

**THE INFLUENCE OF USING DUOLINGO APPLICATION  
TOWARD STUDENTS' ENGLISH VOCABULARY KNOWLEDGE OF THE  
ELEVENTH GRADES  
IN SMAN 1 ABUNG KUNANG**

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**Abstract:** This research is about the influence of using duolingo application toward students' English vocabulary knowledge of the eleventh grades in SMAN 1 Abung Kunang. With a main problem is students' have limitations in mastering vocabulary in english and understanding of vocabulary. The aim of this research is to investigate the influence of using duolingo application toward students' English vocabulary knowledge. This research used an experimental method with a pre experimental type. The population in this study were eleventh grade students of SMAN 1 Abung Kunang with a total of 94 students. However, the sample used in this research was 63 students with class XI Natural Sciences 1 as the control class and XI Natural Sciences 2 as the experimental class. The experimental class was taught using the duolingo application as media, while the control class did not use the duolingo application. The instrument used in this research was 50 multiple choice test. Data collecting technique in this reasearch used post-test only. The data obtained was then tested using the t-test formula. Based on the results of t-test calculations with a significance level of 5%, it shows that  $t_{\text{observed}} = 5.42$  is higher than  $t_{\text{table}} = 1.999$ . The results of this research show that the use of the Duolingo application has an significant influence on English vocabulary knowledge in the eleventh grade of SMAN 1 Abung Kunang. So the conclusion in this research is that there is an influence between using the duolingo application as a learning medium on students' vocabulary Knowledge.

**Key words:** *Vocabulary Knowledge, Duolingo Application, Learning Media.*

**Abstrak:** *Penelitian ini tentang pengaruh penggunaan aplikasi duolingo terhadap penguasaan kosakata bahasa Inggris siswa kelas sebelas di SMAN 1 Abung Kunang. Dengan masalah utama adalah siswa memiliki keterbatasan dalam penguasaan kosakata dalam bahasa inggris dan pemahaman kosakata. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh penggunaan aplikasi duolingo terhadap pengetahuan kosakata bahasa inggris siswa. Penelitian ini menggunakan metode eksperimen dengan type pre experiment.*

*Populasi dalam penelitian ini ialah siswa kelas sebelas SMAN 1 Abung Kunang dengan total 94 siswa. Namun, sample yang digunakan dalam penelitian ini ialah 63 siswa dengan kelas XI Ilmu pengetahuan alam 1 sebagai kelas kontrol dan XI Ilmu pengetahuan alam 2 sebagai kelas experiment. Kelas experiment diajar dengan menggunakan media aplikasi duolingo sedangkan kelas kontrol tidak menggunakan aplikasi duolingo. Instrument yang digunakan dalam penelitian ini ialah 50 soal test pilihan ganda. Teknik pengumpulan data dalam penelitian ini*

*ialah hanya menggunakan post-test. Data yang diperoleh kemudian diuji menggunakan rumus uji-t. Berdasarkan hasil perhitungan uji-t dengan taraf signifikansi 5%, menunjukkan bahwa  $t_{hitung} = 5.42$  lebih tinggi dibandingkan dengan  $t_{table} = 1.999$ . Hasil dari penelitian ini menunjukkan bahwa penggunaan aplikasi duolingo memberikan pengaruh signifikan terhadap pengetahuan kosa kata bahasa inggris pada kelas sebelas SMAN 1 Abung Kunang. Jadi kesimpulan dalam penelitian ini adalah terdapat pengaruh antara penggunaan aplikasi duolingo sebagai media pembelajaran terhadap pengetahuan kosakata siswa.*

***Kata Kunci : Pengetahuan Kosakata, Aplikasi Duolingo, Media Pembelajaran***

## **I. INTRODUCTION**

Vocabulary is a collection of words which is an important part or a basic part when someone wants to learn a language. English vocabulary is one of the language components that must be mastered and understood by students in learning English. By having vocabulary, students can understand the meaning of English both spokenly and writtenly. It can enable them to master English language skills such as reading, writing, listening and also speaking.

However, the fact is that without vocabulary students will have difficulties in understanding when teachers and native speakers are speaking English. Richards (2001, p.4) explained that one of the most obvious aspects of language and one that linguists focus on first is vocabulary.

Vocabulary knowledge is an important part that must be understood by students, with students having adequate vocabulary it can make it easier for students to communicate with teachers and foreign

speakers. Alqahtani (as cited in Fatah, 2020, p.8) explained that vocabulary knowledge is considered the main tool in learning a second language, this is because limited vocabulary can hinder a person's successful communication. Vocabulary knowledge is how much vocabulary students have, where vocabulary must be understood and learned. When learning a vocabulary as a foreign language, students will get many words when learning it so that this can help students communicate in English language.

Based on the facts in the field, When the researcher made interview in class XI natural science 1 and XI natural science 2 on tuesday the 21<sup>st</sup> of the 2<sup>nd</sup> month of 2023 at SMAN 1 Abung Kunang, it was found that students still a low vocabulary. And students experience difficulties in understanding writing vocabulary caused by a lack of students' knowledge of vocabulary. Because students who were able to achieve KKM scores were only 35% with a total of 33 students who passed while students who scored below the

KKM were 65% with a total of 61 students who did not pass. Meanwhile, the passing grade for English subjects at SMAN 1 Abung Kunang is 70%.

There were some students who explained that friendship was one of the factors that caused students difficulties in learning vocabulary because students did not have friends who could help practice their English speaking skills. Students having difficulty distinguishing the same words but have different meanings, so students are afraid when they want to mention the word. This can also be caused by students' low interest in learning English.

Besides, learning media is also one of the causes of low student vocabulary knowledge. Some students explained that the learning media used was still monotonous and made students feel bored with their learning. In the era of digital technology that is increasingly sophisticated and adequate, there are many learning media that can be used to support learning at school and outside the school environment. Warsita (cited in rahardian, 2017) stated that educational technology cannot be solved by conventional media alone. In this research will investigate the effectiveness of using the duolingo application as the learning media.

Duolingo is a learning app that everyone can use because it is a free

language learning app created by Luis von Ahn. Besides being available in the web version, this application is also available in Android, iOS, and Windows Phone versions. Jaskova (2014) stated that Duolingo is the newest free program in language learning. This application can help in influence student vocabulary, because the duolingo application was created with a game-like learning system that requires students to answer several questions in the application. Based on the description above, the researcher is interested in conducting research with the title "The Influence of Using Duolingo Application Toward Students' English Vocabulary knowledge of The Eleventh Grades in SMAN 1 Abung Kunang".

Based on the background of the problems above, the researcher identified several problems, namely as follows:

1. The Students' have a lack of vocabulary in the eleventh grades.
2. The students' have a lack of knowledge and understanding of vocabulary.
3. The students' still have difficulty finding friends to speak English language.
4. The students' interest in learning English is still a low.
5. The Duolingo Application has not used yet in that school.

While the formulations of the problem as follows "is there any significant

Influence of using Duolingo Application toward students' English vocabulary Knowledge of The Eleventh Grades in Sman 1 Abung Kunang".

The purpose of this research is to investigate whether there is an Influence of using Duolingo Application toward Students' English vocabulary Knowledge of The Eleventh Grades in SMAN 1 Abung Kunang.

The researcher hope the reserach can be useful for everyone, especially useful in the world of education. Therefore the use of research results is intended as follows:

1. For students

The usefulness of the research results for students is that users get insight about the duolingo application in teach vocabulary and other English language skills.

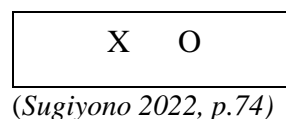
2. For teachers

The results of this study are expected to be an alternative learning media that can be used to teach vocabulary and other English skills.

## **II. RESEARCH METHODE**

This research uses a quantitative approach because researcher will test whether there is influence and offer solutions or innovations in learning media

that can be used to add insight to the world of education. This type of research using experimental research and using a pre-experimental design with posttest only. . In this research, there are two groups, namely the control class and the experimental class. XI Natural Science class 1 as the control class is not given treatment while XI Natural Science class 2 as the experimental class is given treatment with the duolingo application. The design of the pre-experimental using the One –shot case study or posttest only design is as follows:



In this study, the population that will be used three classes with a total of 94 students in eleventh grades at SMAN 1 Abung Kunang. Based on Sugiyono (2022, P.81) Sample is part of the size and characteristics of the population. The sample in this research use two classes, namely students in XI Natural Science Class 1 totaling 30 students' as the control class and XI Natural Science Class 2 totaling 33 students' as the experimental class. Then, the sampling technique taken in this research used purposive sampling.

The technique of collecting data through a multiple choice test vocabulary knowledge, and there are 50 multiple choice questions with aspects of noun,

adjectives, verbs, adverbs. Meanwhile, 50 multiple choice questions have been tested based on validity and reliability. The validity in the research used point biserial correlation formula and the reliability test used kuder richardson-20 called the KR-20 formula. The next, data analysis technique begins with the normality test, homogeneity test, and hypothesis test. The normality test used Liliefors formula and Homogeneity test used F test formula. Meanwhile hypothesis test used independent t-test formula.

### III. RESULTS AND DISCUSSION

#### Results

In this research, the researcher first conducted a try out to determine the validity and reliability of the instruments used in this research.

The try out was carried out regarding vocabulary knowledge which was attended by 34 class students XI Natural Sciences 2 at SMAN 1 Abung Barat on July 21<sup>st</sup> 2023. After that, a try out advanced was carried out on August 25<sup>th</sup> 2023. Validity test of vocabulary knowledge instrument, the researchers used point biserial correlation formula. there were 50 multiple choice questions test. But after testing there were only 26 valid questions. Therefore, the researchers

conducted a try out advanced with 40 multiple choice questions. When tested for validity, there were only 25 valid questions. So if a combine the initial try out and the try out advanced there are 51 valid questions. The reliability of vocabulary knowledge instrument, in this research, the researchers used Kuder Richardson formula (KR-20). The criteria for the reliability instrument are  $r_{observed} > r_{table}$  with a significance level of 5% and  $df = 32$  and the result of the first try out is  $(0.75 > 0.34)$ . Meanwhile, the result of try out advanced are  $(0.85 > 0.34)$ . Thus, it can be concluded that the instrument used is reliable.

There are three processes data analysis in this research. Namely normality test, homogeneity test, and hypothesis test. The researchers used the Liliefors formula as a normality test. With the following test criteria  $L_{observed} < L_{table}$  which means that the resulting data is normally distributed. The results of normality test is presented in the following table:

**TABLE 1  
THE SUMMARY OF NORMALITY IN  
POST TEST**

Class	Number of students	$L_{observed}$	$L_{table}$
Experiment	33	0.077	0.154
Control	30	0.117	0.161

From the results of the post-test in both classes, namely, in the experiment class is  $L_{observed} 0.077 < L_{table} 0.154$  and in the control class is  $L_{observed} 0.117 < L_{table} 0.161$ . So it can be concluded that both classes have normal distribution. The homogeneity test is used to see whether the resulting data is distributed homogeneously or not. The researcher used F-test formula as homogeneity test. The results of calculations using the F-test is  $F_{count} 1.798 < F_{table} 1.842$ . Thus the data generated from the experimental class and control class is homogeneous and  $H_0$  is accepted. After obtaining the normality and homogeneity test. The researcher carried out a hypothesis test using Independent t-test formula. The results of the post-test in the experimental class and control class as follows:

**TABLE 2**  
**THE SUMMARY OF HYPOTHESIS TEST**

Significant level	$t_{table}$	$t_{observed}$
5%	$t_{(0,05)(61)} = 1.999$	5.42

Based on the table above, can be explained that  $t_{observed} 5.42 > t_{table} 1.999$  with significance level 5%. So it can be concluded that  $H_0$  is rejected dan  $H_a$  is accepted. Thus it can be said that there is significant influence of using duolingo application toward student's English

vocabulary knowledge of the eleventh grades in SMAN 1 Abung Kunang.

**Discussion**

This research was conducted at SMAN 1 Abung Kunang on Tuesdays and Thursdays starting from august 29<sup>th</sup> 2023 to October 5<sup>th</sup> 2023. The results of the influence of using the duolingo application toward students' English vocabulary knowledge, it was concluded that the use of the duolingo application had an effect on students' English vocabulary knowledge. It was found that the average post test score in the experimental class using the Duolingo application was 60.24, while the post test score in the control class not using Duolingo application was 40.26. So it can be seen that the average score in the experimental class is higher than the average score in the control class.

Research results from  $t_{observed} 5.42$  higher than  $t_{table} 1.999$ . Thus it can be concluded that there is influence of using duolingo application toward students' English vocabulary knowledge of the eleventh grade in SMAN 1 Abung Kunang. Based on the research results in class XI Natural Science 2 SMAN 1 Abung Kunang, it can be concluded that the use of the Duolingo application has an influence on vocabulary knowledge and students' understanding of vocabulary. This can be seen from the average post-test score is

60.24, so it can be concluded that there is an influence on the use of the Duolingo application. Using the duolingo application has an effective impact on students as a learning medium compared to using conventional learning. The duolingo application media can be used as a learning medium by teachers. Nursyamsiah (cited in Abin rais and Andas huzniati Netty 2022, p. 424) explained that the duolingo application is an effective learning medium for learning vocabulary.

Based on the explanation and results of the research, it can be concluded that the duolingo application media can influence English vocabulary knowledge. From the research that has been carried out, it is concluded that there is significant influence of using duolingo application toward students' English vocabulary knowledge of the eleventh grades in SMAN 1 Abung Kunang". With alternative hypothesis is accepted.

#### **IV. CONCLUSION**

Based on the analysis and results of the discussion previously explained, it can be concluded that there is significant influence of using duolingo application

toward students' English vocabulary knowledge of the eleventh grades in SMAN 1 Abung Kunang. This can be seen in the average post test score in the experimental class of 60.24 and in the control class of 40.26. With the result of t-test is  $t_{\text{observed}} 5.42 < t_{\text{table}} 1.999$ .

Based on the results of the discussion previously explained, the researcher provides several recommendations for the parties involved in this research.

##### **1. Teacher**

Teachers are expected to be able to provide English language training related to vocabulary knowledge. Those who don't only use conventional learning media, but can also use the duolingo application media as a learning method. Exercises are given so that students can understand English learning, especially in mastering students' vocabulary.

##### **2. Students**

Students are expected to be able to use the Duolingo application media not only in the school environment, but can also be used outside the school environment. So this can help students master and understand English vocabulary.

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