

The Effectiveness of Using Repetition Drill Technique with Duolingo Application to Improve Vocabulary at Seventh Graders of MTs Al-Huda Reban

Efektivitas Penggunaan Teknik Repetition Drill dengan Aplikasi Duolingo untuk Meningkatkan Kosakata pada Siswa Kelas Tujuh MTs Al-Huda Reban

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ABSTRACT

Vocabulary is one of the elements to master, and this is important. Based on some difficulties in learning English, especially to improve vocabulary. Teachers must be able to find creative and effective ways to teach vocabulary to their students. This study aims to determine the efficacy of the repetition drill method by using Duolingo application to increase vocabulary in seventh grade in MTs Al-Huda Reban. This study employs a quantitative methodology. The study will employ an experimental design and involve two classes, each class consisting four meetings. One class studied English by using technique of repetition drill with Duolingo application and one class without this technique. It can be seen, the experimental class scored 80,54, whereas the controlled class scored 74,46. The two hypotheses are accepted (H1) and the null hypothesis (H0) is rejected (T-test result), as the significant value (2-tailed) 0,006 is less than alpha = 0,05. Based on the outcomes of the N-Gain computation, the average value of 55.0822 falls into the moderately effective category. Thus, it can be said that using the Duolingo application and the repetition drill approach is a useful way to increase vocabulary.

ABSTRAK

Vocabulary merupakan salah satu unsur yang harus dikuasai dan penting. Berdasarkan beberapa kesulitan dalam belajar bahasa Inggris, terutama untuk menambah kosa kata. Guru harus dapat menemukan cara yang kreatif dan efektif dalam mengajarkan materi kosakata. Penelitian ini dilakukan untuk mengetahui keefektifan hasil latihan berulang dengan aplikasi Duolingo dalam mengembangkan kosakata Bahasa Inggris bagi siswa MTs Al-Huda Reban. Penelitian ini menggunakan metode kuantitatif. Penelitian ini menggunakan eksperimen desain yang dilaksanakan pada dua kelas, pada tiap-tiap kelas di laksanakan sebanyak empat pertemuan. Dari dua kelas tersebut, salah satu kelas bahasa Inggris dengan menggunakan teknik repetition drill dengan aplikasi Duolingo dan satu kelas yang lain tanpa menggunakan teknik repetition drill. Dari hasil penelitian mendapatkan rata-rata nilai 80,54 di kelas eksperimen, 74,46 sebagai nilai rata-rata di kelas kontrol. Dari dua kelas yang berbeda tersebut menghasilkan nilai rata-rata yang berbeda secara signifikan melalui uji-t. Dengan hasil uji-t tersebut berarti nol hipotesis (H0) dapat ditolak dan hipotesis alternatif (H1) dapat diterima dengan nilai yang signifikan (2 – tailed) dengan nilai 0,006 tidak sebesar nilai alpha 0,05. Dengan menggunakan perhitungan N – Gain menghasilkan nilai rata-rata sebanyak 55,0822 yang termasuk dalam kategori efektif sedang. Sehingga dapat disimpulkan bahwa penggunaan teknik repetition drill dengan aplikasi Duolingo efektif untuk meningkatkan kosakata.

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INTRODUCTION

The primary form of communication is language. Language is a system of communication in which people talk and write in a specific way (Hornby, 2008). However, nobody ever learns the entire vocabulary of any language because people recognize that there are many languages. English has become an international language of the most important language. According to Madawu in (Mohammad & Abdulrahman, 2016), English is a crucial language to understand and learn. Because it is the most useful and helps us get information globally in everyday life, especially in the present period. By knowing English, we can increase our value by multiplying connections and having broad perspectives.

There are four skills that must be acquired when learning English, they are speaking, reading, listening, and writing. As a result, the four skills are interconnected. To espouse those skills there are linguistic elements in English that must be studied by the pupils, including pronunciation, vocabulary, and grammar. Vocabulary is one of the most crucial English language skills. The vocabulary is a crucial element in the teaching and learning English process (Indrasari et al., 2018). It is a fundamental step in learning English.

Learning vocabulary is a crucial part of learning a foreign language. Increased vocabulary helps students improve their verbal fluency, writing abilities, and comprehension (Willis, 2008). Recognize the importance of vocabulary in language learning, because without knowing grammar, Mastering the language only reaches a certain level, however nothing can be communicated without vocabulary (Thornbury, 2007). It implies that mastering vocabulary comes first and is the basis of language. especially for foreign language students because communication without mastering vocabulary would not result in understanding.

In Indonesia, English is considered a foreign language, hence, the Ministry of Education and Culture has worked hard to introduce it to pupils. In junior high school, English is formally taught. Primarily seven graders, though some learners have been learning it since elementary school. As a result, the students' difficulties when learning unfamiliar words. The uninteresting learning process made students feel lazy while learning English. Many students still have difficulties in understanding English texts and answering reading questions due to their lack of vocabulary, moreover they not mastering vocabulary. The learning process is not interactive and enjoyable for students. So, to create effective teaching and learning processes, especially in English teachers must have strategies for students to learn effectively and efficiently in their expected goals.

Based on the survey, the researcher chose seventh-grade students of MTs Al-Huda Reban because one of the factors contributing to students' difficulty in learning English is the lack of students' vocabulary. Students' inability to comprehend the text in the book or the teacher's dialogue during the English language learning process is evident in the fact that many of them remain silent during class. There is also a lack of motivation among students to learn English, which makes them understand that it is difficult. Students become bored since the learning model still frequently transfers materials to them through traditional learning. Students are not proficient in using smartphone technology, and some of them only utilize it for entertainment purposes, especially gaming.

To solve the problems outlined above, teachers must be able to create innovative and effective ways to teach vocabulary to their students. The researcher finds one of the solutions to the previous problem. The repetition drill technique is used by the researcher. Tice (Afifah, 2019) stated that repetition drill is the most basic drills applied to language learning pattern. It is one of several techniques that can be employed in teaching. Its technique is that the student repeats it aloud after the student hears an utterance (Richards & Rodgers, 1986). As a result, the repetition drill technique can help students more easily memorize the vocabulary presented by the teacher, and it can also help learners to learn actively.

The repetition drill method was selected by the researcher because it improves and is a useful strategy for aiding the pupils' vocabulary retention. But still used a traditional technique, It has been integrated by researchers with language-learning software. The development of technology makes it easier for students to access various things, including applying application to facilitate learning. And learning media can inspire new interests and desires, provide motivation and stimulation for learning activities, and offer psychological effects on learning (Kaligis et al., 2022). So that, the use of supporting learning media is expected to be positive, effective, easy, and unique. The application used is the Duolingo application. It is a mobile educational application that includes several exercises including speaking, grammar, reading, writing, listening, and vocabulary.

The Duolingo application has a great learning strategy and its very inspiring learning system (Risky, 2022). It has almost 30 million registered users, according to its website. It provides various language in addition to English for both native English speakers and non-native speakers (Munday, 2016). The application is available not just on the web but also for Android and IOS. As of November 2016, the application offers 66 distinct language classes in 23 different languages. Duolingo application as a tool for language learning might help someone expand their vocabulary in communicating. Students can easily learn new words by using the Duolingo application. Furthermore, Duolingo provides vocabulary exercises and chances for students to evaluate their knowledge and discover areas for improvement. In other words, it suggests that Duolingo can be used as a teaching tool in the classroom to give students new learning opportunities based on the caliber of the content, student feedback, and motivation.

The researcher chosen MTs Al-Huda as a sample of this research because many students' difficulty in learning English, especially in learning vocabulary. And the researcher found any problem at seventh grade students of MTs Al-Huda, the students did not understand the text and dialogue given by teacher, more over many students were silent when learning take place. Based on the problems, the researcher believes that one of the simple and obvious methods is to combine the repetition practice with the Duolingo application. It can make students are not bored with activities that are just like that, and it be more fun in learning English to mastered vocabulary. By combining the repetition drill technique with the Duolingo application, researcher with an interest in investigating whether "The Effectiveness of Using Repetition Drill Technique with Duolingo Application to Improve Vocabulary for Seventh Graders of MTs Al-Huda Reban".

RESEARCH METHOD

This research used quantitative method, employs an experiment design. Sugiyono (2015) stated that the purpose of the experimental approach is to ascertain, in regulated and controlled environments, how particular therapies affect others. The nonequivalent control group design was employed in the study; this design is comparable to the pretest-posttest control group design in a genuine experimental design. However, neither the control group nor the experimental groups are selected at random in this design. This method compares both the experimental and control groups, but the groups are not randomly selected or organized. The experimental and control groups were subjected to an initial pretest. Both groups received different treatments, whereas the experimental group used repetition drill technique with Duolingo application and control group used traditional teaching method. Finally, a posttest was given to each group.

The tools that researchers employ to facilitate the collection of study data are called instruments. On the basis of this, the investigator set up multiple research instruments:

1. Observation

The observation is conducted to find out the situation and conditions to obtain accurate results in teaching and learning activities in the experimental and control groups. So, that it might be used to find out the various problems encountered so that it can analyze the learning process.

2. Test

The test is a series of statement that must be answered to assess a person's ability. The test instrument in this study is to see the students' ability to master vocabulary. Then the researcher gave two tests at the beginning and last of the meeting. The researcher measures beginning competency and assesses how much students' vocabulary abilities have improved following treatment using pre-and post-test results. The learning outcomes of the students in the experiment and control groups are then compared using the test. The procedures for examining the test device are as follows:

a. Validity Test

A measure of an instrument's level of validity is called validity. Validity can be determined using the formula below:

$$r_{xy} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N\sum X^2 - (\sum X)^2\}\{N\sum Y^2 - (\sum Y)^2\}}}$$

(Ali et al., 2021)

Descriptions:

r_{xy} : Correlation coefficient between variables X dan Y

X: Score of each item X

Y: Score of each item Y

N: Total of respondents

b. Reliability Test

The test is regarded to be trustworthy if it produces consistent results when tested multiple times. As a result, a test is said to have high reliability if it can be relied upon, consistent, and productive. The following is how the Cronbach Alpha formula is applied to determine reliability:

$$R_{11} = \left[\frac{k}{k-1} \right] \left[1 - \frac{\sum \sigma b^2}{\sigma 1^2} \right]$$

(Ali et al., 2021)

Description:

r_{11} : Instrument Reliability

k : Total of items

$\sum \sigma b^2$: Total Variance of Item

$\sigma 1^2$: Total Variant

N : Total Number of Students

c. Difficulty Level

The degree of difficulty of the problem is measured by its difficulty level. Test questions should not be too easy or too difficult; rather, they should be balanced in terms of difficulty. This indicates that the question is good. An algorithm was used to determine the difficulty level (Arifin, 2009):

$$TK = \frac{\sum s}{N}$$

Description:

TK: Difficulty Level

S: Total Students answered incorrectly

N: Total Number of Students

d. Differential Power Test

Differential power test is measurement of the extent to which items can distinguish between students who have mastered competencies and those who have not based on certain criteria. .to determine the different power test, the formula was used (Arifin, 2009):

$$t = \frac{\bar{X}_A - \bar{X}_B}{\sqrt{\frac{\sum X_1^2 + \sum X_2^2}{n(n-1)}}}$$

Description:

t: Different Power

\bar{X}_A : Mean score experimental group

\bar{X}_B : mean score control group

$\sum X_1^2$: Sum of squared individual deviations experimental group

$\sum X_2^2$: Sum of squared individual deviations control group

n : 27% x N (for experiment and control group)

3. Data Analysis

a. Normality Test

The purpose of a normality test is to determine whether or not the data collected from the experimental and control classes is normally distributed. This test was conducted using IBM SPSS Statistic version 29, which has the following requirements: The data distribution can be classified as normal if the results of the normality test score more than or equal to $>0,05$; otherwise, the data distribution is not normal (Sugiyono, 2013).

b. Homogeneity Test

For the data to be homogeneous and have a significant level greater than $\alpha = 0,05$. or f value can be computed using the formula. (homogeneity level):

$$f_{\text{hitung}} = \frac{S_b^2}{S_k^2}$$

Description:

S_b^2 : Largest variance

S_k^2 : Smallest variance

Interpolation is used to calculate the table's homogeneity test value.

If $f_{\text{hitung}} < f_{\text{tabel}}$, the data is homogeneity distribution.

c. Hypothesis and T-test

To evaluate if the hypothesis in this study is accepted or rejected, hypothesis testing is performed. Calculate the significance test first in order to ascertain the hypothesis. The T-test is a method of data analysis used to determine whether there is a significant difference between students' vocabulary knowledge in the experimental class when Duolingo was used and in the control class when it wasn't. This study used IBM SPSS Statistic version 29 to conduct an Independent Samples T-test with a two-tailed test of significance. following the T-test calculation:

If the $t_{\text{hitung}} < t_{\text{tabel}}$ or $t_{\text{count}} > t_{\text{table}}$ then H_0 is rejected and H_1 accepted.

d. N-Gain Score

The gain score is determined using the difference pre-test and post-test. Sugiyono (2015) stated the difference between the beginning and final test scores is referred to as the treatment effect. The calculation of gain value is as follows:

$$G = S_f - S_i$$

Description:

G: Gain

S_f : Score pre-test

S_i : Score post-test

After collecting of scoring results, it will continue to calculate the average improvement in student learning outcomes, particularly using N-Gain.

$$g = \frac{\text{score posttest} - \text{skor pretest}}{\text{skor ideal} - \text{skor pretest}}$$

The acquisition of N-Gain normalization is then categorized into three types: Students who get score of less than 40% are include the effective category, Students who get score 40% until 55 % are include the less effective category, Students who get score 55% until 75% are include the quite effective category, and Students who get score more than 76% are include the effective category (Sugiyono, 2015).

RESULT AND DISCUSSION

Table 1. Validity Test

Item	$t_{\text{table 5\% (20) (0,444)}}$	t_{count}	Description
Item 1	0,534	0,015	Valid
Item 2	0,456	0,043	Valid
Item 3	0,961	<0,001	Valid
Item 4	0,475	0,034	Valid
Item 5	0,595	0,006	Valid
Item 6	0,534	0,015	Valid
Item 7	0,595	0,006	Valid
Item 8	-0,029	0,903	Invalid
Item 9	0,156	0,510	Invalid
Item 10	0,961	<0,001	Valid
Item 11	0,255	0,278	Invalid
Item 12	0,961	<0,001	Valid
Item 13	0,961	<0,001	Valid
Item 14	0,961	<0,001	Valid
Item 15	0,961	<0,001	Valid

Table 2. Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
0,754	16

According to the instrument data analysis from table 2, researcher used 15 questions to assess the validity of 20 students. It can be seen that $> r_{\text{table}}$ 12 items are declared valid and 3 items are declared invalid because the results are less than the number of r_{table} . Therefore, it can be concluded that these questions are valid even though not all of them are valid because there are no invalid half of the items. Then the reliable test from table 3 result above obtained a coefficient value of 0,754.

Table 3. Results Data Difficulty Level

No Item	Mean (Output SPSS)	Difficulty Level
Item 1	0,55	Medium
Item 2	0,75	Easy
Item 3	0,75	Easy
Item 4	0,70	Medium
Item 5	0,50	Medium
Item 6	0,55	Medium
Item 7	0,80	Easy
Item 8	0,70	Medium
Item 9	0,75	Easy
Item 10	0,70	Medium
Item 11	0,75	Easy
Item 12	0,90	Very Easy
Item 13	0,75	Easy
Item 14	0,75	Easy
Item 15	0,75	Easy

Table 4. Result Data Differential Power Test

No Item	R _{count} (Output SPSS)	Different Power Test
Item 1	0,534	Good
Item 2	0,456	Good
Item 3	0,961	Excellent
Item 4	0,475	Good
Item 5	0,595	Good
Item 6	0,534	Good
Item 7	0,595	Good
Item 8	-0,029	Bad
Item 9	0,156	Bad
Item 10	0,961	Excellent
Item 11	0,255	Enough
Item 12	0,961	Excellent
Item 13	0,961	Excellent
Item 14	0,961	Excellent
Item 15	0,961	Excellent

Based on the reliability coefficient value on table 4, it could be concluded that all items in this study are reliable. With the difficulty level is medium to very easy. From the data above it could be concluded that the criteria differential power test from table 5 for the item/question are in the range of bad – excellent. It could be concluded that the questions used are extremely diverse, so that it is good to be used as a question instrument.

Table 5. Normality Test

Tests of Normality						
	Kelas	Kolmogorov-Smirnov ^a			Shapiro-Wilk	
		Statistic	df	Sig.	Statistic	df
Peningkatan Kosakata Siswa	Pre-Test Eksperimen	0,155	28	0,085	0,931	28
	Post-Test Eksperimen	0,170	28	0,037	0,919	28
	Pre-Test Kontrol	0,180	28	0,021	0,928	28
	Post-Test Kontrol	0,179	28	0,023	0,936	28

a. Lilliefors Significance Correction

It is known from the data analysis that all of the data in the Shapiro-Wilk and Kolmogorov-Smirnov tests have values greater than 0.05, indicating that the research data is regularly distributed. The results of the pre-test indicated that the controlled class had a Kolmogorov-Smirnov score of 0,021 while the experimental class had a score of 0,085. Additionally, the experimental class's pre-test score is 0,037 while the controlled class's score is 0,023.

Table 6. Homogeneity Test
Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Peningkatan Vocabulary	Based on Mean	4,679	1	54	0,035
	Based on Median	4,570	1	54	0,037
	Based on Median and with adjusted df	4,570	1	52,052	0,037
	Based on trimmed mean	4,421	1	54	0,040

The data from the experimental class and the controlled class are known to be homogenous based on the homogeneity test result. It can be inferred that the variance of the post-test data for the experimental class and the control class is homogeneous as the significant value based on mean is $0,035 > 0,05$.

Table 7. Group Statistics

		Group Statistics			
Kelas		N	Mean	Std. Deviation	Std. Error Mean
Peningkatan Vocabulary	Post-Test Kelas Eksperimen	28	80,54	8,535	1,613
	Post-Test Kelas Kontrol	28	74,46	5,984	1,131

Table 8. Independent Sample Test

Table 8: Independent Sample Test											
Levene's Test for Equality of Variances					t-test for Equality of Means						
	F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
					One-Sided p	Two-Sided p			Lower	Upper	
					Peningkatan Vocabulary	Equal variances assumed	4,679	0,035	3,082	54	0,002
	Equal variances not assumed			3,082	48,380	0,002	0,003	6,071	1,970	2,111	10,032

The independent sample t-test showed that there was a significant difference in the mean score when using the Repetition Drill approach with the Duolingo application. As can be seen, the controlled class scored 74,46, whereas the experimental class scored 80,54. Using a $t(df = 54) = 3.082$ results, the two-tailed significant value is 0.03. Given that the significant result (2-tailed) 0,006 is less than $\alpha = 0,05$, it follows that the alternative hypothesis (H_1) is accepted and the null hypothesis (H_0) is rejected. It implies that the Duolingo application's repeated drill technique has an impact on pupils' vocabulary development.

Table 9. N-Gain Experimental Class and Controlled Class

No.	N-Gain Score (%)	
	Kelas Eksperimen	Kelas Kontrol
1	66,67	16,67
2	80	20
3	42,86	11,11
4	40	12,5
5	44,44	0
6	14,29	20
7	66,67	25
8	25	16,67
9	16,67	20
10	28,57	14,29
11	20	25
12	50	28,57
13	37,5	25
14	42,86	40
15	60	16,67
16	40	0
17	100	20
18	25	0
19	80	25
20	40	14,29
21	37,5	16,67
22	33,33	0
23	50	16,67
24	14,29	14,29
25	40	28,57
26	50	33,33
27	50	25
28	66,67	20
Mean	55,0822	18,0456
Minimal	14,29	0
Maximal	100	40

The N-Gain calculation findings indicate that the average value of 55.0822 falls into the moderate effective category. Therefore, it can be said that improving vocabulary with the Duolingo application using repeated drill approach is only moderately effective.

Based on the aforementioned data analysis, researchers can conclude that utilizing the repetition drill approach with the Duolingo application can have a positive impact on vocabulary improvement because therapy results in higher test scores than traditional learning. It means that using repetition drill technique with Duolingo application showed a positive effect to be implementation especially, for seventh graders of MTs Al-Huda Reban.

CONCLUSION

The research can be concluded based on the analysis of the data that was collected. The purpose of the study was to get empirical data regarding the impact of supplementing the Duolingo application with the repetition drill approach on vocabulary improvement in seventh-grade of MTs Al Huda Reban. Enhancing vocabulary can be achieved by combining repetition drills with the Duolingo application. Additionally, it makes learning more enjoyable and productive for the students. There was a noticeable variation in the mean score between the Duolingo application and the repetition drill technique. As can be seen, the controlled class scored 74,46, whereas the experimental class scored 80,54. The T-test result indicates that since the significant value (2-tailed) 0,006 is less than $\alpha = 0,05$, the alternative hypothesis (H1) is accepted and the null hypothesis (H0) is rejected. Furthermore, the average value of 55.0822 falls into the moderately effective group based on the N-Gain calculation results. Thus, it can be said that using the Duolingo program and the repetition drill approach is a good way to increase vocabulary.

This research has similarities with the previous related work was done by Fatah (2019), in paper entitled, "The Effect of Using Duolingo Application to Develop Students' Vocabulary Knowledge". The goal of this study was to gather empirical evidence on the effect of applying the Duolingo application to help students enhance their vocabulary knowledge. This study employed a quasi-experimental design. The participants in this study were students in the seventh grade at SMP Islam Taman Qur'aniyah Jakarta Selatan. Based on the study's findings, using the Duolingo application can help students improve their vocabulary knowledge (Fatah, 2019). Because there are similarities, such as using the Duolingo application to enhance vocabulary, the thesis can be used as a reference. And the population is the same-students in seventh grade. The difference is that this thesis does not employ the same technique as the researchers' research.

And this research has similarities with the research by Suwandi (2020). In thesis entitled "The Effect of Duolingo Application on Students' Vocabulary at MTs Darul Ilimi Batang Kuis". The research aims to investigate the challenges encountered by seventh grade students at MTs Darul Ilimi Batang Kuis as well as the variables influencing the students' difficulty in memorizing vocabulary. The study is quantitative with the effect size was calculated to be 1.37, with effect ranging to substantial effect. As a result, the Duolingo program has had a substantial impact on the vocabulary mastery of students in the seventh grade at MTs Darul Ilimi Batang Kuis (Suwandi, 2020). This study is similar in that it uses the Duolingo application to improving vocabulary and this research used experimental design. But in this research not used Repetition Drill technique for combining the Duolingo application. Some of the previous studies that have been described above are sufficient as references for researcher research. Along with the times and technology, programs such as the Duolingo application will help increase students' vocabulary, and in teaching English, the teacher can use memorization by using repetition drill techniques.

REFERENCES

- Affiah, S. (2019). *Improving Students' Vocabulary Mastery by Using Repetition Drill Technique* [Undergraduate Thesis]. Universitas Muria Kudus.
- Ali, Bayad, & Anwar, G. (2021). Vocabulary Learning Strategies and Foreign Language Acquisition at Private School. *Vocabulary Learning Strategies and Foreign Language Acquisition*, 6(3), 1–11. <https://doi.org/10.22161/ijels>.
- Arifin, Z. (2009). *Evaluasi Pembelajaran: Prinsip Teknik Prosedur*. Remaja Rosdakarya.
- Fatah, C. A. (2019). *The Effect of Using Duolingo Application to Develop Students' Vocabulary Knowledge (A Quasi-Experimental Study at the Seventh Grade of SMP Islam Taman Quraniyah Jakarta Selatan in Academic Year 2018/ 2019)* [Undergraduate Thesis]. UIN Syarif Hidayatullah.
- Hornby. (2008). *Individual Freedom in Language Teaching*. Oxford University Press.
- Indrasari, A., Novita, D., & Megawati, F. (2018). Big Book: Attractive Media for Teaching Vocabulary to Lower Class of Young Learners. *JEES (Journal of English Educators Society)*, 3(2), 141–154. <https://doi.org/10.21070/jees.v3i2.1572>
- Kaligis, E. G. R., Purwanti, L., & Rikmasari, R. (2022). Meningkatkan Kemampuan Kosakata Bahasa Inggris Terhadap Tenaga Pengajar Melalui Aplikasi Duolingo. *Jurnal An-Nizam: Jurnal Bakti Bagi Bangsa*, 1(3), 83–92.
- Mohammad, T. F., & Abdulrahman, T. R. (2016). English Learners Perception on Lecturers' Corrective Feedback. *Journal of Arts and Humanities*, 10–21.
- Munday, P. (2016). The Case for Using DUOLINGO as Part of the Language Classroom Experience (Duolingo como parte del curriculum de las clases de lengua extranjera). *RIED*, 19(1), 83–101. https://digitalcommons.sacredheart.edu/lang_fac
- Richards, J. C., & Rodgers, T. S. (1986). *Approaches and Methods in Language Teaching*. Cambridge University Press.
- Risky, A. (2022). *The Use of Duolingo Application Toward Students' Vocabulary Mastery at the Seventh Grade of State Islamic Junior High School 4 Rokan Hulu* [Undergraduate Thesis]. UIN Suska Riau.

Sugiyono. (2013). *Metode Penelitian Kuantitatif Kualitatif Dan R&D*. ALFABETA.

Sugiyono, S. (2015). *Metode Penelitian dan Pengembangan (Research and Development/ R&D)*. Alfabeta.

Suwandi, S. (2020). *The Effect of Duolingo Application on Student' Vocabulary Mastery at MTs Darul Ilmi Batang Kuis* [Undergraduate Thesis]. UIN Sumatera Utara Medan.

Thornbury, S. (2007). *How to Teach Vocabulary*. Pearson Education.

Willis, J. (2008). *Teachiing the Brain to Read: Strategies for Improving Fluency, Vocabulary, and Comprehension*. ASCD.