



Penerapan Aplikasi Duolingo sebagai Media untuk Meningkatkan Pengetahuan Kosakata Siswa

The Implementation of Duolingo Application as Media to Improve Students' Vocabulary Knowledge

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ABSTRAK

Penelitian ini adalah penelitian kuantitatif dalam bentuk pre-eksperimental design yang melibatkan one group pre-test dan post-test yang bertujuan untuk mengetahui ada tidaknya pengaruh penerapan Duolingo Application sebagai media untuk meningkatkan pengetahuan kosakata siswa pada kelas VII MTs Mahyajatul Qurra' Lassang, Takalar. Populasi dalam penelitian ini adalah seluruh siswa kelas VII dari A sampai D yang berjumlah 125 siswa, dan tiap kelas terdiri dari 30 sampai 33 siswa. Sampelnya adalah kelas A yang terdiri dari 33 siswa yang dipilih secara random sampling. Data hasil penelitian diperoleh dengan memberikan tes hasil belajar pada materi pokok kosakata berupa pre-test dan post-test. Teknik analisis data yaitu dengan menggunakan uji normalitas, T-test, dan statistic deskriptif. Hasil penelitian menunjukkan rata-rata nilai post-test (68.18) lebih besar dari rata-rata nilai pre-test (28.78). Cara untuk menguji hipotesis nol dapat ditolak atau tidak adalah dengan membandingkan p-value dengan standar tingkat signifikansi 0,05. Nilai p kurang dari 0,05 ($0,000 < 0,05$). Artinya hipotesis nol dapat ditolak dan dapat disimpulkan bahwa penggunaan Duolingo Application efektif dalam meningkatkan pengetahuan kosakata siswa.

Kata Kunci: kosa kata, Duolingo Application, pre-test, post-test

ABSTRACT

The research is quantitative research in the form of pre-experimental design involving one group pre-test and post-test which aims to find out an effect of the implementation of Duolingo Application as media to improve students' vocabulary knowledge in class VII MTs Mahyajatul Qurra' Lassang, Takalar. The population in this research was all students of class VII from A to D, totaling 125 students, and each class consisted of 30 to 33 students. The sample is class A which consists of 33 students who were selected by random sampling. The research data were obtained by providing a learning outcome test on the subject matter of vocabulary in the form of pre-test and post-test. The data analysis technique is using normality test, T-test, and descriptive statistics. The result shows the mean score of the post-test it could be seen that the mean of the post-test score (68.18) was larger than the mean of the pre-test score (28.78). The way to test the null hypothesis can be rejected or not was by comparing the p-value with the standard level of significance, 0.05. The p-value was less than 0.05 ($0.000 < 0.05$). It means that the null hypothesis was rejected and it was concluded that the use of Duolingo Application was effective in improving students' vocabulary knowledge.

Keywords: vocabulary, Duolingo Application, pre-test, post-test

1. INTRODUCTION

English is one of the international languages. In this era of globalization, learning English is very important for getting interested in the production of science and technological knowledge worldwide. Introducing English as early as possible is also important. As one of the subjects learned by students from elementary to university level, the Indonesian government has listed English as the first foreign language to be taught. Students are able to achieve four language skills, such as: listening, reading, speaking, and writing, in order to teach English at elementary school, junior high school, and senior high school. Students can learn the grammatical rules and vocabulary in order to master English.

Mastering the vocabulary of the target language is one of the essential aspects of language learning. If foreigners learn a new language without mastering the language's vocabulary, it would be hard for them to understand the language. Vocabulary is one of the components or sub skills of English that must be taught to learners since the primary function of vocabulary is for all languages. Carter and McCarty (1988) said that vocabulary is an appreciation of the meanings of terms and words. Vocabulary is the fundamental ability that students need to achieve in order to gain other skills, such as reading, writing, listening, and speaking. Students ought to have sufficient vocabulary in order to communicate well. Without learning and knowing the vocabulary well, it is hard to learn the other competencies. Students should be aware of vocabulary while learning English, since they can want to use it to convey their thoughts and communicate through understanding the words.

Therefore, if students have lack of vocabulary, it will be difficult to learn and understand the content provided by the curriculum. It is important to take into account that learning vocabulary will help students to understand the content. An important role will be played by the teachers as facilitators in the learning process. Besides, in the teachers' lesson plans, they should know the achievements of students. The teachers need to understand how the vocabulary of students can be strengthened. The teachers now concentrate only on syllabus content. There is no

instructional language in the syllabus; it merely focuses on four things, such as listening, speaking, reading, and writing. Thus, it would be hard for students who have lack of vocabulary to do the exercise, and some of them also have a problem where there are several words with different meanings.

There is an application named the Duolingo application to improve the students' vocabulary in learning English vocabulary because it offers many activities that could help improve students' English vocabulary knowledge in a more appealing and enjoyable learning process. The Duolingo application offers four English language learning skills that are listening, reading, writing and speaking that come in a design-like game. So learning for the students can no longer be bored because the game like design would inspire the students to do the exercises. It is also quick to access the Duolingo application. This application can be easily downloaded from the Google Play Store so that the application can be easily accessed by English language learners.

The Duolingo application is free learning software for languages. The aim of this research is to find out the implementation of using Duolingo application and how the vocabulary of students can be enhanced by Duolingo. Therefore, whether it is used to teach students in the classroom, the writer needs to see the effects of the implementation of Duolingo application. It was being planned to see whether or not it will help the students improve their vocabulary. According to the explanation, the writer aims to perform an experimental study entitled: *"The Implementation of Duolingo Application as Media to Improve Students' Vocabulary Knowledge."*

2. LITERATURE REVIEW

2.1 Teaching Vocabulary

Teaching vocabulary is obviously important in English language teaching, since vocabulary is the primary part of promoting communicative goals. There are various ways to implement mobile pedagogy in language teaching, according to Agnes, Lucy, and Donohue (2015), as follows: (1) Integrate activities inside and outside the classroom relating to the communicative needs of learners. (2) As a dynamic

scheme, expose learners to language. (3) Combine the four speaking, listening, reading and writing skills. (4) Provide timely input and scaffolding for learners. (5) Give learners opportunities to socially connect, negotiate context and create diverse and innovative dialogue through time and place with peers and English language users outside the classroom. (6) Allow learners to rehearse speech and writing, which in a classroom environment can be especially challenging.

2.2. Learning Vocabulary

Learning is something that both students have an appreciation of and something they have all been interested in. Sometimes, students invest their time in the formal environments of educational systems, such as schools, to enhance comprehension and skills. For each person, learning should have an impact on their own potential. To achieve success, students who are participating in the learning process would be more active. There are five basic steps in vocabulary learning, according to Brown and Payne (1994):

- a) Encountering new words
- b) Having the shape of the term
- c) Having the sense of the word
- d) In memory, consolidating word form and context
- e) Using the word

2.3 Kinds of Vocabulary

The vocabulary is divided into active and passive vocabulary by Jo Ann Aebersold (1997): (1) Active vocabulary refers to things that can be properly used by the learner in speaking or writing, and is often referred to as productive vocabulary. (2) In the sense of reading or listening, passive vocabulary refers to language objects that can be recognized and understood, and is often referred to as receptive vocabulary.

2.4 Duolingo Application

Duolingo is a free application that was developed in November 2011 by Luis Von Ahn and Severin Hacker. 'Free language education for the world' is its motto. It has more than 30 million registered users, according to

its website. For English speakers, it provides many languages, as well as those for non-English speakers. As one of the language learning apps, Duolingo will assist anyone in communication to improve their vocabulary skills. Via the Duolingo application process, students quickly learn new terms based on their own will.

2.5 Teaching Vocabulary by Using Duolingo Application

In order to teach vocabulary using the Duolingo framework, there are several steps: (a) Provide students with English book related materials without using the Duolingo program. The words used in the text can be recognized by students. (b) Provide the learners with some activities after the students understand the words. It is possible to ask the students to put the words and information out of the report. (c) They should be able to learn new vocabulary by using the Duolingo application after the materials have been distributed to the students.

There are several steps that can be carried out in the classroom learning exercises to simply help the readers understand the role of each section of the Duolingo application: (a) First, students can download it on Google Play or the App Store and update it with Android / iOS operating systems to use the program on mobile phones. Without an account, users can build an account or access activities. However, by creating an account, users can only save their progress. (b) Next, the students can choose the English language to learn after establishing an account and begin activities immediately. (c) Then, to progress to more advanced units, the students are able to take a placement test. The learning experience is divided into thematic units that start from "Basics" and can range from "Food" or "Family" thematic vocabulary parts to more advanced grammar topics such as "Past Perfect" and "Subjunctive Past". (d) Finally, through the lessons or units, the students would have access to their development. Each lesson focuses on improving vocabulary through pronunciation skills, translation, listening comprehension, and vocabulary awareness, with about 10 to 20 questions. The lesson is leveled up to the next lesson when each lesson has finished well, and then unlocked and get a crown.

2.6 Hypothesis Test

The statistical test was intended to compare the two means of pretest and posttest, respectively. The way to test whether the null hypothesis can be dismissed, according to Balnaves and Caputi (2001: 40), is less than 0, 05 by comparing the T-value of the obtained statistics. This study's hypothesis test is as follows: (a) The alternative hypothesis is dismissed if the significant amount is less than 0, 05 and the null hypothesis cannot be rejected. It implies that before and after being taught using the Duolingo program, there is no distinct score on the vocabulary knowledge of students. (b) The alternative hypothesis is not rejected if the significant amount is greater than 0, 05 and the null hypothesis is rejected. It implies that before and after being taught using the Duolingo application, there is a slightly different score on the vocabulary awareness of students.

3. RESEARCH METHOD

3.1 Type of The Research

The type of this study is quantitative analysis using the pre-experimental approach and post-test design using one group pre-test. In the pre-experimental research process, this one-group pretest-posttest configuration is included. The process of pre-experimental study is still a real experiment since there are still external variables that influence the formation of the dependent variable as well (Sugiyono 2013, p. 74). The seventh-grade students of MTs Mahyajatul Qurra' Lassang, which consists of 1 class, are the focus of this study. There are two variables in this study, namely:

- a) Independent Variable is "the implementation of Duolingo application".
- b) Dependent Variable is "students' vocabulary knowledge".

3.2 Place and Time of The Research

The research was conducted by the writer in MTs Mahyajatul Qurra' Lassang which located at Jl. Masjid Raya Syuhada Tammuloe Desa Lassang, Takalar, Sulawesi Selatan. This research was carried out in three weeks from October 6th to October 20th, 2020 where the writer focused on the seventh-grade students of

MTs Mahyajatul Qurra' Lassang. This research was held in six meetings in the class; pre-test, treatment four times, and post-test.

3.3 Research Design

The writer used the pre-experimental testing approach in this study. The one-group pre-test-post-test configuration was used in the pre-experimental testing method since it was performed in one group only without another control group. This experiment is also called pre-experimental design (simple experiment). In the one-group pretest-posttest design, there are three phases: (a) Pre-test, (b) Treatment, (c) Post-test.

3.4 Population and Sample

The population is the largest generalization group. Gay (1992: 124) claimed that the population is the group of interest to the researcher, the group to which she or he was to be generalized as a result of the analysis. The population, on the other hand, is identified as all members of any well-defined class of persons, events or objects (Ary, et. Al, 2010: 148). So that's why, in MTs Mahyajatul Qurra' Lassang, Takalar, which consists of four classes from A to D and each class includes thirty to thirty-three students, the population of this study was first grade.

In the meantime, sampling is the practice of choosing a number of people for a sample in such a way that the people represent the wider population from which they were chosen (Gay, 1992: 123). This sampling has the purpose of obtaining population information. So, sampling is the process of taking a sample. Random sampling has been used as a method of selecting a sample in this analysis, since random sampling is the best way to obtain a representative sample. In addition, the author also recognizes that, especially in their vocabulary, all subjects were homogeneous in their abilities.

3.5 Research Instrument

The instrument is a model of a tool used in science. The examination is the principal instrument of this analysis. The goal of this research is to discover the implementation of the Duolingo application as a media to enhance the awareness of vocabulary of students. The aim of the test is to assess the ability of students to

understand English vocabulary. In learning vocabulary, the writer checks the vocabulary so that learners can get feedback and encouragement. The test is the means of assessing a person or group's awareness, strength, feeling, intellect, or aptitude (Gay, 1992: 154).

In addition, (Ary, et. al, 2010: 201) claimed that the test is a collection of stimuli provided to a person to elicit responses based on which it is possible to assign a numerical score. The test thus generates numerical scores that can be used to measure test takers, and it was a representative sample of individual actions. The writer used two kinds of tests to obtain the necessary ratings of the students' achievement in vocabulary skill in this study. They were both pre-test and post-test. The writer gave the students multiple choice tests in this case.

3.6 Data Collection Procedures

This study used pre-test and post-test in order to collect the data. Before receiving the treatments, the pre-test was given to the students to understand the previous vocabulary knowledge of the students. The writer provided the treatments to the students after providing the pre-test in order to learn new vocabulary through the application of Duolingo. In four meetings, the treatments were held. Then, in order to understand the achievement of students after students are given the treatments, the writer performed a post-test.

3.7 Data Analysis Techniques

This analysis used a quantitative approach. The writer analyzed the details from the pre-test and post-test results. The goal is to find out how to incorporate Duolingo as a media application to enhance the awareness of vocabulary of students. The writer then compares the pre-test and post-test average scores. Some parameters for vocabulary learning review were calculated by the writer:

- (a) Understanding main idea, (b) Understanding vocabulary, (c) Understanding implied information.

4. FINDINGS AND DISCUSSIONS

4.1. Research Findings

4.1.1 The Description of Data

The writer conducted pre-test and post-test to investigate the students' vocabulary knowledge before and after taught by Duolingo application. In this research, the writer chooses one class as the sample. The instrument was given to the VII A students of MTs Mahyajatul Qurra' Lassang Takalar. There were 33 students who were participants in this research. The highest pre-test score for students was 80 and the lowest was 10. While 90 were the highest post-test score, the lowest score was 30. The writer arranged the outcome of normality test, T-test, and descriptive test of the students after the students' do pre-test and post-test. The writer determines scores in pre-test and post-test using IBM SPSS Statistic 20.

The classification of the students' scores in Pre-test and Post-test showed before giving treatments, in pre-test there were 31 (93.93%) students got "Very Poor" scores, 1 (3.03%) student got "Average" scores, and 1 (3.03%) student got "Good" scores. While in the Post-test, there were 12 (36.36%) students got "Good" scores, 12 (36.36%) students got "Average" scores, 7 (21.21%) students got "Poor" scores and 2 (6.06%) students got "Very Poor" scores.

4.1.2 The Analysis of Data

i. Normality Test

This test is conducted before calculating the t-test. It purposed to know whether the data is normally distributed or not. The significance of the data in the table of Shapiro-Wilk from pre-test is 0.103 and post-test is 0.160. It means that the pre-test data is normally distributed, because the significance score is higher than $\alpha = 0.05$.

ii. T-test

The data of paired sample test shows that the result of t ($df = 32$) = -15.31 and p-value or sig (2-tailed) is 0.00. The writer uses $\alpha = 0.05$ (5%) as the significant standard, therefore the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted since the p-value or sig (2-tailed) 0.00 is lower than $\alpha = 0.05$ (5%). It means that the use of Duolingo application is effective to improve students' vocabulary knowledge.

iii. Descriptive Statistics

The Descriptive Statistics of Pre-Test Post-Test indicated that there was significant difference between the mean of pre-test that is 28.78 while in post-test is 68.18. The standard deviation of pre-test is 7.80 and post-test is 13.21. Meanwhile, the standard error of mean of pre-test is 1.35 and post-test is 2.30. While N for each other is 33. It means that the implementation of Duolingo application as media to improve students' vocabulary knowledge has caused in improving students vocabulary.

4.1.3 Hypothesis Test

Based on the result of pre-test and post-test, it can be inferred that the t-value (-15.314) is higher than the t-table (-2.037) in the significance level of $\alpha = 0.05$ (5%). Therefore, the t-value > t-table which means that the alternative hypothesis (H_a) is accepted and the null hypothesis (H_0) is rejected. Thus, it indicated that the using of Duolingo application is effective to improve students' vocabulary knowledge at the seventh grade students of MTs Mahyajatul Qurra' Lassang, Takalar.

4.2 Discussion

In this study, the writer used the Duolingo app to teach English vocabulary to pupils in the seventh grade at MTs Mahyajatul Qurra' Lassang in Takalar. In efforts to answer the writer's inquiries, the writer effectively collected data utilizing tests. The goal of this study is to determine the impact of utilizing Duolingo in English vocabulary instruction on students' vocabulary knowledge and their perspectives on Duolingo's use in English vocabulary instruction. Hopefully, the students will be more motivated to learn vocabularies and gain a better comprehension as a result of this media.

They are having fun while studying, and they can use their English language in everyday interactions. The writer explained the following to identify the effectiveness of the research's outcome. There is only one research topic, and it concerns the impact of Duolingo on students' vocabulary knowledge. Almost all of the students scored higher on the post-test than on the pre-test, according to the author. The data from the post-test score suggested that the students' scores had improved. The mean of the post-test is higher than the pre-test (68.18>28.78), indicating that students' scores improved massively before and after treatment.

It could be determined that Duolingo had a positive impact on the students' vocabulary skills. It was due to the fact that Duolingo was an innovative medium for teaching English vocabulary to beginners.

5. CONCLUSION

The main objective of this study is to investigate the introduction of the Duolingo application as a media to enhance the knowledge of vocabulary of students, as well as to discover the effect of Duolingo on students. The inference may be drawn as follows, based on the outcome and discussions in chapter IV:

- a) Applying Duolingo to boost the vocabulary awareness of learners will enhance the skill of students. The results will show that the average of the post-test scores was higher than the pre-test scores. The post-test average was 68.18, while the pre-test average was 28.78.
- b) For beginner-level learners, Duolingo is one of the powerful means of teaching-learning vocabulary. For students, it is significantly interesting as they have shown excellent responses to this media, they are easy to understand the content, providing an opportunity for all students to get a fair turn in practicing material, Duolingo will reduce learning frustration and also inspire them to learn a new concept.

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