMPN 2 Kota Serang. Based on the findings, it can be concluded that mobile game especially Duo Lingo Game can be implemented in teaching vocabulary mastery.

Keyword: Vocabulary; Mobile Game; Duo Lingo; True Experimental

INTRODUCTION

One of the important components of language learning is comprehension of vocabulary. To learn English language, firstly student must know a lot of words. Mastery of a language begins with the mastery of vocabulary. Moreover, in learning foreign language, students are demanded to use the language properly. It is supported by Azar (2012:256) states that in order to communicate well in a foreign language, students should acquire an adequate number of words and should know how to use them accurately.

Some problems can be identified as follows: The students have difficulties to memorizing English vocabulary, the students feel bored while the teaching learning process and the last is the students only have limited time to learn English in the class.

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As explained in the identification of problem, the researcher limited the problem only to analyze the influence of Duolingo games toward students' vocabulary mastery at the seventh grade of SMPN 2 Kota Serang. And In accordance with the limitation of the problem above, the researcher conducted a study to answer the following question: Is there any influence of using Duolingo games toward students' vocabulary mastery at seventh grade of SMPN 2 Kota Serang?

THEORETICAL FRAMEWORK

Vocabulary mastery plays an important role in learning a language. There were some definitions of mastery that are proposed by expert. Swammel (1994:656) defines mastery as comprehensive knowledge. This definition is supported by Homby (1995:721) who state that mastery is complete knowledge or complete skill. From explanation above mastery means the students having abiliy in understanding and using vocabulary. Vocabulary it self deals with words and meaning.

In learning vocabulary automatically we have to know the meaning of words itself and can use it in sentences. Richard and Renandya (2002:225) state that vocabulary is a core component of language proficiency and provides much of the basis how well learner speak, listen, read, and write. The definitions above shown that vocabulary is very important component in language, because word could not separate in study one language. Thornbury (2002: 3) states that knowing how words are described and categorized can help us understand the decisions that syllabus planners, materials researchers and teacher make when it comes to the teaching of vocabulary. There are some kinds of vocabulary: Noun, Pronoun, Adverb, Adjective, Verb, Preposition, Determiner, Conjuction and etc.

Concept of Teaching English Vocabulary

While conducting teaching, the teacher has to manage the classroom well. It can be done by planning some activities that make students enjoy, comfortable, convenient and interesting in learning vocabulary. One of those activities is game. The meaning of game was interpreted by some experts in many ways. Wright (2006:1) said that game is an activity which is entertaining and engaging, often challenging, and an activity in which the learners play and usually interact with others. Game is also defined as an "activity with rules, a goal, and an element of fun" (Hadfield, 1990: 5). It can be concluded that game is an enjoyable and competitive activity which has rules and goals and even relax the people who played it.

In learning new language, learners usually find difficulties in memorizing and using new vocabularies in context. Related to that issue, games can be used as media for language learning. According to Aglahra and Tamjid (2011: 2) educational games are software that helps students to learn the lesson subjects and to develop their problem solving skills by using their desire and enthusiasm to play. Teacher's role is needed to connect suitable game which can educate students and to give vocabulary learning indirectly.

The emerging of mobile phone in this digital era has changed its function not only for doing communication but also for providing information, learning, entertaining and so on. It is

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in the line with Valarmathi (2011) said that mobile phones can support many kinds of learning, including language learning and mobile technologies offer numerous practical uses in language learning. the researcher try to find what kind of that technology which is appropriate with Indonesian's learner in learning vocabulary. The answer is a game, more precisely is mobile game. In this case, the researcher choose Duo Lingo Game as a software for learning vocabulary.

Duo lingo is a free language-learning website. It is designed so that as users progress through the lessons, they simultaneously help to translate different websites and other documents. According to Jaskova (2014:15) Duolingo is seen as a future in learning languages and in global communication. Students work with the program and get a chance to explore all the skills in English. Although the content of the software is not suited to the students' cultural background, it engages students in a very interesting way that can motivate them.

RESEARCH METHODOLOGY

In this research the researcher used quantitative approach with true experimental design as a method. According to Hatch and Farhady (1982:22) true experimental design that would differentiate between experimental group and control group.

The research design would be:

G1	T1	X	T2
G2	T1	O	T2

Notes:

G1   : Experimental Group
G2   : Control Group
T1   : Pre-test
T2   : Post-test
X   : Treatment
O   : No Treatment
(Hatch and Farhady 1982:22)

The researcher used test as a technique to collecting data to find out the result of the research. The researcher used pre-test and post-test to get some important data of the research. Pre-test conducted before the treatments. The purpose was to found out the influence of using Duo Lingo game toward students' vocabulary mastery before treatment. Meanwhile, post-test was conducted after the treatment. It taken as measurement tool as measure students' vocabulary mastery achievement after the treatment. According to Sugiyono (2009: 308), data collecting technique is the most strategic step in a research. It was because the main objective of the research was obtaining the data. Without the technique of collecting the data, the researcher would not obtain the data that fulfill the standardization of collect the data.

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RESEARCH FINDINGS AND DISCUSSION

The objective of this research was to find out whether there was an influence of using Duo Lingo Game toward student's vocabulary mastery at the seventh grade as a media in teaching learning process. The research was conducted at SMPN 2 Kota Serang ,on 16 May until 9 June 2017 on the second semester of academic year 2017-2018 with the students at seventh grade as the population. The subject of this research were divided into two classes that chosen by cluster random sampling technique. In this research the population was 355 students that divided into nine class 7A-7I and Each class consists of 30-40 students. The researcher chose 7B which consist of 33 students as the experimental group and 7C consist of 33 students as the control group.

In order to answer the research question about the influence of Duo Lingo game toward students' vocabulary mastery, the researcher used test as the instrument to collect the data.

There were two tests used in this research, pre-test and post-test. Pre-test was conducted before the treatment and post-test was conducted after the treatment. In this research, the data were collected in two weeks. The pre-test was given to the both of group at the first meeting of the research. Then the researcher did the different treatment in the both of groups. Finally, the post-test was given at the last meeting of the research. Before the reseacher gave the pre-test and the post-test in experimental class and control class, the researcher gave the try out test,the aimed of try out was to measured that instrument had validity and reliability or not in the class.

Try out was administered on Saturday, May 16th 2017 before the researcher conducted the pre test and post test in order to find out the validity and reliability of the instrument. The test was multiple choices consist of 50 itemsand the form of try out was multiple choices which the options consisted of A, B, C, and D. The number of students in try out class were 34 students. The researcher took the material based on the curriculum and syllabus implemented at SMPN 2 Kota Serang.

The data of the try out was analyzed by *Pearson Product Moment* formula to examine the validity of the test. if $r_{count} > r_{table}$ it means the items was valid (Ridwan, 2011: 98). there were total items of try out were 50 items. The researcher got 40 items were valid, they were #Q.1 #Q.2 #Q.4 #Q.8 #Q.9 #Q.10 #Q.11 #Q.12 #Q.13 #Q.14 #Q.15 #Q.16 #Q.17 #Q.19 #Q.21 #Q.23 #Q.24 #Q.25 #Q.26 #Q.27 #Q.28 #Q.30 #Q.31 #Q.32 #Q.33 #Q.34 #Q.35 #Q.36 #Q.37 #Q.38 #Q.39 #Q.40 #Q.41 #Q.42 #Q.44 #Q.45 #Q.46 #Q.47 #Q.49 #Q.50.

10 items were invalid, they were #Q.3 **#**Q.5#Q6 #Q.7 #Q.18 #Q.20 #Q.22 #Q.29#Q.43 #Q.48. it is because almost students answer correctly. It means that the valid items could be used to measure students' vocabulary mastery in control and experimental class. The researcher just let the invalid items and used 40 items for pre-test and post-test; 20 items for pre-test and 20 items for post-test.

To find the reliability of this test, The data on try-out were analyzed by Pearson Product Moment formulation and Spearman Brown formulation to examine the reliability of the test items. The researchers devided the items into beginning items and last items. The beginning items consisted 25 items test which number **(1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25)** and the ending items test consisted 25 items which number **(26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50)**.

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Based on the result of Reliability of the test, it could be seen from r table with the 34total respondences (df= n-1) 34-1 = 33. The value of r_{table} = 0.399). The criteria of testing as follows:

If $r_{11} \geq r_{table}$: It indicates that instrument (test) was reliable

If $r_{11} \leq r_{table}$: It indicates that instrument (test) was not reliable.

Based on the result of calculation, it was calculated $r_{11} \geq r_{table}$ or 0,850≥ 0,399. It can be concluded that the test was reliable.

The pre test of experimental class and control class was conducted on Wednesday; May 17th, 2017. The pre test was consisted 20 items test and the form of pre test was multiple choices with the options A, B, C and D. After the researcher got the students' score of pre test, the researcher found out the maximum score and minimum score in both of groups.

Based on the students' score of pre test that the researcher was collected from experimental class. The result showed that the lowest score was **10 #S.E31** and the highest score was **70 #S.E20, #S.E4, #S.E10, #S.E18, #S.E23, #S.E27** and **#S.E21**. Meanwhile, based on the students' score of pre test that the researcher was collected from control class. The result showed that the lowest score was **20 #S.C30** and the highest score was **70 #S.C20 and #S.C24** It can be concluded, the students' score in experimental class same with students' score in control class. it can be seen the highest score in experimental class was **70** and the highest score in control class was **70.**

The Mean diagram of pre-test in control class and experimental class
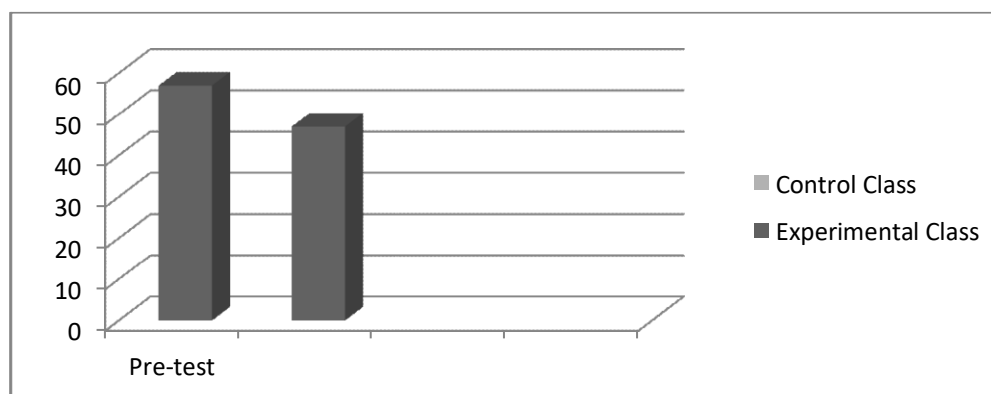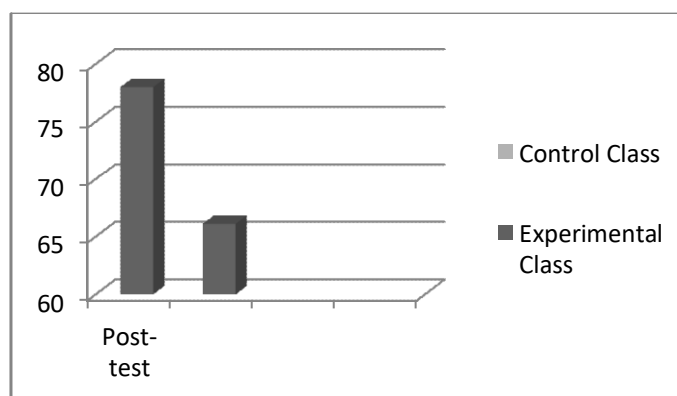

The diagram above showed the mean score in experimental class is 57 and control class was 47. It shows the quality of the students in vocabulary mastery before treatment. The different seen in the score is 10 points.

The post test in experimental class was conducted on Wednesday ; May 24th, 2017 and control was conducted on Tuesday; May 23rd, 2017. The pre test was consisted 20 items test and the form of post test was multiple choices with the options A, B, C and D. After the researcher got the students' score of post test, the researcher found out the maximum score and minimum score in both of groups.

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Based on the students' score of post test that the researcher was collected from experimental class. The result showed that the lowest score was **55 #S.E28** and the highest score was **95 #S.E27**. Meanwhile, based on the students' score of post test that the researcher was collected from control class. The result showed that the lowest score was **40 #S.C5** and the highest score was **80 #S.C5** and **#S.C8.**

It can be concluded, the students' score in experimental class higher than the students' score in control class. it can be seen the highest score in experimental class was **95** and the highest score in control class was **80.** Based on the data, the students' vocabulary mastery increased. It can be seen from the different score of pre test and post test. The researcher drew the diagram of mean of the post test to show the difference below.

The Mean diagram of post-test in control class and experimental class

The diagram showed a significant difference between the result of the post test in experimental class and control class. The mean score in experimental class was 78 and control class was 66.1.

The researcher used chi-square (x^2) formula to measure the data distribution of research result was normal was or not. The test was normally distributed if the value of x^2 lower than x^2_{table} or $x^2_{count} \leq x^2_{table}$. The test of normality focused on pre test and post test of experimental class and pre test and post test of control class.

According to result of normality pre-test , the value of x^2_{count} (chi-square) was 12.05. The value of x^2_{table} was 14,06 (d.k = k -1= 6 -1= 5) with the level of significance 0.05 (5%). It can be concluded that the value of x^2_{count} was lower than x^2_{table} or 12.05 ≤ 14.06.It means that the pre test in experimental class it was normally distributed.

And the result the result of normality pre-test, the value of x^2_{count} (chi-square) was 13,5. The value of x^2_{table} was 14,06 (dk = k -1= 8 -1= 7) with the level of significance 0.05 (5%).It means that the pre test in control class it was normally distributed.

According to result of normality post-test, the value of x^2_{count} (chi-square) was 13,36. The value of x^2_{table} was 14,06 (d.k = k -1= -1= 5) with the level of significance 0.05 (5%). It can be concluded that the value of was lower than x^2_{table} or 13,36≤ 14,06. It means that the pre test in experimental class it was normally distributed.

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And the result the of normality post-test, the value of x^2_{count} (chi-square) was 8.72. The value of x^2_{table} was 14,06 (d.k = k -1= 6-1= 5) with the level of significance 0.05 (5%). It can be concluded that the value of x^2_{count} was lower than x^2_{table} or 8.72≤ 14.06It means that the pre test in control class it was normally distributed.

To find out the homogeneity of pre test from experimental class and control class the researcher used f_{count} the biggest variants of pre test from experimental class was **17.7** and smallest variants from control class was **15.7**. The variances are put into the f_{count} as follow:

$$F_{count} = \frac{BV}{SV} = \frac{17,5}{15,7} = 2,2$$

From the calculation, the homogeneity of pre test was 1.10 the value of F_{table} significance 5% with:

F_{table} = F (1 − a)(dk = k)(dk = N − k − 1),
F_{table} = F (1 − a)(dk = 1)(dk = 33 − 2 − 1),
F_{table} = F (1 − 0.05)(1)(30),
F_{table} = F (0.95)(30)
F_{table} = 1 (as numerator) and 30 (as denominator).

The value ofnwith the level of significance 0.05 (5 %) is 4.171*(see appendix)*. It can be concluded $F_{count} ≤ F_{table}$ or 2,2 ≤ 4,171. So, the data of pre test were homogen.

To find out the homogeneity of pre test from experimental class and control class the researcher used f_{count} the biggest variants of pre test from experimental class was **15.04** and smallest variants from control class was **14.3** The variances are put into the f_{count} as follow:

$$F_{count} = \frac{BV}{SV} = 1.05$$

From the calculation, the homogeneity of pre test was 1.10 the value of F_{table} significance 5% with:

F_{table} = F (1 − a)(dk = k)(dk = N − k − 1),
F_{table} = F (1 − a)(dk = 1)(dk = 33 − 2 − 1),
F_{table} = F (1 − 0.05)(1)(30),
F_{table} = F (0.95)(30)
F_{table} = 1 (as numerator) and 37 (as denominator).

The value ofnwith the level of significance 0.05 (5 %) is 4.105 *(see appendix)*. It can be concluded $F_{count} ≤ F_{table}$ or 1.15 ≤ 4.171. So, the data of post test were homogen.

In this research, there are two hypotheses assumed. There are the alternative hypothesis (h_a) and the null hypothesis (h_o). The test of mean difference was conducted to test whether the null hypothesis () is rejected or received. To find out the mean difference of control class and experimental class, the researcher used formula. The criteria of testing as follows:

If $F_{count} ≤ F_{table,}$ it indicated that H_o is accepted
If $F_{count} ≥ F_{table,}$ it indicated that H_o is rejected

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CONCLUSION AND SUGGESTION

This research was aimed to investigate the influence of Duo Lingo game toward students' vocabulary mastery at the seventh grade of SMPN 2 Kota Serang. Based on the result of the calculation in the previous chapter, it can be concluded that the students who were taught by using duo lingo game got better achievement. It could be seen from the data was analyzed by using t-test to test the hypothesis of this research in the significance degree of 5%. t_{count}(4,61) was higher than t_{table}(1,99). It means the null hypothesis (Ho) was rejected and alternative hypothesis (Ha) was accepted and it can be seen score of experimental class is higher than control class. Therefore, it can be concluded that Duo Lingo Game gave positive influence on the students' vocabulary mastery at the seventh grade of SMPN 2 Kota Serang. Based on the findings, it can be concluded that mobile game especially Duo Lingo Game can be implemented in teaching vocabulary mastery.

This research aimed to find out about the influence of Duo Lingo game toward students' vocabulary mastery. After the researcher finished with the analysis, there were some suggestions in learning students' vocabulary mastery through mobile game (Duo Lingo game).

For the English teacher:
a. English teacher should be adapt the newest technology with the teaching learning process. Teacher should be more creative in making enjoy learning process for the students by playing a game especially mobile game. By playing a mobile game with English, it will be better for them in using their smartphone for learning process.
b. The teacher should motivate students to keep learning not only in the class but also outside the class. Giving the task or homework which is related on the lesson and the available game, it can make the students feel enjoy in playing by learning.

For the students
a. Students can increase their vocabulary by playing a mobile game, in this research is Duo Lingo. When they found new vocabularies and they want to finish task in the game, they should know the meaning first so that the students' vocabulary knowledge increase by itself.
b. The limited class time for students can make them to explore their English skill with their smartphone in their home.

For the next researcher
a. The next researcher who will conduct the study using duo lingo game in other skill such as speaking, reading or listening. Because this media is flexible and easy to implemented in other skills in the class.
b. This research will be references for the next research and they could develop and continue their own research dealing with duo lingo game and vocabulary mastery. It is expected to be better than this research.

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