



Duolingo Application as A Learning Aid to Enhance Vocabulary Proficiency in Procedure Texts at Junior High School

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Abstract. *The purpose of this study was to investigate the effectiveness of Duolingo in improving vocabulary mastery related to procedure texts among 26 seventh-grade students at MTSS Daarul Ulum Margomulyo Blitar. The researchers employed a pre-experimental design using a one-group pre-test and post-test approach. The research process included three key steps: 1) administering a pre-test, 2) providing treatment, and 3) conducting a post-test. Data was collected through testing and analyzed using SPSS25. The results indicated that students' vocabulary achievement increased from an average of 61.15 in the pre-test to 83.65 in the post-test. The analysis revealed a significance value (sig2-tailed) of 0.001, which is below 0.05, indicating that Duolingo effectively enhanced the vocabulary achievement of the seventh-grade students at MTSS Daarul Ulum Margomulyo Blitar. Based on these findings, it is recommended that English teachers consider using Duolingo as an alternative instructional tool, particularly for teaching vocabulary and potentially other language skills or subskills.*

Keywords: *Duolingo Application; vocabulary achievement; procedure text.*

1. INTRODUCTION

Reading, Speaking, Writing, and Listening are the four abilities that students must acquire when learning English in a foreign language classroom, such in Indonesia (Dian Fadhilawati et al., 2023). Furthermore, beside skill there are also subskills for example grammar, pronunciation and vocabulary. Apart from these skills, there are still subskills that are no less important for students to learn, namely grammar, pronunciation and vocabulary. Of these subskills, learning vocabulary is one of the most fundamental contexts to be mastered, (Hestiana, 2022). In order to communicate and comprehend effectively in a variety of circumstances, vocabulary is essential. One of the key components of language learning is vocabulary, (McCarthy, 1990). Furthermore, Hestiana, (2022) stated that language can be improved by expanding our vocabulary. Gaining or having a large vocabulary is the result of mastering vocabulary. Having a strong vocabulary will enable students to understand words in their context. In addition, Alabsi, (2016) stated an essential component of a student's comprehension and ability to communicate in any language is their vocabulary. Meanwhile, Nurchurifiani et al., (2021) added that the fundamental component of language that a person has to acquire is vocabulary. Individuals need a variety of vocabularies to support their language proficiency. Students who are learning a language cannot utilize it effectively if they do not have a sufficient understanding of the word and its meaning.

Even though vocabulary is crucial for helping students learn English, many junior high school students have a small vocabulary; in this situation, many students had trouble understanding idiomatic expressions, defining words, and using terms correctly (Hardianto & Baharuddin, 2019). Alqahtani (2015) asserted that almost all EFL learners struggle with word choice, pronunciation, spelling, idiomatic phrases, and inflectional grammar, which is consistent with these claims. For this reason, mastering vocabulary is crucial to mastering the four English language abilities. According to field research, a large number of Indonesian students struggle to comprehend English lectures, with a lack of vocabulary knowledge being the primary barrier (Herwiana, n.d.). Based on research conducted Sadiq et al., n.d. (2022), it is concluded that students are currently facing challenges in mastering vocabulary in English. This is because insufficient media has been used to assist in the teaching and learning process for students.

Student of junior high school of English require engaging ways to make the learning process seem enjoyable, (Sofeny et al., n.d. 2022). In general, the goals of learning vocabulary are to help students comprehend the meanings of new words, acquire a larger vocabulary, and effectively use words in communication, it is imperative that teachers choose and implement effective teaching strategies when teaching vocabulary to their students in order to increase their motivation to learn the material, (Fadhilawati, 2012). Duolingo is one digital tool that can be used to help learners with their challenges. Launched in November 2011, Severin Hacker and Luis Von Ahn created the free language learning app Duolingo, which presently has 68 different language courses available in 23 languages. 22 more courses are in the process of being developed, (Reskyani et al., n.d. 2021). Teachers can help their students learn grammar by incorporating Duolingo into the classroom and utilizing its features. Duolingo is a well-known language-learning platform that uses an interactive and gamification approach to language training. It provides a selection of interactive lessons, tests, and exercises that can be tailored to focus on specific grammar structures, which include interactive activities, instant feedback, and fascinating content (Fadhilawati et al., 2023).

Furthermore, Duolingo is a widely available platform that works with a variety of gadgets, such as PCs, tablets, and smartphones. This makes it incredibly simple for students to use this application, and they may practice at home whenever they want without any difficulties, not only during school hours. Previous research findings have repeatedly shown that incorporating Duolingo into language instruction has a beneficial impact and can improve students' motivation, engagement, and language learning outcomes. Several researchers have investigated the effectiveness of Duolingo in aiding students in language learning. Dian

Fadhilawati et al., (2023) shown a substantial enhancement in students' proficiency in learning English using Duolingo, as indicated by the rise in scores between the pre-action and post-action assessments. Additionally, the findings of this study are consistent with earlier research by Karjo & Andreani (2018) in Aulia et al., (2020) which demonstrated the positive effects of Duolingo on language learning development when used alone or in conjunction with other applications. After 24 hours, learners generally remembered 80–100% of the words. It can be assumed from a few previous studies that examined the efficacy of Duolingo that it can serve as an alternative tool for acquiring students' English vocabulary.

According to researchers who have interviewed English teachers at MTSS Daarul Ulum Margomulyo, it was discovered that students are still having trouble mastering up English, some of the learners' basic English language competency levels were not being met by them. The youngster's inability to develop their vocabulary in English and their inability to memorize it all using a dictionary was the culprit. Therefore, to address students limited vocabulary learning, there is a tremendous demand for engaging and relevant vocabulary learning materials. For these reasons, the author would want to conduct a study on junior high school students' vocabulary using application Duolingo. Based on the context provided, the researchers employed Duolingo as a tool to assist students in acquiring vocabulary and conducted a study titled "The Efficacy of Duolingo Application to Elevate Student's Vocabulary Achievement of Procedure Text in Junior High School" at MTSS Daarul Ulum Margomulyo, Blitar.

2. METHOD

The researchers utilized a quantitative methodology, gathering numerical data for the research (Creswell & Creswell, 2018). The research design adhered to a pre-experimental strategy, precisely employing a one-group pretest- post-test design. In this experimental design, a solitary group of participants was engaged, and there was no inclusion of a comparative group. The objective of this study was to determine whether or not using Duolingo improved students' vocabulary achievement up to the seventh grade. The study was carried out at MTSS Daarul Ulum Margomulyo, Kabupaten Blitar. The researchers had a number of reasons for selecting this particular school, including having a good connection with an English teacher at MTSS Daarul Ulum Margomulyo who frequently provided information regarding the classroom environment. In this research, purposeful sampling is employed in accordance with the teacher's recommendation for the student's English proficiency. The researcher used a tryout to examine the test's validity and reliability, both for the pre- and post-test. prior to

gathering data. The participants involved in this research were seventh-grade students from MTSS Daarul Ulum Margomulyo, Kabupaten Blitar, comprising a total of 26 students. The research procedures consisted of three main stages: conducting a pre-test, implementing the treatments, and administering a post-test, as stated in Sugiyono (2008:11) the design of the study is as follows in Figure 1.

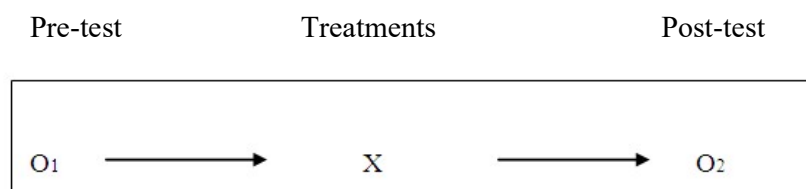


Table 1. The Research Procedures

Information:

O1 = Pre-test prior treatment

O2 = Post-test after the treatment

X = treatment of the class by implementing learning using the Duolingo application

To collect data, the researchers conducted tests, ensuring a thorough assessment of the tests' validity and reliability. Subsequently, they analysed the gathered data using SPSS25. The research established two hypotheses: 1) Ha: There is efficacy of the Duolingo application to enhance students' vocabulary achievement of procedure text in the junior high school fifth-grade students at MTSS Daarul Ulum Margomulyo Blitar, Kabupaten Blitar; and 2) Ho: There is no efficacy of the Duolingo application to enhance students' vocabulary achievement of procedure text in the junior high school at MTSS Daarul Ulum Margomulyo Blitar, Kabupaten Blitar.

A pretest consisting of 20 multiple-choice questions on procedure text vocabulary was completed by 26 students on January 27, 2024. All took the test within the allotted 60 minutes, and while some concluded with confidence and others unsure, they all finished with an average score of 61.15, which is lower than the school's required 75.00. They utilized the Duolingo app throughout the course of the following week to acquire vocabulary connected to verbs in procedure text materials. This approach was enjoyable and simple for the students to comprehend, and it helped them get ready for the post-test the next week. An example of utilizing Duolingo in this manner is shown in Figure 1.



Figure 1. The Utilization of Duolingo Application in Class

The post-test was held on January 18, 2024. Twenty-six students in the seventh grade at MTS Daarul Ulum Margomulyo Blitar completed a post-test covering 25 items that were identical to those they had completed on the pre-test. The post-test's questions, however, were arranged differently and were more randomly distributed than those in the pre-test. The exam lasted for ninety minutes, like before. But in contrast to pre-tests, students had much greater confidence. Almost none of the students asked the test-related questions to complete the exam or after the treatment. The researcher instructed the students to turn in their worksheets at the front desk after the allotted time ran out. The post-test average of 83.65 indicates that all 26 students completed the test with ease. After that, the researchers used SPSS25 to evaluate it. The goal of the analysis was to calculate and compare the pretest and post-test significance with the needed significance (0.05) in order to ascertain the t-test result and whether it falls on the Alternative Hypothesis (H_a) or Null Hypothesis (H_o). Based on the calculated p-value ($\text{sig } 2 < 0.001$) and the t-distribution graph, the difference in vocabulary comprehension between the pre-test and post-test scores for students using Duolingo is statistically significant. This provides strong evidence that Duolingo effectively improved the vocabulary comprehension of procedure texts among seventh-grade students at MTS Daarul Ulum Margomulyo.

The influence of Duolingo Application on students' English learning outcomes was clearly beneficial, as seen by the results that were previously given. Prior utilizing Duolingo Application, the subjects' pre-test average was 61.15. Nonetheless, the students' post-test results showed a notable improvement, with an average of 83.65, after they actively engaged with the Duolingo App. These results demonstrate the efficiency of the Duolingo app as a

successful tool for raising vocabulary achievement among learners. As a result, Junior High School students' vocabulary achievement may be enhanced by using Duolingo Application.

3. FINDINGS AND DISCUSSION

The study evaluated the vocabulary of process texts used by seventh-grade students after they were introduced to learning made possible by the Duolingo app. An extensive analysis of the students' indicators of performance served as the base for this impact study. The information obtained from this comprehensive review provide a thorough perspective on how well the Duolingo program works as a vocabulary-learning tool. The student results before and after the Duolingo app was used in the classroom for procedure text on vocabulary are shown below.

Table 1 displays data that indicates a significant enhancement in the animal vocabulary learning results of the thirty sixth-grade students at MTSS Margomulyo Blitar. The procedure texts' vocabulary acquisition results showed a notable improvement on average, rising from a starting score of 61.15 to an astounding 83.65. This notable advancement highlights how well Duolingo application can be used as a useful tool for vocabulary teaching in junior high school. It suggests that the student's ability to define terms and use them effectively in context was greatly enhanced by the Duolingo application when it came to vocabulary acquisition. The result of the research strengthens Ajisoko (2020) Duolingo can serve as an effective application for enhancing English language learning, particularly in the realm of vocabulary. According to Savira Hernadijaya (2020) the gamification learning offered by Duolingo, particularly in enhancing vocabulary, demonstrates positive and beneficial outcomes.

Tabel 2. The students' Learning Outcomes after Utilizing Duolingo Application in Acquiring the Vocabulary of Procedure Text

| No | Initial of Students | Pre-Treatment Test Result | Post-Treatment Test Result |
|-----------|----------------------------|----------------------------------|-----------------------------------|
| 1 | AJB | 60 | 85 |
| 2 | KKB | 65 | 80 |
| 3 | MQB | 75 | 80 |
| 4 | SLN | 45 | 85 |
| 5 | MTWS | 80 | 90 |
| 6 | NVA | 45 | 75 |
| 7 | IY | 55 | 85 |
| 8 | HAY | 70 | 95 |
| 9 | FQ | 75 | 90 |

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|----|---------|-------|------|
| 10 | SIS | 70 | 90 |
| 11 | LOS | 65 | 75 |
| 12 | NAW | 60 | 85 |
| 13 | RDI | 45 | 75 |
| 14 | SCT | 60 | 80 |
| 15 | JSM | 40 | 75 |
| 16 | PRS | 45 | 80 |
| 17 | AGS | 55 | 75 |
| 18 | MKA | 60 | 80 |
| 19 | YUA | 70 | 85 |
| 20 | LAH | 40 | 75 |
| 21 | UYA | 75 | 95 |
| 22 | JAK | 80 | 95 |
| 23 | SEJ | 40 | 80 |
| 24 | NH | 70 | 80 |
| 25 | DCS | 75 | 90 |
| 26 | YSMS | 70 | 95 |
| | Average | 61.15 | 83.5 |

4. CONCLUSION

Drawing from the above explanation, implication is that learning vocabulary through the Duolingo is more effective. This can be seen from the student post-test scores, which are higher than the score of pre-tests. The utilizing of the Duolingo application makes the study of vocabulary interesting and engaging since it allows students to learn vocabulary more fun. The result of the study unequivocally demonstrated the positive impact of Duolingo Application on students' vocabulary achievement. These findings firmly establish the efficacy of Duolingo Application as an effective and successful resource for enhancing students' vocabulary acquisition. It is indeed a noteworthy addition to modern educational resources. The Application can be used as supplementary materials to reinforce classroom lessons. Promote Responsible Internet Usage: With easy access to the Internet, students can further enhance their skills utilizing Duolingo Application at home. Parents play a pivotal role in guiding and monitoring their children's internet usage. Moreover, Future research is suggested to using Duolingo Application on students' vocabulary achievement. Additionally, they may investigate

the strategies and best practices for effective utilizing Duolingo for learning vocabulary into junior high school curriculum to maximize its benefits for young language learners.

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