Children's Language Learning Vocabulary Through Mobile Applications: Duolingo

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Abstrak

Artikel penelitian ini bertujuan untuk menyelidiki bagaimana pengaruh Duolingo dapat membantu meningkatkan kosakata Bahasa Inggris anak-anak. Data diperoleh dari 10 anak kelas 7 yang dikumpulkan di 1 tempat utama yaitu rumah peneliti untuk memudahkan dalam mengumpulkan dan mengamati data. Penelitian ini menggunakan teori pembelajaran bahasa yang dikemukakan oleh Halliday (1978). Penelitian ini menggunakan desain penelitian pra-eksperimen dengan pre-test dan post-test. 10 anak sebagai sampel berlatih menggunakan aplikasi Duolingo selama 10 hari, di mana mereka harus menjawab 1 pelajaran yang terdiri dari 10 hingga 15 latihan setiap hari. Data yang terkumpul dalam penelitian ini dianalisis secara kuantitatif dengan mengamati anak-anak yang terdiri dari beberapa prosedur. Penelitian ini menggunakan dua instrumen penelitian yaitu tes dan angket untuk menjawab pertanyaan penelitian. Bagaimana Duolingo dapat membantu anak-anak meningkatkan kosa kata mereka? Selanjutnya, untuk menyajikan data, penelitian ini menggunakan tabel dan bagan yang dilengkapi dengan simbol dan angka, untuk memastikan validitas dan reliabilitas, serta menggambarkan pertimbangan etis dalam hal keterlibatan responden. Hasil penelitian ini menunjukkan bahwa dengan menggunakan Duolingo sebagai media pembelajaran, anak-anak dapat menguasai sebagian besar kosakata dari semua latihan yang diberikan. Skor yang mereka peroleh untuk post-test jauh lebih tinggi daripada skor untuk pre-test.

Kata Kunci: *Anak-anak, Pembelajaran Bahasa, Kosakata, Aplikasi Seluler, Duolingo*

Abstract

This research article aims to investigate how the influence of Duolingo can help improve children's vocabulary. The data were obtained from the 10 children of 7th graders that were collected in 1 main place that was the researcher's house to make it easier to collect and observe the data. This study used the theory of language learning proposed by Halliday (1978). This study used a pre-experimental research design with a pre-test and post-test. The 10 children as the sample were practicing using Duolingo apps for 10 days, during which they had to answer 1 lesson consisting of 10 to 15 exercises every day. The collected data in this study were quantitatively analyzed by observing the children that consisted of some procedures. This study used two research instruments, namely, tests and questionnaires to answer the research questions. How can Duolingo help children improve their vocabulary? Furthermore, to present the data, this study used the tables and charts which were elaborated with symbols and numbers, to ensure validity and reliability, and described the ethical consideration in terms of the involvement of the respondents. The result of this study showed that by using Duolingo as a learning medium, children can master most of the vocabulary from all the given exercises. The scores they obtained for the post-test were much higher than the scores for the pre-test.

Keywords : *Children's, Language Learning, Vocabulary, Mobile application, Duolingo*

INTRODUCTION

Language learning is a dynamic process that develops throughout one's life. Language is being learned by humans to communicate thoughts, feelings, and experiences, and to be able to speak a new language as the target language. Learning a new language involves four language skills: listening, speaking, reading, and writing. Besides language skills, three basic components are required to learn English to children: pronunciation, grammar, and vocabulary. It is very important for children who want to master English to learn vocabulary. Children are required to acquire sufficient vocabulary to facilitate the learning of other language skills and components (Puspita & Sabiqoh, 2017). People can still understand a language with the wrong language structure, however, without vocabulary, people can't express anything in words or writing. Laufer (1997) stated in Ambara (2020), "learning vocabulary is one of the most important elements without which neither comprehension nor production of language is possible. In another word, vocabulary cannot be separated from other language skills." More importantly, Basuki (2017) defined the importance of vocabulary as the core of the complexity of the language and the starting point for those who learn a foreign language. Therefore, learning vocabulary was required for those who learn a foreign language.

Vocabulary is important for learning English; however, many children still lack knowledge of English vocabulary nowadays. Children tend to feel bored in the classroom due to the use of media and the lack of monotonous skills of the teacher during the teaching and learning vocabulary process. Therefore, children find it difficult to understand a sentence or to express themselves in a spoken language. However, in this age of globalization, technology plays an important role in all sectors of human life, including education. Through technology, education is more diverse and provides children with a variety of opportunities to improve their knowledge, learning, and access to online learning/educational resources. One of the popular technological advances in learning English is the Duolingo application.

Duolingo is a mobile phone application that was designed to help children feel easier and more fun in learning a language, especially English vocabulary. Before entering the lesson, children can choose one of the four target time options that have already been provided by Duolingo. The options are; five minutes per day, ten minutes per day, fifteen minutes per day, and twenty minutes per day. If the children already have experience with the target language, it provides the children with a placement test. Meanwhile, if the children are still beginners in learning the target language, children start with the basics. To use this app, the children are not required to fill in any additional questions or register for the course, instead, they can jump right into the first lesson by only tapping "Start" and be faced with several exercises. The exercises can be divided into many types: Translation exercises, in which the children translate the language from the source language to the target language and vice versa; Matching exercises, in which the children look at a photo and match it to a given word or vice versa; Filling the blank exercises, in which children have to choose the right word to fill the blank of the sentence; Listening exercises, in which children listen to the short sentences in a second language and type correctly; Speaking exercises, in which children have to say words or sentences that are said by the speaker in the apps.

This study used the theory of language learning proposed by Halliday (1978) to analyze the data. Halliday (1978:9), viewed language learning as a social and cultural practice. He intentionally used the term "learning" rather than "diverting" the language. This is because language is not something that can be "learned" externally, however, it is considered to be built by interaction (1978:16). Halliday's study of the child language was aimed at answering the question, "What function does language play in the lives of young children?" (1978:18). To find out what a child means in an utterance, Halliday suggests asking the question, "What did the child learn using language?" For example, a child can learn to cry and get attention very quickly. Children with hearing loss start to drop or push small items at their parents to achieve the same effect.

However, after children start to grow up and want or are required to learn a foreign language, they can no longer use the old method, namely by listening to other people

randomly or being taught in a monotonous way in class, because children will tend to feel bored. For this reason, it is necessary to have a new method of learning or teaching foreign languages to children using applications from mobile phones. According to Booton, Hodgkiss, and Murphy's article (2021) entitled "*The impact of mobile application features on children's language and literacy learning: a systematic review*", mobile phone touchscreen programs give new possibilities for children to learn the language. This systematic evaluation summarizes the proof of the effect of functions of mobile phone programs on children's language learning. Therefore, leveraging mobile phone touchscreen may want to have a massive effect in assisting the improvement of language and literacy talents inclusive of vocabulary, grammar, pronunciation, reading, and writing in each first and second language of the children.

The analysis in this study focused on children's reactions to the use of the Duolingo app, both in terms of the process and effectiveness of learning new English vocabulary. The data are from 10 children of 7th graders. They are Cindy, Indah, Dwi, Ani, Febri, Diah, Devi, Ita, and Paramitha.

METHOD

Pre-experimental research was used in this study, with one group pre-test and post-test. This study included ten children from the seven grades in the first semester of the 2020/2021 academic year of Junior High School at SMP N 2 Busungbiu. After finishing their studies at school, the children were instructed to practice using Duolingo for 10 days. Each day, children have to practice 1 lesson which consists of 10 to 15 exercises. A pre-test was used to assess children's vocabulary mastery before using the apps. If the post-test score is higher than the pre-test score, it means that children's vocabulary has improved and that the practice was just as successful as a medium for learning vocabulary.

In this study, two instruments were used. It was a series of tests and questionnaires. The test was used to determine the effect of Duolingo, and the questionnaire was used to assess children's perceptions following their use of Duolingo. There are two tests: a pre-test and a post-test. Before using Duolingo, the pre-test was completed. The pre-test consists of 30 basic vocabulary questions based on basic 1 and 2 questions on stage 1 of the Duolingo application to determine how far the children have progressed in their mastery of English vocabulary. However, the questions provided were merely the questions about translation and filling in the blank exercises, where children are given printed questions to work on within 30 minutes. Meanwhile, the post-test was administered following the children's practice. The goal of this test was to see how children's vocabulary scores changed after using Duolingo. The post-test consists of 30 questions drawn from checkpoint 1 of the Duolingo app, including translation, matching, filling in the blanks, listening, and speaking exercises. These questions served as a summary of all of the material from the first to the tenth day. The post-test, like the pre-test, had a time limit of 30 minutes. The results were analyzed in conjunction with the pre-test results to determine the impact of Duolingo on improving children's vocabulary.

In this study, a closed-ended questionnaire was also used. The questionnaire contains ten questions. It consists of children's interests as well as the benefits of Duolingo. At the most recent meeting, the children completed the questionnaire.

RESULT AND DISCUSSION
Result of Pre-test and Post-test

The children had been required to answer some questions about their English vocabulary proficiency in both the pre-test and post-test. The questions were of the same type, but they were not identical. The results of the pre-test and post-test were shown in table 1.

Table 1. Children's Scores

| No	Name	Pre-test	Post-test
1	Cindy	67	90
2	Indah	63	87
3	Dwi	63	87
4	Ani	67	90
5	Febri	60	83
6	Diah	70	93
7	Devi	77	100
8	Ita	70	93
9	Paramitha	73	97
10	Mulan	57	80

According to the table above, the highest score for the Pre-test was 77 and the lowest score was 57. From the pre-test, it can be seen that 6 children were getting scores above the average, and the rest were under the minimum criterion. To determine the outcome of the pre-test, the score was calculated to determine the mean score. The pre-test mean score was 66,7. It can be concluded that the children's vocabulary remains less because the questions in the pre-test were much easier than the questions in the post-test.

Furthermore, the highest score for the Post-test was 100 and the lowest score was 80. There were 6 children who were getting scores above the average because the post-test mean score was 90.

There was a very remarkable improvement in children's scores based on the results of the pre-test and post-test scores. The pre-test mean score was 66,7, and the post-test mean score was 90. Their remarkable improvement score was 13,3.

Result of the Questionnaire

Questionnaires were developed to collect information on children's perceptions of using Duolingo for extensive vocabulary learning. The questionnaire contains ten questions. The data can be seen in figure 1.
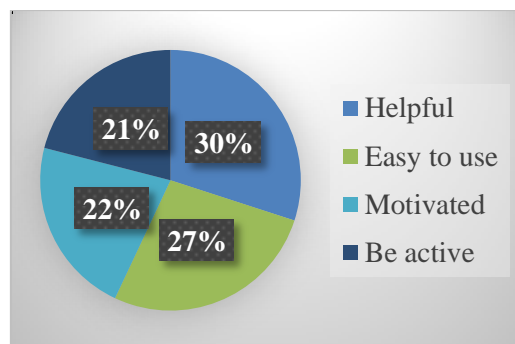
Figure 1. Children's Interests in Using the Duolingo Apps

According to the data presented above, it was discovered those children agreed on Duolingo, where 30% of children agree that Duolingo was helpful, 27% agree that Duolingo was very easy to use, 22% agree that Duolingo makes children interested in learning vocabulary, and 21% agree that Duolingo makes them active in learning vocabulary. It can be concluded that Duolingo aids them in comprehending and practicing their vocabulary.
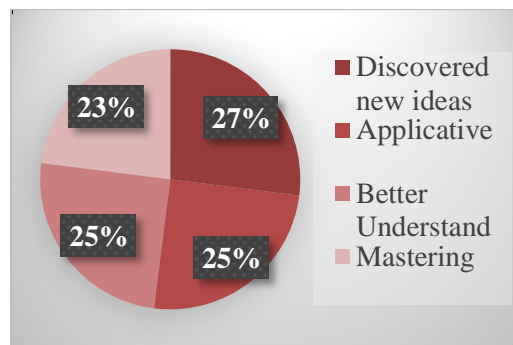
Figure 2. Advantages of Duolingo Apps by Children's

Based on the data above, it was discovered those children agreed on Duolingo, 27% of students agree that Duolingo allows them to discover new ideas, 25% agree that Duolingo was applicative to use and makes them have a better understanding, and 23% agree that Duolingo can help them to mastered vocabulary.

The study discovered that nearly all children had significantly higher post-test scores than pre-test scores. The data from post-test scores revealed that the children's scores improved. The post-test mean score was greatest than the pre-test score (66,7>90), indicating that children's vocabulary mastery has increased. The measurement progress was 13,3. According to the findings, children's scores were improved significantly before and after extensive use of Duolingo.

The results of the questionnaire indicated that the children responded positively. Children were much more eager to learn; more skilled as a result of their increased interest in learning; easier to understand the material; offering all children a fair chance to practice the material; eliminating tedium in learning; encouraging new ideas; assisting children in memorizing and practicing the material in everyday life.

CONCLUSION

The main purpose of this study was to explore the use of the Duolingo application in learning English, improve children's vocabulary, and investigate the impact of Duolingo on children. Based on the results and discussions, the conclusions can be drawn as follows:

1. The findings show that by using Duolingo as a learning medium, children can master most of the vocabulary from all the given exercises. The scores they obtained for the post-test are much higher than the scores for the pre-test.

2. All children have the same opportunity to participate in learning material and practice questions from Duolingo, which can certainly increase their activity.

3. Children can connect target knowledge with the source knowledge, reduce learning anxiety, increase their attention and metalinguistic awareness during the learning process.

4. Children always feel excited and comfortable following every exercise in the Duolingo application for a long time because of the game-like learning method (with the existence of life in the game), levels, and power-ups. In addition, children are also free to access the Duolingo application without having to spend money. Children only require an active data cellular (quota) on their mobile phones to access the application.

5. Besides vocabulary, children obtain other benefits from learning using the Duolingo application where their listening and speaking skills also experience significant changes. Furthermore, that makes children look more confident in using English to communicate.

6. Children have been able to develop their competitive spirit in competing to complete each exercise in the fastest time which will directly get them a lot of diamonds to upgrade the "owl" character in the Duolingo application to make it more interesting and obtain a lot of XPs to occupy the top position of the rank in the league they are in.

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REFERENCES

Ambara, I. W. (2020). THE EFFECT OF USING DUOLINGO APPLICATION IN LEARNING VOCABULARY AT SMAN 2 KARANGAN. *Karya Ilmiah Dosen*, *3*(1).

Basuki, Y. (2017). The Requisite Vocabulary 1 Material for College Students of Stkip â?? Pgri Trenggalek. *Karya Ilmiah Dosen*, *3*(1).

Booton, S.A., Hodgkiss, A., & Murphy, V.A. (2021). *The impact of mobile application features on children's language and literacy learning: a systematic review.* Computer Assisted Language Learning. https://doi.org/10.1080/09588221.2021.1930057

Habibie, A. (2020). DUOLINGO AS AN EDUCATIONAL LANGUAGE TOOL TO ENHANCE EFL STUDENTS' MOTIVATION IN WRITING. *British (Jurnal Bahasa dan Sastra Inggris)*, *9*(1), 13-26.

Halliday, M.A.K. (1978). Language as Social Semiotic: the social interpretation of language and meaning. London: Edward Arnold.

Nushi, M., & Eqbali, M. H. (2017). Duolingo: A Mobile Application to Assist Second Language Learning. *Teaching English with Technology*, *17*(1), 89-98.

Puspita, N., & Sabiqoh, N. (2017). Teaching vocabulary by using crossword puzzle. *English Education: Jurnal Tadris Bahasa Inggris,* 10(2), 308-325. https://doi.org/10.24042/ee-jtbi.v10i2.1753

Sudipa, I.N. (2021). *Bahasa Inggris Akademik*. English for Academic Purposes. 1-18.

Thwaite, A. (2019*). Halliday's View of Child Language Learning: Has it been Misinterpreted? *Australian Journal of Teacher Education,* 44(5). http://dx.doi.org/10.14221/ajte.2018v44n5.3