

Duolingo as an Artificial Intelligence Technology-Based Learning System in English

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Abstract

The evolving techniques of online-based learning place a demand on learning English via technology media. An alternative for learning English is through Duolingo media. The purpose of this study is to learn how to use Duolingo media to help students learn English more effectively. A qualitative methodology and action research in the classroom design were employed in this study. This research was conducted at SMAN 11 Garut, involving 50 students. Data obtained from the results of observations, interviews, and tests. The results of this study indicate that there is an increase in students' ability to learn English by using Duolingo media.

Keywords: *Duolingo, artificial intelligence, mobile learning, English*

Introduction

The development of science and technology is so fast massive change in life. This is not only happening in the world of industry, the economy, politics and the environment, but also penetrated into the world of education. Development Science and technology, accompanied by a high sense of responsibility, will bring benefits to everyone who uses the technology. Negative impacts can be reduced by an attitude of prudence and a high sense of responsibility in the field of education, science Knowledge and technology are embodied in artificial intelligence, or what is known as Artificial Intelligence (AI). Its existence is expected to facilitate education practitioners, teachers, and students. Students accessing learning resources via the internet.

Artificial Intelligence (AI) is like the brain of a robot. Some experts have a difficulty to define AI because of its relationship to several interdisciplinary sciences such as include linguistics, computer science, anthropology, philosophy, psychology, and neuroscience.

Artificial Intelligence (AI) is a field of technology that enables people to employ robot-like motions as helpers. Its presence is represented via a computer system's virtual display (Pratikno, 2017: 19). According to Luckin et al. (2016: 14) Artificial Intelligence (AI) is a computer system created to communicate with the outside environment using cognitions and behaviors similar to those of humans in general. Haugeland (1996) adds that Artificial Intelligence (AI) is mind design, which involves designing a system that operates similarly to the human brain. Overall, the discussion on Artificial Intelligence (AI) is quite broad and diverse because the elements that make up an AI technology are not studied

using one. Its application Artificial Intelligence (AI) technology has also been applied in the area of education to benefit students in a variety of ways, one of which is learning English via the mobile learning app Duolingo.

Mobile Learning can be used as one of the current media. Mobile learning is a learning idea that is created for students to use mobile-based learning resources such as cellphones and the internet. According to Jin (2019) Mobile-learning is a unique learning medium in that students may easily access instructional content, directions, and apps at any time and from any location.

Physical learning based on mobile learning does not require meeting face-to-face in the same place as a classroom or training center. Learners have mobile devices such as smartphones as part of their daily routine (Ferereira et al., 2015:51). The development of mobile learning is also marked by the emergence of applications with educational or educational themes that are useful as learning media and can be downloaded for free via smartphones. One of the mobile learning applications that is currently popular is the Duolingo application.

When it comes to interpersonal and individual communication, language is a fundamental human function (Nugraha, 2022). Duolingo is a learning application that provides lots of foreign language vocabulary learning materials that are designed in an attractive way to help users develop foreign language vocabulary skills more competently and effectively. It is supported by the availability of various languages, including English. In this application, language learning that mixes voice and pictures is appealing. Duolingo has more than 500 million total users and 56.5 million active monthly users globally until the third quarter of 2022, according to Data Business of Apps (2023).

English learning with the Duolingo application starts at the lowest or easiest level, and the next level will be opened after the user has mastered the previous level. In the Duolingo app, game approaches for learning vocabulary include guessing words, creating words, writing words, translating words, and repetition.

Duolingo deliberately carries the concept of "playing while learning" to make it more fun and easier to use for all ages. The various features offered by Duolingo will make it easier for users, both individually and in groups, to learn English. Based on the background above, the researcher is interested in knowing how effective the Duolingo application is in improving English language skills.

Duolingo

Duolingo is a free online language platform that offers translation tasks to help students learn vocabulary and grammar (in the form of studying and practicing a specific topic), as well as pronunciation and listening practice (Bende, 2017). The usage of the Duolingo application platform as a medium is projected to make it simpler for students to learn English wherever they are in an effective, efficient, and enjoyable manner.

Garcia (2013) adds that Duolingo is a free online language learning service with the purpose of assisting users in learning languages by utilizing their learning activities via the Web and apps. Duolingo It contains a variety of up-to-date language-learning strategies. This can help pupils understand, be interested in, and enjoy studying since it creates the sense of learning while they are learning. Duolingo offers a variety of languages from which language learners can pick, including English, Arabic, Spanish, French, Dutch, and others.

Duolingo also gives statistics such as points achieved, course overview tree, streaks, and time spent. Duolingo is simple to use since the technique is straightforward, and it can be used by people of all ages. This implies that Duolingo is easier to use and more appealing, thus it will be more comfortable as a medium for conducting online lessons. This is consistent with earlier research, which indicates that students are happy and enjoy learning languages using Duolingo (Vesselinov, R., & Grego, J. (2012). Based on the explanation above, the researcher wishes to study how to improve students' communication abilities through the use of Duolingo as a technology-based learning medium.

According to Djamarah (2014), one strategy for attracting students' attention is to employ media that encourages them to think. Learning media such as the Duolingo program is one type of media that may capture students' interest. Duolingo invites students to study English since it is enjoyable and not dull. The visual appeal of Duolingo encourages pupils to pay attention to the program. According to Munday (2016), Duolingo is superior than assignments and traditional media because of the convenience it gives. This implies that Duolingo is a user-friendly and easy-to-use medium for teaching and learning.

Mobile Learning

The use of information and communication technology in education is expanding with new tactics and models, which may be broadly classified as e-learning systems, which are forms of learning that employ electronic devices and digital media, or mobile learning. Mobile learning is a type of learning that takes place on mobile devices. Mobile learning, also known as M-Learning, is learning that takes place on mobile devices such as PDAs, mobile phones, laptop computers, and other information technology equipment (Sutopo, 2012: 175). According to K.Kim and C.Kim (2013), mobile learning provides an environment in which students may study languages without regard to time or space constraints, resulting in active engagement between students' mobile phones and achievement of learning objectives.

The rapid development of mobile devices, their ease of use, and their increasingly low prices in comparison to personal computer devices are driving factors in the expansion of mobile learning as an alternative learning medium that forms a learning paradigm that can be done anywhere and at any time. This is also consistent with what Jin et al. (2019) stated: "Anytime-anywhere learning" allows students to possibly build their own learning experiences by accessing multiple materials, engaging, collaborating, researching, and doing a variety of activities without regard for place or time constraints.

The advantage of Mobile Learning is that students may access learning materials, guides, and applications from anywhere and at any time. M-Learning makes learning clearer and easier for pupils to grasp. Furthermore, learning with M-Learning makes learning more entertaining, which increases learning motivation. If learning motivation has grown, so will the efficiency of learning a foreign language (Clark, 2000).

Method

The method used in this research is a qualitative approach with Classroom Action Research (CAR). This study used three cycles and was designed using the Kemmis and McTaggart (2014) model which consisted of four steps, namely planning, action, observation, and reflection. The object of research is the class XII students of SMAN 11

Garut, totaling 50 students. The process of collecting data is done by using the methods of observation, tests, and interviews. An analysis of English scores was also carried out on the pre-test and post-test. The results of the analysis are based on a sample that represents the population. The assessment criteria for this study were that students were able to achieve both cognitive and affective criteria. The cognitive criterion is that students are able to achieve the Minimum Completeness criterion score in this school, which is 80.

Results and Discussion

The data obtained from the test results given Data collection was taken from two groups, namely the experimental group and the control group, and each group was given a pretest and post-test. The experimental group was the group that used the Duolingo application media, and the control group was the group that did not use the application media. With the test given, it will be possible to see the deviation from the experimental group and the control group. The author uses the Duolingo application in this study. The Duolingo application is an application that can improve students' English learning outcomes both verbally and in writing, because using this application can make students interested and active in learning English. To obtain data, the authors held two groups, namely the control group and the experimental group. The control group will be given a pre-test without using the application, and then the researcher will apply the Duolingo application to learning English, which is called the control group. After being given material by using the application, students will be given a post-test.

Based on the results of observations, the researcher found several problems that made students experience difficulties in their ability to speak English. Many students feel bored during the learning process in class because the learning methods presented do not attract students' attention so they have low motivation to learn English. In addition, students also lack vocabulary mastery and lack confidence, so they have difficulty finding the right words to express their ideas. Based on the evidence collected through exams, observations, and interviews, it is clear that using Duolingo to learn has been shown to increase students' English skills. The usage of Duolingo in the classroom piques students' interest, making the lesson more engaging in terms of language acquisition. When obtaining instructional information from the teacher, students must pay close attention.

Conclusion

Based on the interviews that the researchers submitted to the students, they said that learning English using Duolingo was very interesting and gave them new experiences; they really enjoyed learning while playing using Duolingo. This is very interesting for students because they respond very well to this medium; they easily understand the material; it allows all students to get a fair turn in practicing the material; Duolingo can eliminate boredom in learning; and it also encourages them to learn new things. concepts in learning. Furthermore, based on the findings of the study, pupils could communicate in English using the Duolingo program. They are more comfortable speaking English. This implies that the Duolingo program is useful for students learning to speak and developing their communication skills. This demonstrates that Duolingo may be used as an alternate method

of learning English. The Duolingo mobile application has the potential to greatly enhance student learning results and boost student participation.

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