Students perception of using Duolingo application in vocabulary subject at English department students in Muhammadiyah University of Mataram

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ABSTRACT

The evolvement of technology has increased up a variety of educational applications that are increasingly interesting and innovative as online-based learning tools for English subjects. One of the applications of technologies that popular is Duolingo. The Duolingo application is an Android-based application that can improve students' English skills, such as the ability to speak, write, read, translate, listen to English and also increase vocabulary. This study aims to find out the perception of English Department students at Universitas Muhammadiyah Mataram toward the use of Duolingo application for learning English and to explore the advantages and disadvantages of Duolingo for learning English according to them. This study used quantitative methods by involving English Department Students in Muhammadiyah University of Mataram as participants. The populations of this study 113 students and the samples are consists of 40 students from each semester. To collect data for this research,Researchers used Google forms to distribute questionnaires. The findings reveal positive outcomes, with students reporting significant improvements in their English skills. They particularly appreciate Duolingo's gamified nature, which makes learning feel like playing a game.The Duolingo application helps students to improve their abilities in learning English, especially increasing vocabulary.

1. Introduction

In the era of globalization, language has an important role. Language is one of the communication tools used daily. Language makes it easy for people to communicate with each other. The language also makes convenient people express themselves, feelings, opinions, idea, in conveying the information (Fiqri et al., 2021). In the KKBI dictionary, language is a random system of sound symbols utilized by individuals in a community to collaborate, communicate, and recognize oneself (Br Ginting et al., 2023). English has become the language used by many people all over the world to connect and share with others. Therefore, people should understand and master English in order to gain broader knowledge, information, and technology. In learning a foreign language, vocabulary plays an important role. It is one element that links the four language skills of speaking, listening, reading and writing all together (Huyen & Nga, 2003).

In English learning, we have to build vocabulary so we do not feel difficult when we learn a language (Fiqri et al., 2021). Vocabulary cannot be detached from other facets of English language

learning. Vocabulary is the basic component that must be mastered by learners so as to develop other language proficiencies like listening, speaking, reading, and writing. To have good English proficiency, the learners must have ample vocabulary. Richards and Renandya (2002) state that Vocabulary is a core component of language proficiency and provides much of the basic how well learners speak, listen, read, and write.

There has been a lot of research on using technology in learning English. Himmelsbach (2019) stated that when the Internet is connected, we can access and collect information 24 hours a day (Kieu et al., 2021). The development of digital technology with its easy access to information has changed the way we communicate and relate with and in the world. Mobile learning makes educational contents available in a flexible form in terms of time and place, changing the relationship between learning and learners (Finardi et al., 2016). One of the well-known softwares or sites that uses gamification to learn a foreign language is Duolingo (Aulia et al., 2020).

1.1. Literature Review

a. Technology

The technological advancements in the 21st century have impacted every aspect of human life, including the field of education. The world of education not only needs to harness the benefits of these technological developments but also adapt to equip students with the skills they will need in the future. Technology provides students with the opportunity to learn independently and collaborate with their peers (Warni et al., 2018). Based on the latest insights into how students today actually prefer to use available technology and how their learning is impacted if they use this technology, it is revealed that the use of modern technology and equipment, student learning and interactivity is increasing (Raja & Nagasubramani, 2018). Since the past, humans have used various communication tools such as language, symbols, and other tools to transmit and change information and then communicate with each other using different technologies as mechanisms to manage, transmit, and process all the information created and received (Barreto, 2018). Technology has been used as a technique or tool to improve education and teaching methods in this era. One way is to use an application on your cellphone (Inayah et al., 2020). Most of the large institutions prefer to incorporate modern technology into their studies. Most professionals recognize that implementing technology in the learning environment as a means of regular improvement can be beneficial and motivating. Instructors are looking for advanced methods to motivate students and facilitate learning procedures. The measured social networking sites can facilitate various learning objectives instructed by experts and course designers. Nowadays technological innovations are changing the way of communication day by day. Shyamlee and Phil (2012) stated that the growth of the internet has influenced the learning of new languages especially English as the most widely spoken language in the world. Academic research has understandably focused on the potential of various digital technologies to enable, extend and even 'enhance' student learning (Henderson et al., 2017).

b. Duolingo Application

Duolingo is one of the mobile applications to learn English on smartphones that everyone can access every time and everywhere. People only need smartphones and the Internet, and the students certainly have those things (Al Ayub Ahmed et al., 2022). Duolingo is one of the most popular applications for learning languages among people in addition to Babbel and 24/7 Tutor. These types of apps have advantages that the traditional teaching lacks. For instance, Duolingo motivates the learners to learn independently without the teacher's instructions (Amin, 2021). In the field of Mobile-Assisted Language Learning (MALL), Duolingo is generally seen as a strong representation of gamification in MALL applications (Shortt et al., 2023). Another important feature of Duolingo is personalized instruction. There are multiple ways that Duolingo provides individualized learning experiences. First, learners with prior knowledge of the language are encouraged to take a placement test to begin at an appropriate place in the course. Second, based on machine learning algorithms, learners receive immediate feedback when giving a wrong answer and have the opportunity to apply this feedback to a novel exercise. Third, Duolingo

offers practice sessions that use spaced repetition algorithms personalized for each learner. In addition, learners are able to personalize their own learning experiences, depending on their goals and needs (Jiang et al., 2020)

c. Vocabulary

Vocabulary is one of very important aspect in learning English (Firmansyah, 2016). Vocabulary is knowledge involves knowing the meanings of words and therefore the purpose of a vocabulary test is to find out whether the learners can match each word with a synonym, a dictionary – tape definition, or an equivalent word in their own language. In learning vocabulary, automatically it must to know the meaning of words it self and can use it in sentences (Hariati, 2020). Vocabulary is a primary basis for constructing the ability of speaking, writing, listening, and reading. Without the mastering vocabulary, the students cannot communicate their ideas, emotions, thoughts and desires because vocabulary is essential for understanding the meaning of words (Wijaya et al., 2019). Students will have difficulty in voicing their comprehension and even production if they do not have enough words in their vocabulary (Sari & Aminatun, 2021). Mastering vocabulary is important for every language learner because vocabulary is the basis for someone to master a language (Amalia, 2020). Language use leads to an increase in vocabulary knowledge. If student cannot master and learn more vocabulary, it is the problem and difficult for them to understand the Language especially learning to speak, listening, reading. In vocabulary to support their skills, they must to mastering that (Salawazo et al., 2020).

1.2. Previous Studies

As the Duolingo becomes a widely-used English learning application, there are many pieces of studies investigating the use of this application in language learning. A recent study by Tuong and Dan (2024) researchers found that EFL students appreciated the positive impact Duolingo had on their listening skills. They highlighted the app's flexibility, engaging nature, and real-life situations. Regularly engaging with Duolingo exercises is considered important for expanding vocabulary, improving grammar, and understanding the language more deeply. However, there is a need to increase diversity in the pronunciations and contexts of Duolingo listening exercises. Participants also voiced a desire for better feedback mechanisms for language learning progress. Mulya & Refnaldi (2016) in their recent study the research results show that using school.duolingo.com as an alternative learning media in teaching and studying English online in high schools has a number of advantages. The platform allows teachers to track students' learning progress and increase their motivation through gaming features. Students can interact with various activities, such as listening, writing, speaking and translating in a simple interface. However, research also identified several shortcomings, such as a lack of emphasis on explaining grammatical structures and the use of computerized voices in listening exercises. In conclusion, school.duolingo.com can be an effective alternative in improving students' English language skills at the high school level. Niah & Pahmi (2019) explored the results show that using Duolingo is effective in improving students' speaking and listening skills. In both classes, there was an increase in speaking and listening scores after using Duolingo. Analysis using a pretest-posttest design model shows that students' speaking and listening skills significantly increase after using Duolingo. Thus, this research shows that Duolingo can be an effective tool in improving junior high school students' English speaking and listening skills. González-Fernández (2023) conducted Research comparing second language learning using Duolingo and in the classroom for Spanish-speaking beginners learning English. Results showed improvements in L2 proficiency and vocabulary knowledge for both methods, with Duolingo being more effective in vocabulary and classroom learning better in listening skills. Although classroom learning takes more time, Duolingo users have slightly higher motivation after learning. In conclusion, Duolingo offers a promising alternative for L2 learning at a basic level. In other research Sudina & Plonsky (2024) Conducting research aimed at testing predictions from two sets of variables on second language (L2) improvement in application-based language learning using Duolingo. Results indicated that frequency and curriculum orientation of app use were more related to improvement than total time of exposure. These findings highlight the importance of consistency and clear learning goals in achieving language progress. Additionally, this research shows that the level of second language persistence and motivation can influence in-app learning behavior, with the level of persistence consistently showing a stronger relationship with improved oral abilities. In conclusion, the results of this study provide important insights into the role

of internal and external factors in second language learning through applications, as well as provide practical suggestions for the learning design of the Duolingo application and learner behavior.

While some studies have been carried out on the students' perception toward the use of Duolingo in learning languages, there have been few empirical investigations that seek to explore the students' perception based on uncontrolled use of the Duolingo as an application in learning English. This study aims to find out the perception of English Department students at Universitas Muhammadiyah Mataram toward the use of Duolingo application for learning English in vocabulary subject. Expressing an opinion on an object based on evidence or personal experience could be termed as a perception (Hasanah, 2017). Perception can be defined as the process of acquiring information about objects, events, and relationships through observation and interpretation. It involves assigning meaning to stimuli and responses by analyzing information and predicting messages. This process incorporates elements such as attention, motivation, hope, and memory (Agung et al., 2020). Despite the growing popularity of language learning applications like Duolingo, there is a gap in research examining students' perceptions of using such applications specifically for vocabulary subjects, especially within the context of English Department students in Muhammadiyah University of Mataram. While previous studies have explored the effectiveness of Duolingo for language learning, there is limited research focusing on students' attitudes, experiences, and perceptions regarding its use in vocabulary acquisition, particularly among English Department students in specific educational institutions. Understanding students' perceptions can provide valuable insights into the efficacy and potential challenges of integrating Duolingo into vocabulary learning within the university curriculum. The research question in this study is: "What are the Students Perception of Using Duolingo Application in Vocabulary Subject at English Department Students in Muhammadiyah University of Mataram?"

This research is expected to provide valuable insights into how English Department students at Universitas Muhammadiyah Mataram perceive the use of the Duolingo application in vocabulary learning. It is hoped that the results of this study can offer valuable input for curriculum development and the implementation of technology in language learning within the academic environment.

2. Method

This research uses a quantitative survey approach to collect and analyze data regarding student perceptions of using the Duolingo application in learning English vocabulary. The population of this study consisted of students from the English Department at Muhammadiyah University of Mataram. The total number of students in this department is 113 people. This research sample was chosen randomly and consisted of 40 students each semester. Sample selection was undertaken to cover possible variations in perceptions of Duolingo use. To collect data, researchers used Google Form to distribute questionnaires to students. The questionnaire was designed to evaluate student perceptions of the effectiveness, usefulness and challenges of using the Duolingo application in learning English vocabulary. The research instrument used was a questionnaire developed by the researcher.

3. Findings and Discussion

3.1. Findings

A questionnaire was used to collect data for this study in order to determine Students Perception of Using Duolingo Application in Vocabulary Subject at English Department Students in Muhammadiyah University of Mataram. The data obtained from the questionnaire were analyzed to answer the research question "What are the students perception of using Duolingo application in vocabulary subject at English department students in Muhammadiyah University of Mataram?"

The researchers discussed the results of the closed-ended questionnaire in which students rated each statement on a five-point scale by placing a check mark in the appropriate column: strongly agree, agree, neutral, disagree, and strongly disagree. The researchers classified fifteen statements. The mean and percentages of the participants' responses, as well as their discussion, are presented below.

Table 1. The results of the closed-ended questionnaire

No	Questions	Questions and Scale					
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
1.	Duolingo is easy to use for learning English vocabulary.	32.5%	52.5%	7.5%	0%	7.5%	100%
2.	English vocabulary questions in Duolingo are easy to understand.	32.5%	55%	7.5%	2.5%	2.5%	100%
3.	I am interested in learning using Duolingo because it helps me understand the meanings of English vocabulary well.	30%	57.5%	7.5%	0%	2.5%	100
4.	Learning using Duolingo makes me have a deeper understanding of the learning materials.	25%	57.5%	10%	0%	7.5%	100%
5.	Learning using Duolingo enables me to apply my English language skills in everyday life.	27.5%	55%.	12.5%	0%	5%	100%
6.	Duolingo makes me more enthusiastic about memorizing English vocabulary.	35%	10.%	47.5%	2.5%	5%	100%
7.	Duolingo helps increase my motivation to learn languages because of its interesting features such as awards, levels, and challenges.	37.5%	52.5%	5%	0%	5%	100%
8.	Besides the mobile app, I find that the web or desktop version of Duolingo is also useful and easy to use.	12.5%	12.5%	70%	0	5%	100%
9.	Duolingo covers all the skills needed to learn a foreign language, from writing, listening, to speaking practice, all available in the app.	27.5%	55%	10%	0	7.5%	100%
10.	With the best combination of AI and language science, lessons are tailored to help you learn at the right level and pace.	22.5%	62.5%	7.5%	2.5%	5%	100%
11.	The feedback provided by Duolingo is relevant to my language learning needs.	12.5%	17.5%	67.5%	0%	2.5%	100%
12.	Using Duolingo helps me maintain consistency in language learning by providing new content regularly and reminding me to practice.	22.5%	55%	17.5%	0%	5%	100%
13.	My academic performance has improved since I started using Duolingo.	20%	62.5%	10%	0%	7.5%	100%
14.	I feel that Duolingo's accessibility is excellent, accessible from various devices and can be accessed anytime, making it easier for me to schedule study time.	20%	62.5%	15%	0%	2.5%	100%
15.	The Duolingo app is very practical for students because it only requires an internet connection to be used.	25%	62.5%	10%	0%	2.5%	100%

3.2. Discussion

Based on the survey data, the majority of respondents have shown a positive perception towards the use of Duolingo as a tool for learning English. Most of them feel that Duolingo is easy to use and the questions within it are easily understood. Additionally, many are interested in learning using Duolingo because they feel they can understand English vocabulary meanings well and gain a deeper understanding of the learning materials. Moreover, attractive features such as awards and levels in Duolingo help to boost motivation for language learning, while the platform's accessibility across various devices is also highly regarded. While most respondents provide positive responses towards the use of Duolingo, there is also a small portion that expresses disagreement with some statements. Those who disagree or strongly disagree provide a different perspective in this data analysis. For

example, in the question about the usefulness of the web or desktop version of Duolingo (question number 8), a small portion of respondents (17.5%) express neutrality or disagreement with the statement. This indicates that although the majority feel that the web or desktop version is useful and easy to use, there are some who may have had different experiences or preferences leaning towards the mobile version. In the question about the relevance of feedback provided by Duolingo (question number 11), a small portion of respondents (20%) express disagreement. This might suggest that some users feel the feedback provided may not always align with their learning needs or may not cover all aspects they expect. Although these disagreeing or strongly disagreeing responses represent a small percentage of the total respondents, it is still important to take note of them as they provide additional insights into areas that may need improvement or refinement in the development and enhancement of Duolingo as a language learning platform. In conclusion, Duolingo is an effective and popular tool for language learning among the respondents. This positive perception indicates that Duolingo has the potential to help users improve their English language skills in an easily accessible and engaging manner. With features tailored to user needs, Duolingo can be a valuable asset in English language learning efforts.al nj of 84% of respondents showed agreement towards the statement. Out of this number, 32% strongly agree and 52% agree, while 7% strongly disagree, and 7% are neutral towards the statement.

Therefore, Duolingo is considered an effective and popular tool for learning English. This positive perception indicates that Duolingo has the potential to help users improve their English language skills comprehensively in an easily accessible and engaging manner. By taking into account user feedback, Duolingo can continue to be enhanced to meet their needs and expectations in the language learning process.

4. Conclusion

The purpose of this study was to determine determine Students Perception of Using Duolingo Application in Vocabulary Subject at English Department Students in Muhammadiyah University of Mataram. Based on the findings of this study, it is evident that English Department students at Muhammadiyah University of Mataram perceive the use of the Duolingo application for vocabulary learning as highly practical and beneficial. The data suggests that regular English practice is essential for maximizing the benefits of previous lessons. Additionally, students view the Duolingo application as a tool to assess and enhance their English proficiency, providing them with valuable skills for communication. Given their interest in using Duolingo for English learning, it is recommended to further explore and integrate this user-friendly learning system into their curriculum to effectively support their language learning journey.

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