Enhancing Early Childhood English Vocabulary: Teachers' Perspectives on Optimizing the Duolingo Application

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Abstract

Currently in Indonesia, a substantial number of young children lack proficiency in and awareness of English vocabulary, a crucial international language. This study aims to explore the potential of Duolingo application usage in improving English vocabulary among young children, specifically from the perspective of teachers. Employing a quantitative descriptive research method, data were gathered through questionnaire surveys. The results indicate that the utilization of the Duolingo application by teachers contributes positively to the learning environment, resulting in noticeable improvements in English vocabulary among early childhood learners. The children demonstrated enhanced vocabulary skills after using the application over a specific duration. However, the study also highlights that the Duolingo application should not be relied upon as the sole source for English language learning in early childhood education. Its usage needs to be integrated into structured and teacher-directed learning approaches. Effective management of the application is crucial to maximize its benefits for young learners. This research serves as a benchmark for the development of similar applications aiming to enhance English vocabulary for early childhood education, emphasizing the importance of combining digital tools with structured pedagogical methods.

Keywords: English Vocabulary, Duo Lingo Application, Teacher Perception, Early Childhood.

Introduction

Within Indonesia's early childhood education system, there is still a significant gap in young learners' vocabulary knowledge of English (Eliwatis et al., 2022; Mutiah et al., 2020; Yusuf et al., 2017). The necessity of efficient language learning from a young age is highlighted by the significance of English as an international language on a global scale (Butarbutar et al., 2019; Deni & Fahriany, 2020). It has been difficult for traditional teaching approaches to sufficiently close this gap.

In the landscape of early childhood education in Indonesia, a notable insufficiency prevails in the field of English vocabulary acquisition among young learners (Jayanti & Sujarwo, 2019; Poedjiastutie et al., 2021). The global popularity of English as an international language emphasizes the critical need of successful language development beginning at a young age (Adriany, 2018; Lestariyana & Widodo, 2018). Despite this requirement, traditional pedagogical techniques have experienced significant obstacles in addressing the subtle components of language acquisition in young brainscabel (Cabell et al., 2015).

As young students begin their schooling, the lack of vocabulary in English becomes a prominent issue that demands a careful analysis of current approaches (Padial-Ruz et al., 2022; Rahn et al., 2023). The shortcomings of conventional teaching methods in developing a strong vocabulary base highlight how language competency standards are changing in today's globalized society. Effective vocabulary acquisition techniques are especially important since language proficiency is essential for promoting cross-cultural understanding and international communication in addition to academic performance (Zhao et al., 2017).

Recognizing the limits of traditional teaching techniques in addressing this vocabulary gap, it becomes critical to investigate alternative ways that correspond with the dynamic demands of young learners. This investigation entails not just identifying present issues, but also imagining novel ways that might reshape the landscape of early childhood education, setting the framework for a more complete and nuanced approach to language development.

However, the introduction of digital technology in education provides a potential to modernize language learning methodologies. The Duolingo program

stands out among these technologies for its dynamic and entertaining language-learning capabilities (Freeman et al., 2023; Harahap & Daulay, 2023; Hazar, 2022; Sudina & Plonsky, 2023). The Duolingo app also has various special features created exclusively for children, such as interactive games, engaging visuals, and motivating prizes. All of these will contribute to the creation of an exciting and enjoyable learning environment for youngsters (Butler, 2022). So that young children are driven to continue learning and expanding their English vocabulary. The progress monitoring function allows children and parents to observe detailed learning progress (Fadhli et al., 2022). This tool allows youngsters to recognize their accomplishments, create motivation, and identify areas for growth. Parents may also monitor their children's growth and give appropriate support based on their children's learning requirements (Jiang et al., 2021). Aside from that, the Duolingo app offers a number of learning exercises to assist youngsters expand their English vocabulary. Children can practice their communication abilities by doing speaking and listening activities, which aids in the general development of English language skills in young children (Ritonga et al., 2022).

Despite its popularity, there has been no systematic research into the optimal use of Duolingo for developing English vocabulary, particularly in the context of early childhood education in Indonesia. This study aims to close this gap by examining the possible advantages of Duolingo and assessing its influence on English vocabulary development in young children, with a focus on the viewpoints of early childhood educators. This study intends to provide fresh insights on the effective integration of digital technologies in early childhood language education through in-depth investigation, with useful implications for future research.

The current disparity in English word proficiency among young Indonesian children raises serious concerns about their readiness for a globalized future. While several studies have investigated language-learning programs, a complete investigation of Duolingo's efficacy in the Indonesian early childhood education environment is conspicuously missing. This study fills that gap by investigating not just the influence of Duolingo on vocabulary learning, but also the perspectives of early childhood educators about its practical application. Understanding the subtleties of technology's incorporation and efficacy is critical as it becomes increasingly entwined with educational practices. Furthermore, by evaluating the merits and possible constraints of adding Duolingo into organized language-learning contexts,

the study hopes to contribute to the larger conversation on novel pedagogical techniques. By doing so, it hopes to lay the groundwork for future study while also providing practical insights for educators to improve English language learning experiences for Indonesia's early children.

This study adds a new perspective to the field of language teaching, technology integration, and early childhood development by stressing the significance of Duolingo in the Indonesian educational system. The changing environment of English language learning, along with the revolutionary potential of educational technologies, necessitates a rethinking of traditional teaching methods. By concentrating on the views of early childhood educators, this study highlights the critical role they play as mediators in influencing young children's learning experiences. While previous research has looked at the influence of digital apps on language learning, few have precisely addressed the contextual complexities of early childhood education in Indonesia.

This study not only contributes to the intellectual discussion of English language learning apps, but it also pioneers an inquiry into the practical consequences of Duolingo as a complement to traditional teaching techniques. This study aims to contribute nuanced insights by elucidating the dynamics of its use in early childhood classrooms, laying the groundwork for further investigation and potentially informing the development of tailored English language-learning solutions for the Indonesian educational landscape.

Research Methodology,

Research Design

This study adopts a quantitative approach with a survey method to investigate the extent to which the utilization of the Duolingo application can enhance English vocabulary in early childhood. The decision to use a quantitative method is made to ensure objective data analysis and in-depth statistical insights, providing a more comprehensive understanding of the application's impact. The survey method is chosen as the primary data collection method, focusing on the perspectives and experiences of teachers as key stakeholders in early childhood education.

Participants

The survey is directed towards 94 teachers in the Sungai Tarab Subdistrict, Tanah Datar Regency, who play a crucial role in the process of early childhood education. Teachers possess direct insights into the application's impact in their day-to-day teaching. Involving their perspectives through the survey aims to provide a more complete understanding of the effectiveness of the Duolingo application.

Data Collection

Data collection is conducted by distributing survey links to teachers through relevant communication channels. Teachers are requested to answer questions honestly, providing their views based on their experiences in integrating the Duolingo application into early childhood education.

Data Analysis

After data collection, analysis is performed by calculating the percentage of responses to each question in the survey. The quantitative approach allows us to present findings objectively and understand statistically the extent to which the Duolingo application positively influences English vocabulary learning in early childhood.

The collected data will be presented in the form of percentage tables, followed by a discussion of the results referencing expert opinions and relevant previous research. The researcher will act as a mediator to develop arguments from the research findings and present conclusions drawn from the conducted survey.

Findings and Discussion

Findings

Analysis of Survey Results: Enhancing Early Childhood English Vocabulary with Duolingo Application

The survey conducted through the Google Form questionnaire was successfully filled out by 94 teachers. From the analysis of the data, the average indicates that the Duolingo application plays an effective role in helping young children improve their English vocabulary. This statement is based on the responses of the teachers to each statement listed in the questionnaire. The effective utilization of the Duolingo application is evident through the use of various digital devices such as smartphones, laptops, tablets, computers, and other media. This can be observed from the average results in Table 1 below:

Table 1: Evaluation of the Effectiveness of the Duolingo Application in Improving English Vocabulary in Early Childhood

No	Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
1	Duolingo application can be an effective tool to help young children improve their English vocabulary.	47.9%	47.9%	3.2%	1.1%
2	Duolingo uses a fun and interactive approach to teach English vocabulary to children.	42.6%	55.3%	2.1%	-
3	With Duolingo, children can learn English vocabulary through games, challenges, and interesting activities.	42.6%	55.3%	-	2.1%
4	The application provides systematic repetition to help children remember the vocabulary they have learned.	47.9%	51.1%	1.1%	-
5	Duolingo provides varied vocabulary exercises, including through pictures, audio, and pronunciation.	45.7%	53.2%	-	1.1%
6	Children can expand their English vocabulary through the gradual lessons offered by Duolingo.	45.7%	51.1%	2.1%	1.1%
7	Duolingo offers the ability to track children's learning progress in learning English vocabulary.	42.6%	57.4%	-	-
8	The application provides instant feedback to children, helping them correct mistakes and strengthen vocabulary understanding.	36.2%	60.6%	2.1%	1.1%
9	Duolingo can help children sharpen their listening, reading, and speaking skills in English vocabulary.	48.9%	44.7%	6.4%	-
10	Using Duolingo, children can learn English vocabulary anytime and anywhere.	51.1%	44.7%	4.3%	-
11	The application motivates children with awards, levels, and challenges that increase with their learning progress.	50%	50%	-	-
12	Duolingo provides content that is relevant and suitable for the interests and needs of young	54.3%	41.5%	4.3%	-

children.				
13 Children can practice English vocabulary with fellow Duolingo users through community features or competitive mode.	43.6%	53.2%	2.1%	1.1%
14 Duolingo offers the ability to repeat vocabulary exercises considered more challenging by children.	37.2%	58.5%	4.3%	-
15 The application has a child-friendly design, with an easy-to-use and engaging interface for children.	37.2%	57.4%	4.3%	1.1%
16 Duolingo uses artificial intelligence technology to adapt learning materials to the abilities and learning speed of children.	44.7%	54.3%	1.1%	-
17 The application offers English vocabulary lessons specifically designed for young children.	43.6%	51.1%	5.3%	-
18 Duolingo combines interactive learning methods, such as selecting answers, matching words, and writing words, to help children understand and remember vocabulary.	43.6%	54.3%	2.1%	-
19 Children can access various additional learning resources, such as vocabulary cards, songs, and videos, through Duolingo.	43.6%	51.1%	5.3%	-
20 The application can be a supportive tool for parents or teachers to help children learn English vocabulary outside the school environment.	43.6%	51.1%	5.3%	-

The analysis of Table 1, which evaluates the effectiveness of the Duolingo application in enhancing early childhood English vocabulary, reveals intriguing insights. A significant proportion of respondents, totaling 95.8%, either strongly agree or agree that Duolingo serves as a highly effective tool for improving the English vocabulary of young children. This overwhelming positive sentiment suggests a widespread acknowledgment among educators regarding the application's potential impact. Additionally, the perceived success is attributed to Duolingo's employment of a fun and interactive approach, as indicated by 97.9% of respondents who either strongly agree or agree with this statement. The acknowledgment of systematic repetition (98.8%) and varied vocabulary exercises (98.9%) underscores the application's commitment to providing diverse and structured learning experiences.

Furthermore, the recognition of Duolingo's role in supporting the development of listening, reading, and speaking skills (93.6%) aligns with its holistic approach to

language acquisition. The flexibility offered by Duolingo, allowing children to learn English vocabulary at any time and place, garners substantial support, with 95.8% of respondents either strongly agreeing or agreeing. The emphasis on instant feedback (96.8%) signifies the application's effectiveness in providing timely correction and reinforcement of vocabulary understanding. Interestingly, the acknowledgment of Duolingo's ability to motivate children through awards, levels, and progressive challenges (100%) adds a motivational dimension to its educational impact.

Moreover, the positive perceptions extend to Duolingo's child-friendly design (94.6%) and its integration of artificial intelligence technology (98.8%). The latter aspect, involving the customization of learning materials based on individual learning capacities, aligns with contemporary educational trends. Finally, the recognition of Duolingo's potential as a supportive tool for parents or teachers outside the school environment (94.6%) reinforces its versatility and adaptability as an educational resource. In conclusion, the comprehensive analysis of Table 1 emphasizes the multifaceted strengths of the Duolingo application in fostering early childhood English vocabulary development.
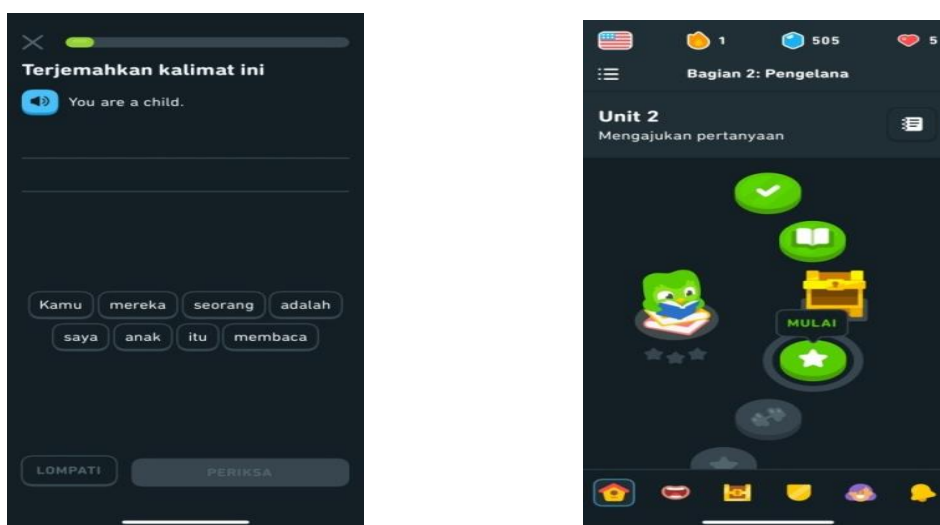

Fig 1. Duolingo Apps

Discussion

The survey results reported in Table 1 show that educators agree on the significant influence of the Duolingo program on early childhood English vocabulary

development. These largely favorable reactions are consistent with current debates over the incorporation of technology in education, notably in the field of language acquisition (Munday, 2017; Munir & Warmansyah, 2023; Werbach, 2014).

The fact that 95.8% of respondents either strongly agree or agree that Duolingo is an excellent tool for boosting young children's English vocabulary demonstrates the value of digital apps in early language development (Loewen et al., 2019). The positive correlation between Duolingo's gamified and interactive approach and its effectiveness in creating an enjoyable learning environment, as acknowledged by 97.9% of respondents, aligns with the broader discourse on technology's ability to engage and motivate young learners (Shadiev et al., 2017). In Duolingo's design, the recognition of systematic repetition (98.8%) and different vocabulary exercises (98.9%) accords with cognitive psychology principles, highlighting the significance of repetition in memory consolidation (Rosell-Aguilar, 2018). This is consistent with studies that show spaced repetition improves language memory (Munday, 2015).

The positive comments to Duolingo's function in promoting listening, reading, and speaking abilities (93.6%) are consistent with research supporting multimodal language acquisition (Shortt et al., 2023. The application's adaptability, which allows youngsters to acquire English vocabulary at their own pace (95.8%), accords with the constructivist perspective of learning as student-centered and flexible to individual requirements (Piaget, 1964). The incorporation of artificial intelligence technology, which was acknowledged by 98.8% of respondents, highlights the current trend of customized and adaptable learning environments (Dehghanzadeh et al., 2021).

Furthermore, the unanimity (100%) on Duolingo's motivating aspects, such as prizes, levels, and challenges, indicates the potential of gamified components to improve student engagement and perseverance (Ajisoko, 2020). Duolingo's child-friendly design, acknowledged by 94.6% of educators, helps to the creation of a good and accessible learning environment for young learners (Wagner & Kunnan, 2015).

Finally, the survey findings support the Duolingo application's pedagogical usefulness in promoting early children English vocabulary growth. These findings not only back well accepted educational ideas, but they also confirm the favorable impact observed in prior studies. Duolingo stands out as a versatile and successful

tool, providing a gamified, interactive, and technologically improved experience for young language learners as instructors continue to explore creative ways to language acquisition.

Conclusion and Suggestion

The beneficial influence of the Duolingo program on young children's early English vocabulary, as approved by 95.8% of educators, confirms its efficacy and adds to the debate about the inclusion of technology in early childhood education. Following study may concentrate on building a learning paradigm that combines Duolingo with traditional approaches, investigating long-term effects, and expanding the involvement of parents. A comprehensive comparison of Duolingo's performance with other ways might potentially be a possible study field to investigate each method's unique benefits and qualities. These initiatives are designed to give a more in-depth understanding of Duolingo's potential in aiding early English language development.

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