The Use of The Duolingo Application in Improving Students' Vocabulary Mastery to the Eleventh-Grade Students of SMK Gemilang Modernland in the Academic Year 2023/2024

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ABSTRACT

This study was undertaken to examine the efficacy of the Duolingo application in enhancing the vocabulary proficiency of eleventh-grade students at SMK Gemilang Modernland during the academic year 2022/2023. Additionally, it aimed to determine the students' perception of the application's effectiveness in improving their vocabulary skills. This study used a mixed-method approach, including both quantitative measurements using a pre-experimental design with pre-test and post-test, and qualitative data collected by a questionnaire. The researcher selected students in the eleventh grade of SMK Gemilang Modernland as the participants of her study, which consisted of four group sessions. Considering the test results, the kids' score has been raised. Mean scores on the pre-test and post-test are 67.84 and 77.52, respectively. The data indicates that the mean of the post-test is greater than the mean of the pre-test. According to the survey, the research findings indicate that using Duolingo in English instruction has several beneficial impacts on students. These include the fact that the Duolingo feature enhances their motivation to study English, the features of Duolingo support their effort in learning, and Duolingo also fosters enjoyment in the English learning exercises. Moreover, almost all students are likely to persist in using Duolingo for their English language studies.

Keywords: Duolingo, vocabulary mastery, students' perception

INTRODUCTION

Vocabulary is inherently interconnected with the process of language acquisition. It is well recognised that vocabulary serves as the fundamental basis of language (Thornburry, 2002). Consequently, someone who is endeavoring to acquire a new language must have a specific degree of knowledge of its vocabulary (Muddin, 2018). The aforementioned data indicate that the significance of vocabulary in language instruction and acquisition should not be undervalued. Moreover, several experts have suggested a predetermined quantity of words that language learners should be obligated to acquire. The "Basic English" lexicon, developed by American linguist Charles K. Ogden in 1930, comprised 850 terms that he deemed adequate for fundamental English conversation (Chvala, 2020). Furthermore, a pupil with a restricted vocabulary will encounter difficulties in several aspects of the language.

Nevertheless, Huyen and Nga (2003) asserted that students experience boredom when they focus solely on the teacher's words during the teaching and learning process, without engaging in any other activities (Huyen & Nga, 2003).

Furthermore, pupils from SMK Gemilang Modernland also encountered same issue. The study observed that the students persistently meet difficulties in acquiring vocabulary. The students struggle with the application and retention of the terminology and its semantic relevance. Furthermore, they employ Indonesian spelling and pronunciation to write and articulate words such as bag, shoes, hat, and pencil as bek, syus, het, and pensil. Consequently, the students lack enthusiasm for passive vocabulary acquisition, when they merely listen to the lecturers' explanations. Hence, it limits their capacity to communicate in the English language.

Within the realm of English language instruction, teacher performance encompasses the manner in which teachers impart language skills (such as speaking, listening, reading, and writing), language components (including grammar, pronunciation, and vocabulary), address the learning requirements of students, and understand the specific areas in which each student should enhance their proficiency in English (Rinanntati et al., 2019). Accordingly, teachers need to possess a comprehensive understanding of the subject matter in order to effectively involve students in the educational process inside the classroom (Andersen & Rustad, 2022). Furthermore, it suggests that English teachers should proactively encourage students to have a greater level of engagement in acquiring knowledge, therefore enhancing their understanding of the fundamental language they aim to master.

Hence, the selection of techniques is identified as a critical factor that teachers should not overlook (Mitchell & Savill-Smith, 2004). Teachers can enhance vocabulary acquisition by including enjoyable and engaging media (Sinaga & Oktaviani, 2020). An effective medium for teaching vocabulary is the Duolingo application (Hardiyanti et al., 2021). It is an instructional mobile application that includes exercises in speaking, reading, listening, and writing to enhance users' vocabulary and grammar proficiency (Guaqueta et al., 2018). An inherent benefit of using Duolingo is its capacity to enhance vocabulary acquisition among students by means of gamified exercises, therefore reducing the possible monotony linked to the learning process. Duolingo is particularly notable as a game that may be efficiently used for this educational objective (Putri & Islamiati, 2018).

The objective of this study is to examine the impact of the Duolingo application on enhancing the vocabulary proficiency of eleventh-grade students at SMK Gemilang Modernland during the academic year 2023/2024. Additionally, the study aims to determine the students' perception of the effectiveness of the Duolingo application in improving their vocabulary mastery.

METHOD

This study employs mixed-methods methodology, which involves collecting and analyzing both qualitative and quantitative data to answer research questions and hypotheses. The quantitative method involves a pre-experimental study to determine the cause-and-effect of reality, while the qualitative method uses questionnaires to assess

vocabulary mastery among eleventh-grade students at SMK Gemilang Modernland. The research began on July 17 and ended on August 3, 2023, with four meetings, focusing on the implementation of media on vocabulary mastery in the class.

The quantitative data in this study was analyzed using SPSS 23.0 Version. The mean, median, mode, range, variance, standard deviation, normality, homogeneity, paired t-test, and descriptive statistics analysis were estimated. Hence, descriptive statistics analysis methods are employed to describe each research variable. Furthermore, the qualitative data analysis has three essential elements: data reduction, data display, and conclusion drawing or verification. Using tables, the researcher presented the data extracted from the documents, the test results, and the questionnaire results. Next, the researcher proceeded to provide a more comprehensive description of the presented data.

FINDINGS AND DISCUSSION
Quantitative Findings
The SPSS results indicate that the participants' pre-test and post-test scores already include the maximum, minimum, mean, and standard deviation for each variable, as indicated in the table below:

Table 1. Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Pre-test	25	40	48	88	67.84	11.224
Post-test	25	30	60	90	77.52	7.644
Valid N (listwise)	25					

Source: SPSS Version 23

The provided descriptive data indicate that the participants' minimum score in the pre-test was 48, while the maximum score was 88, with a mean of 67.84. Furthermore, the lowest score achieved in the post-test was 60, and the highest score was 90, with an average score of 77.52. The following table indicates that the average score of the post-test exceeded the average score of the pre-test. Therefore, it may be inferred that the pupils' proficiency in vocabulary has enhanced in the post-test.

Qualitative Findings
Data collection was conducted using a questionnaire. The survey was disseminated on August 3, 2023. The researcher administered the data questionnaire by transmitting the hyperlink to the Google Form via the messaging application WhatsApp. The survey consisted of ten items presented in the English language format, and the researcher offered students four additional response options. The responses were categorized as strongly disagree, disagree, agree, and highly agree. Examining students' impression of the effectiveness of the Duolingo application in enhancing their vocabulary proficiency yields the following results:

Table 2. Cognitive category: students' perception on the use of Duolingo application in improving students' vocabulary mastery.

No.	Statements	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
1.	As far as I know, Duolingo is a useful application for learning English vocabulary	-	8%	64%	28%
2.	As far as I know, Duolingo is an application that can help me in learning vocabulary	-	4%	36%	60%
3.	As far as I know, Duolingo is an application that will assist me in improving my English skill especially vocabulary mastery	-	-	40%	60%

According to the findings of the above questionnaire session, it can be inferred that students hold a favorable view of using Duolingo for acquiring English vocabulary. In addition, most students said that the Duolingo feature was beneficial in enhancing their drive to master the English language. Efforts in learning, motivation to attain goals, and enjoyment of English exercises can be enhanced by the features of Duolingo. Moreover, almost always students express their intention to persist in using Duolingo for English language learning.

Table 3. Affective category: students' perception on the use of Duolingo application in improving students' vocabulary mastery.

No.	Statements	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
1.	I like Duolingo because it is easy to use and easy to understand	-	-	48%	52%
2.	I like Duolingo because it displays colorful cartoon picture and funny sounds	-	-	28%	72%
3.	I like Duolingo because it is flexible, it can be used anytime and anywhere	-	12%	60%	28%

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Furthermore, Duolingo has other functionalities that prove beneficial in facilitating English language acquisition for students. A majority of the participants, namely 52%, expressed their preferences for Duolingo because to its user-friendly interface and understandable content.

Out of the pupils, a significant majority (72%) expressed high agreement on the fact that Duolingo showcases vibrant cartoon images and amusing sounds. Moreover, Duolingo is versatile and may be accessed at any time, as agreed by 60% of respondents.

Table 4. Conative: students' perception on the use of Duolingo application in improving students' vocabulary mastery.

No.	Statements	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
1.	Duolingo application makes learning English more interesting	-	-	48%	52%
2.	I enjoy Duolingo application because it is hands on and motivating	-	12%	60%	28%
3.	I think Duolingo application can engage me in learning vocabulary	-	-	40%	60%
4.	I will continue to use Duolingo to learn English	-	12%	60%	28%

Students derive pleasure from acquiring vocabulary through Duolingo and believe that studying English may be more engaging with it. According to the survey findings, 52% of the participants strongly agree with this statement. In addition, 60% of the participants expressed a high level of agreement on the motivational nature of learning English, as it involves practical application and meaningful engagement in the learning process. Moreover, 60% of the participants expressed their intention to persist in using Duolingo for English language acquisition.According to the findings of the above questionnaire session, it can be inferred that students hold a favorable view of using Duolingo for acquiring English vocabulary. In addition, most students said that the Duolingo feature was beneficial in enhancing their drive to master the English language. Efforts in learning, motivation to attain goals, and enjoyment of English exercises can be enhanced by the features of Duolingo. Moreover, almost always students express their intention to persist in using Duolingo for English language learning.After analyzing the results of the initial study question, the researcher found that nearly all students achieved higher scores on the post-test compared to the pre-test. The mean of the post-test is notably greater than the mean of the pre-test

(77.52>67.84), suggesting an improvement in students' vocabulary proficiency.

The results of the second research question indicated that students held predominantly positive views regarding the Duolingo application. Specifically, students acknowledged its usefulness in facilitating the acquisition of English vocabulary and its potential to enhance their English proficiency. Furthermore, they believe that Duolingo enhances the learning process by its adaptability and provision of vibrant animated images and amusing audio. Duolingo therefore enhances the appeal and motivation of English language acquisition. Consequently, pupils will persist in using Duolingo for purpose of acquiring English language skills.

Therefore, it may be inferred that there is an enhancement in students' academic performance and the outcomes of the survey, which unveiled a plethora of favorable perspectives, since Duolingo is a captivating platform suitable for instructing English vocabulary.

CONCLUSION

Based on the findings and comments of the study, it can be inferred that Duolingo enhances the students' proficiency in acquiring language. Statistically, the average of the scores on the post-test exceeded the average of the scores on the pre-test. Following the test, the average score was 77.52, whereas the average score before the test was 67.84.

Furthermore, Duolingo is an effective tool for instructing and acquiring vocabulary for students. Given the positive response of pupils to this medium, it is highly intriguing. In addition, most students said that the Duolingo feature was beneficial in enhancing their drive to master the English language. The attributes of Duolingo can enhance their diligence in acquired knowledge and facilitate their enjoyment of the English language learning activities. Moreover, almost all students are likely to persist in using Duolingo for their English language studies.

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