

THE IMPACT OF USING DUOLINGO APPLICATION ON STUDENTS' ENGLISH LEARNING MOTIVATION

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Abstract

The application of technology in English language education is increasingly widespread, one of which is through the Duolingo app. This study aims to evaluate the impact of using the Duolingo app on students' motivation in learning English as well as identify the specific factors that contribute to such motivation. The research method used was a mixed approach, combining quantitative and qualitative. Quantitative data was collected through a structured questionnaire with a Likert scale to measure students' motivation and contributing factors. Qualitative data was obtained through focus group discussions (FGDs) to explore students' experiences and perceptions in depth. The results showed that the Duolingo app significantly increased students' motivation in learning English. Findings from the questionnaire indicated that 53.3% of respondents strongly agreed that Duolingo was effective in increasing their motivation, while 46.7% agreed with the statement. The focus group discussion corroborated these findings by emphasising the role of gamification features, such as points and badges, as well as self-paced learning features in making the learning process more enjoyable and improving English confidence and comprehension. The findings are consistent with previous research highlighting the effectiveness of gamification and self-paced learning features and make a novel contribution by exploring the overall impact of different app features. Limitations of this study include the limited sample size and reliance on self-report data, which may affect the generalisability of the results. Future research is recommended to use a larger and more diverse sample and more varied data collection methods, including direct observation and in-depth interviews. Future research could also explore the long-term effects of using Duolingo and the differences in its impact based on students' educational background or initial ability level. It is hoped that these recommendations will provide a deeper understanding of the effectiveness of this app in the broader context of English language education.

Keywords: Duolingo; English Learning; Learning Motivation

INTRODUCTION

The integration of technology in education is increasingly important, especially in language learning, where digital tools can increase engagement and motivation among students. In recent years, Duolingo, a popular language learning app, has been widely adopted by educational institutions and individual learners as an additional tool for English language acquisition (Shortt, et al., 2023; Loewen, et al., 2019). Despite its popularity, there are growing concerns regarding its actual impact on student motivation and learning outcomes. This research seeks to address the effectiveness of Duolingo in motivating students to learn English, focusing on its ability to sustain interest and improve language skills.

Research on the motivational aspects of language learning apps, particularly Duolingo, is limited and often lacks empirical evidence. There is an urgent need to understand whether the gamification elements and self-paced learning features of such apps actually contribute to sustained motivation among learners or only provide short-term engagement (Adams & Du Preez, 2022; Grabner-Hagen & Kingsley, 2023). This research aims to fill this gap by

investigating the motivational impact of using Duolingo on English language learners, thus providing valuable insights into the efficacy of digital tools in education and guiding teachers in integrating technology into language teaching practices.

The study by Fakhurriana, et al. (2024), entitled 'Perception of the Use of Duolingo Application in English Learning for Students' Vocabulary Mastery', published in *BATARA DIDI: An English Language Journal*, explored students' perceptions of Duolingo's effectiveness in vocabulary acquisition. Using a Likert scale to measure responses, this quantitative study involved a survey which found that 70% of participants agreed that Duolingo had a positive impact on their vocabulary skills. The study concluded that Duolingo is a useful tool for improving English vocabulary acquisition, with students finding the learning process fun and effective. The recommendation is to continue using Duolingo to assist students' vocabulary development, highlighting its positive impact on vocabulary skills.

Tuong & Dan (2024), in their study 'A Study on Duolingo Mobile Applications to Improve EFL Students' Listening Comprehension Performances', published in the *European Journal of Alternative Education Studies*, examined the role of Duolingo in improving listening comprehension among EFL students. The study utilised a quantitative methodology with a Likert scale questionnaire, which revealed that Duolingo positively affected listening skills. However, the study also highlighted areas for improvement, such as the need for more varied pronunciation and better feedback mechanisms. The study concluded that although Duolingo effectively improved listening comprehension, improvements could make the tool more effective, especially in providing diverse linguistic input and timely feedback.

In a study by Hadina, et al. (2023) titled 'Student Perceptions of the Use of Duolingo as an English Language Learning Application', published in the *Journal of Educational Management and Strategy*, the focus was on the motivational benefits of gamification in language learning. This quantitative research used a Likert scale questionnaire to assess students' views on Duolingo. The results showed that students had a positive perception of using Duolingo for English language learning, mentioning that Duolingo was helpful, motivating, and beneficial for improving language skills. The study concludes that Duolingo effectively motivates students and improves their English language skills, recommends its integration into the English language learning curriculum and suggests that teachers and educational institutions utilise Duolingo to support language learning both inside and outside the classroom.

These studies collectively underline a generally positive perception of Duolingo as a language learning tool, particularly in vocabulary acquisition and listening comprehension. However, they also identify areas for potential improvement, such as increasing language diversity and quality of feedback, which could enhance the educational impact of the app.

The use of Duolingo app is proven to significantly increase students' motivation in learning English. The engaging gamification features, such as the points system, daily challenges and level achievements, encourage continuous student engagement. In addition, the flexible self-learning approach allows students to learn according to their own pace and needs, thus improving their confidence and language ability. Based on this, this study asks two main questions: (1) How does the use of Duolingo app impact students' motivation to learn English? and (2) What are the factors that contribute to students' motivation in using Duolingo as an English learning tool?

This study aims to evaluate the impact of using Duolingo application on students' motivation in learning English as well as identify the factors that contribute to the increase in

motivation. The results are expected to provide a comprehensive insight into how digital tools, particularly Duolingo, can be effectively applied to motivate students in language learning. The research also aims to assist educators and curriculum developers in designing learning strategies that are more engaging, relevant, and suited to the needs of diverse learners.

In addition, this research can benefit policy makers and educational institutions in making decisions regarding the adoption of digital learning technologies. With the findings focussing on student motivation, this study can serve as a basis for more informed and strategic educational policy development. Furthermore, this study can contribute to the design of personalised learning, tailored to students' individual preferences to enhance the effectiveness of language acquisition. The findings also have potential wider applicability in the learning of other languages, contributing to global knowledge on the use of gamified learning tools.

METHOD

This research uses a mixed methods approach, combining both quantitative and qualitative approaches to comprehensively analyze the impact of Duolingo app on students' motivation in learning English. The quantitative component involves the use of a Likert-scale questionnaire to measure students' level of motivation as well as the specific factors that influence it (Conradty & Bogner, 2022; Tien & Minh, 2022). This quantitative data was then statistically analysed to identify general trends and relationships between variables. Meanwhile, the qualitative component uses focus group discussions and open-ended questions in the survey to dig deeper into students' experiences and perceptions of using the Duolingo app, providing deeper insights that cannot be captured through quantitative data (Zipp & Kircher, 2022; Sim & Waterfield, 2019). Integrating these two methods allows for a more thorough analysis, encompassing both broad generalisations and detailed understanding.

This research was conducted at Zain Academy from June to August 2024, with funding support from Nurul Jadid University. Quantitative data was analysed using descriptive and inferential statistical methods, while qualitative data was analysed using thematic analysis techniques to identify patterns and themes related to student motivation. The findings of this study demonstrate the positive impact of Duolingo on student motivation, and provide practical recommendations for educators and policy makers regarding the use of this application in language learning curriculum. The research also identifies opportunities for further research, including longitudinal studies to evaluate the long-term impact of using language learning apps.

FINDINGS AND DISCUSSION

Findings

This section presented the results of research related to the impact of using the duolingo application on students' English learning motivation and factors that contribute to students' English learning motivation through the use of the Duolingo application. The following research data was obtained through questionnaires and focus group discussions with students of Zain Academy English course institution.

The Impact of Using Duolingo Application on Students' English Learning Motivation

The following is questionnaire data related to the impact of using the duolingo application on students' English learning motivation.

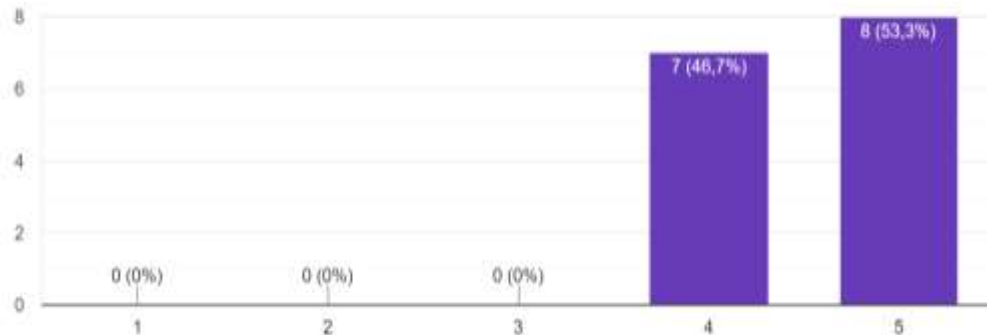


Figure 1. Increased motivation to learn English through Duolingo App.

Based on the questionnaire results, the majority of respondents stated that they felt an increased motivation to learn English through the use of Duolingo. Out of 15 respondents, 53.3% or 8 people stated strongly that Duolingo can increase their motivation. In addition, 46.7% or 7 other respondents chose to agree with the statement. None of the respondents gave neutral, disagree, or strongly disagree answers, indicating that all participants felt the app had a positive impact on their English learning motivation. This indicates that the features offered by Duolingo, such as gamification and self-paced learning, are considered effective in encouraging students to be more engaged and committed in the English learning process. The results also show that none of the respondents doubted the benefits of Duolingo in increasing language learning motivation, confirming a strong belief in the effectiveness of this app in the context of English language learning.

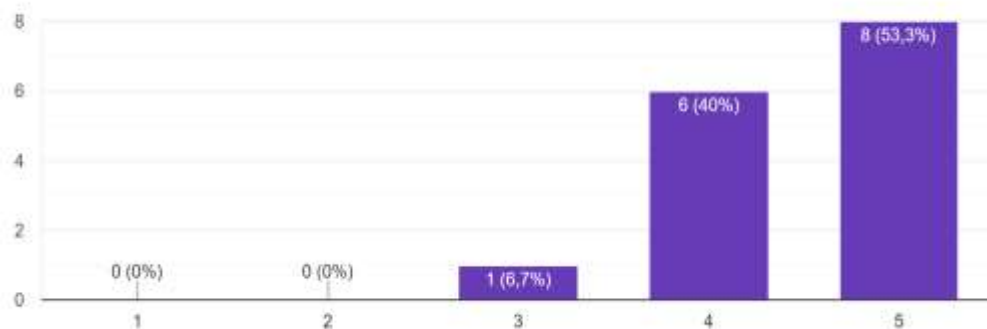


Figure 2. Motivation to continue learning English after using the Duolingo app

Based on the data from 15 respondents, the majority of students feel motivated to continue learning English after using the Duolingo app. A total of 8 respondents (53.3%) stated ‘Strongly Agree’ that Duolingo encouraged them to continue learning English, while 6 respondents (40%) chose ‘Agree,’ indicating that they also felt a positive boost, albeit in a slightly more moderate level. Only 1 respondent (6.7%) felt ‘Neutral,’ which may indicate that they did not experience a significant change in motivation after using the app. No respondents chose ‘Disagree’ or ‘Strongly Disagree,’ indicating that no students felt that using Duolingo reduced their motivation to learn English. Overall, this data shows that the Duolingo app effectively increased the motivation to learn English in the majority of students, with almost all respondents feeling a positive impact from using the app.

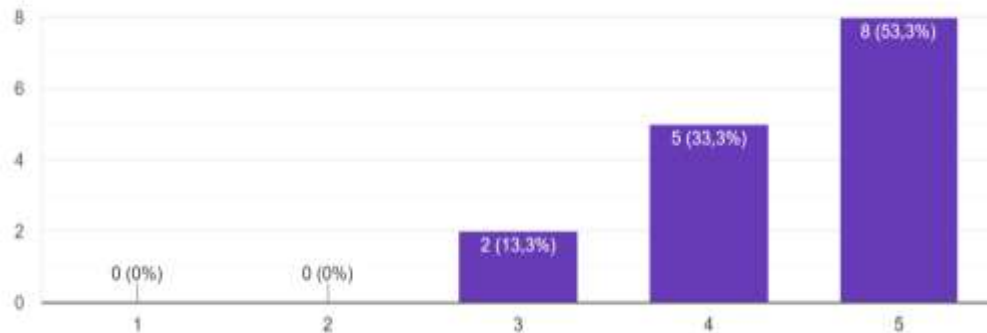


Figure 3. The effect of using Duolingo on enthusiasm to achieve English learning targets

Based on data from 15 respondents, the majority of students felt the positive impact of using the Duolingo application in increasing their enthusiasm to achieve English learning targets. A total of 8 respondents (53.3%) strongly agreed that Duolingo made them more enthusiastic in achieving their learning targets, while 5 respondents (33.3%) agreed with the statement. This shows that 86.6% of the total respondents felt a significant increase in motivation due to the use of Duolingo. Only 2 respondents (13.3%) expressed a neutral stance, while no respondents showed disagreement. This data indicates that Duolingo is effective in motivating students to learn English, especially in encouraging them to achieve the set targets. The excitement generated by the app's features, such as gamification and self-paced learning, seems to play an important role in increasing students' engagement with their learning process.

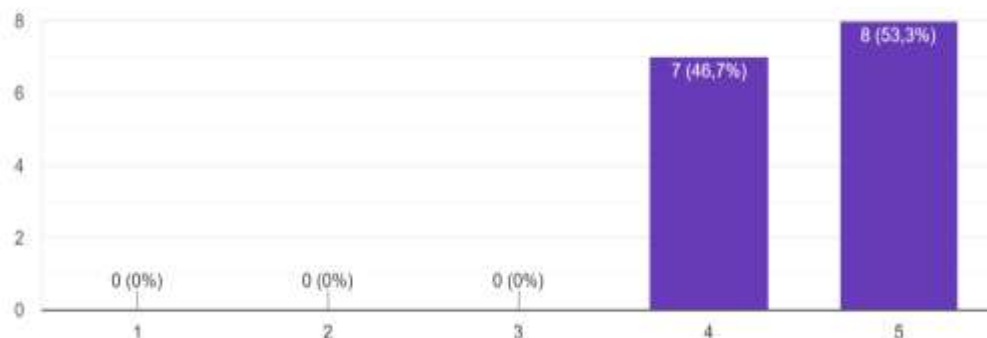


Figure 4. The effect of using Duolingo on the desire to learn English independently outside of class.

Based on the questionnaire data, all respondents showed a positive attitude towards the effect of using Duolingo application in motivating them to learn English independently outside the classroom. A total of 53.3% of respondents (8 out of 15) strongly agreed that Duolingo increased their desire to learn independently, while 46.7% of respondents (7 out of 15) agreed with the statement. No respondents chose neutral, disagree, or strongly disagree options, indicating a consensus that the app is effective in facilitating independent learning. This data indicates that Duolingo's features, such as gamification and flexible accessibility, play a significant role in encouraging students to learn English independently outside the formal classroom environment.

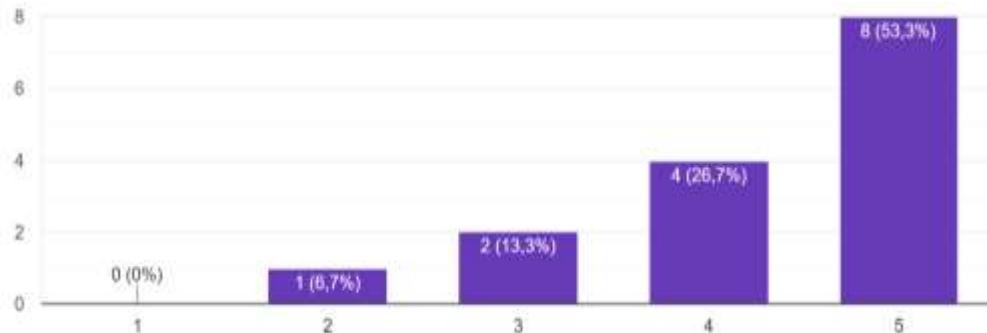


Figure 5. Duolingo's contribution to the overall increase in motivation to learn English.

Based on the data collected from 15 respondents, the majority of participants, 53.3%, strongly agreed that Duolingo contributed greatly to their overall increased motivation in learning English. Another 26.7% of respondents agreed, indicating that more than three-quarters of respondents (80%) felt a significant positive impact of using Duolingo on their learning motivation. Only 13.3% were neutral, indicating that they may not feel a significant change in their learning motivation after using this app. Meanwhile, 6.7% of respondents disagreed, indicating that Duolingo had no impact on their English learning motivation. There were no respondents who strongly disagreed, confirming that overall, Duolingo was rated positively by most respondents in increasing their motivation to learn English.

Furthermore, based on the results of the focus group discussion (FGD), the participants generally agreed that the use of Duolingo application has a positive impact on their motivation to learn English. Many participants stated that Duolingo is easy to use and motivates them to study in their free time, as the gamification features, such as streaks and ranks, make the learning process more fun and interesting. Some participants highlighted how the app helped them increase their confidence in speaking English, understand lessons more easily, and recognize new vocabulary. Others felt more enthusiastic and motivated to continue improving their English skills, especially in terms of pronunciation and acquiring new words. Therefore, it can be said that Duolingo is not only effective in assisting English learning, but also in significantly increasing students' motivation and engagement.

Thus, based on the results of the questionnaire and focus group discussion (FGD), it can be said that the use of Duolingo significantly increases students' motivation to learn English. The questionnaire data showed that the majority of respondents, 53.3%, strongly agreed that Duolingo played a big role in increasing their motivation, with another 46.7% agreeing that the app was effective in encouraging English learning. No respondents felt that the app did not affect their motivation, indicating consistent satisfaction. The FGD results support these findings, with participants mentioning that gamification features such as streaks and ranks made learning more fun and motivated them to study harder. They also felt an improvement in their confidence and English comprehension. Overall, Duolingo was found to be highly influential in motivating students and increasing their engagement in the English learning process.

The Factors Contributing to Students' English Learning Motivation Through the Use of Duolingo App

The following is questionnaire data related to factors that contribute to students' English learning motivation through the use of the duolingo application.

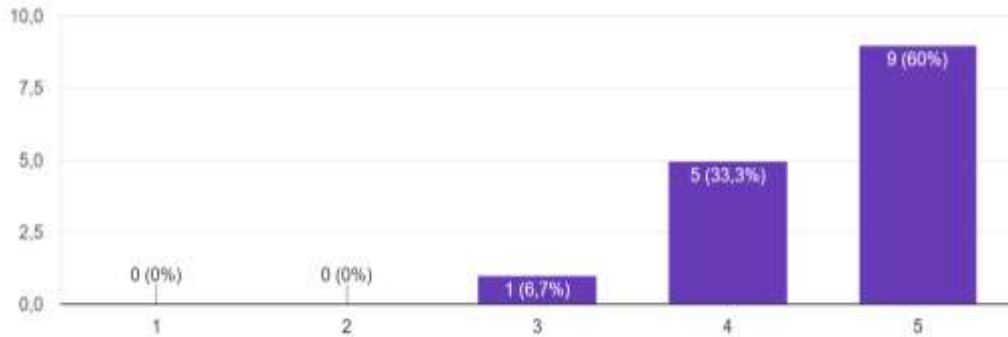


Figure 6. The gamification feature in Duolingo factors in increasing motivation to learn English.

Based on the data from 15 respondents regarding the question about the effect of Duolingo's gamification features on motivation to learn English, the majority showed positive responses. A total of 9 respondents, or 60%, strongly agreed that the gamification features, such as points, badges, and daily challenges, significantly increased their motivation to learn English. In addition, 5 respondents, or 33.3%, agreed with the statement, indicating that they felt the positive impact of the features although not as strongly as the “strongly agree” group. Only 1 respondent, or 6.7%, chose the neutral option, indicating some doubt or uncertainty regarding the effect of gamification on their motivation. No respondents chose the disagree or strongly disagree options, indicating that there were no negative responses regarding the gamification feature of Duolingo. This data suggests that the gamification feature in Duolingo is overall considered effective in increasing students' motivation to learn English.

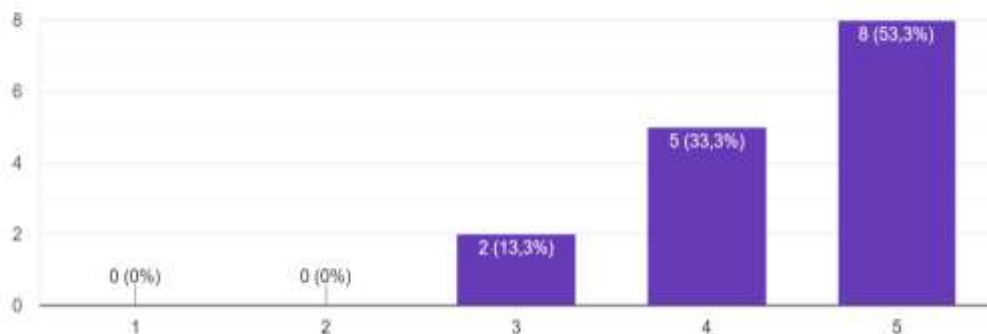


Figure 7. Duolingo's self-paced learning feature factors on students' confidence in learning English.

Based on data from 15 respondents, the majority of participants showed a positive view of the self-learning feature in Duolingo. A total of 8 respondents, or 53.3%, strongly agreed that the feature increased their confidence in learning English. In addition, 5 respondents (33.3%) agreed with this statement. Only 2 respondents (13.3%) chose neutral, indicating that although there were some doubts, no respondents felt negative or very negative towards the impact of the self-learning feature. This data indicates that the self-paced learning feature in Duolingo is generally considered effective in increasing students' confidence in the

English learning process, with no responses indicating disagreement with the benefits of the feature.

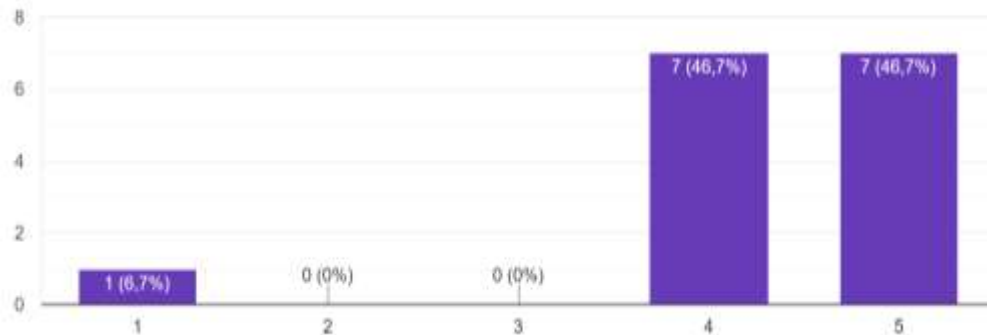


Figure 8. Factor in the variety of exercises offered by Duolingo on student engagement in learning English.

Based on the data obtained from 15 respondents, the majority showed a positive view on the effect of the variety of exercises offered by Duolingo on their engagement in learning English. A total of 46.7% of respondents strongly agreed and another 46.7% agreed that the variety of exercises in this app played an important role in increasing their engagement. Only 6.7% of respondents strongly disagreed with this statement, while no respondents chose the neutral or disagree option. This shows that Duolingo's variety of exercises is generally considered effective in maintaining students' interest and engagement in the English learning process, with most respondents feeling that the variety makes the learning process more interesting and motivating.

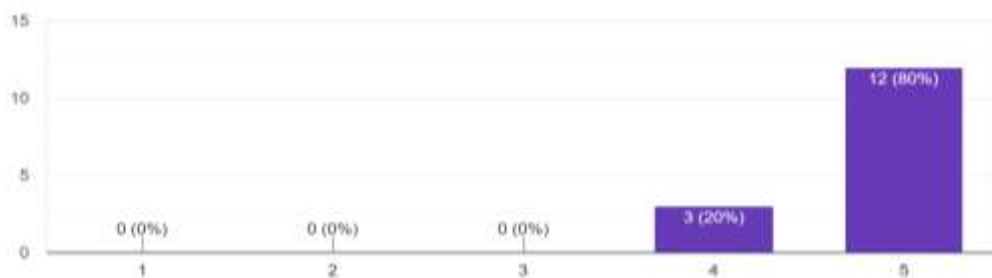


Figure 9. The feedback factor provided by Duolingo on students' English comprehension.

Based on the data collected from 15 respondents, the majority of participants showed a positive view of the effectiveness of the feedback provided by Duolingo in improving their English comprehension. A total of 12 respondents, or 80% of the total, stated that they strongly agreed that the feedback from Duolingo contributed significantly to their English comprehension. Meanwhile, 3 respondents (20%) agreed with the statement, indicating that they also felt the benefits of the feedback, although not as strongly as the strongly agreed group. No respondents chose the neutral, disagree, or strongly disagree categories. These results show that the feedback provided by Duolingo is well received by almost all respondents, reinforcing the perception that this feature is effective in supporting English comprehension and contributing positively to their learning process.

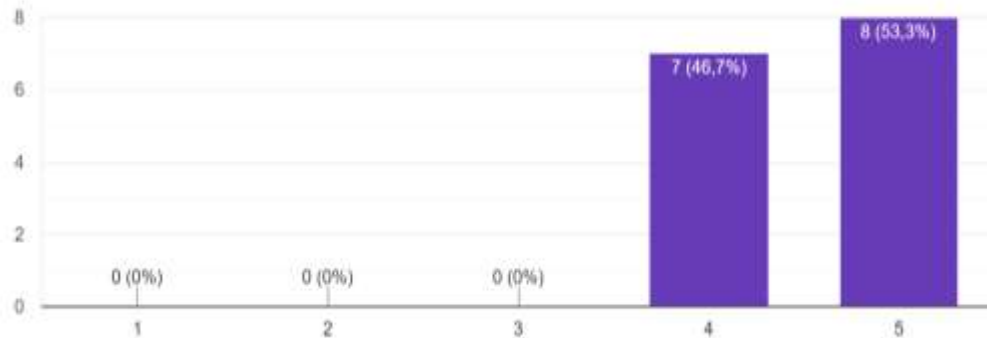


Figure 10. The effectiveness of the Duolingo feature in helping students manage their English learning time independently.

Based on the data obtained from 15 respondents, the majority felt that Duolingo's features were very effective in helping them organise their time to learn English independently. Of the total respondents, 53.3% (8 people) strongly agreed, while 46.7% (7 people) agreed with the statement. No respondents chose neutral, disagree, or strongly disagree options. These results show that almost all respondents have a positive view of the effectiveness of Duolingo features in study time management. With almost all respondents agreeing or strongly agreeing, it can be concluded that the time management feature in Duolingo is considered very supportive for students in managing their study time independently.

Meanwhile, the results of the focus group discussions (FGDs) show that the main factor contributing to the increase in students' motivation when learning English with Duolingo is the gamification features provided by the app. FGD participants revealed that elements such as points, badges, and daily challenges greatly motivated them to continue learning. The Duolingo app is considered fun and easy to understand, which makes the learning process more interesting and entertaining. In addition, the speaking exercises and regular reminders to use the app also strengthen students' engagement in learning. These features not only make it easier to understand the material but also encourage students to continue actively learning by improving their English skills effectively.

Therefore, based on the results of the questionnaire and focus group discussions (FGDs), it can be said that the main factors that contributed to the increase in students' motivation in learning English using Duolingo were the gamification and self-paced learning features provided by the app. The questionnaire showed that the majority of respondents felt a significant increase in motivation thanks to gamification elements such as points, badges, and daily challenges, with 60% strongly agreeing that these features are effective. In addition, the self-learning feature also received a positive response, with 53.3% of respondents feeling that it boosted their confidence. FGD results confirmed these findings with participants stating that gamification features make learning more fun and encourage active engagement. Variety of exercises, effective feedback, and the ability to manage study time independently were also considered important in maintaining interest and improving English comprehension. Overall, Duolingo is considered an effective tool in increasing student motivation and engagement in the English learning process.

Discussion

The Impact of Using Duolingo Application on Students' English Learning Motivation

Based on the results of this study, the Duolingo app is proven to significantly increase students' motivation in learning English. Findings from the questionnaire showed that most respondents, 53.3%, strongly agreed that Duolingo played a big role in increasing their motivation, while another 46.7% agreed that the app was effective in encouraging English learning. Results from focus group discussions (FGDs) reinforced these findings by highlighting that gamification features such as streaks and ranks make the learning process more engaging and motivate students to continue studying diligently. In addition, FGD participants also reported improvements in their English confidence and comprehension, confirming the positive impact of the app on the learning process.

These findings are in line with the results of previous studies discussed in the literature review. The study by Fakhurrriana et al. (2024) revealed that Duolingo was effective in improving vocabulary acquisition, with 70% of students finding the app useful and fun. Research by Tuong & Dan (2024) also showed that Duolingo can improve listening skills, although there are some areas that need improvement. Hadina et al. (2023) emphasised that gamification in Duolingo is highly motivating for students, in line with this study which highlights gamification features as a major factor in increasing learning motivation. This research also makes a novel contribution by exploring the overall impact of gamification and self-paced learning features in Duolingo on student motivation, which has not been fully examined previously. The implications of this study suggest that the integration of these features in the English curriculum can increase learning engagement and effectiveness, so the implementation of this app in English education is highly recommended.

Factors Contributing to Students' English Learning Motivation Through the Use of Duolingo App

The results of this study support the findings of previous research on the effectiveness of gamification and self-learning features in the Duolingo application in increasing students' motivation to learn English. As stated by Hadina et al. (2023), gamification features such as points, badges, and daily challenges proved to be highly motivating for students, in line with the findings of this study which showed that 60% of respondents felt highly encouraged by these elements. The questionnaire and FGD results are also consistent with the study of Fakhurrriana et al. (2024), which highlighted that Duolingo positively affects aspects of learning, including increased confidence and engagement in learning English. The variety of exercises and effective feedback from Duolingo, noted in this study, is also in line with the need identified in Tuong & Dan's (2024) study for better feedback mechanisms and variety of linguistic inputs. Thus, the results of this study not only support but also corroborate the existing literature on the benefits of Duolingo in the context of English language learning.

In terms of novelty, this study makes an important contribution by combining results from questionnaires and focus group discussions to gain a deeper understanding of the specific motivational factors that contribute to the effectiveness of Duolingo. In contrast to previous studies that tend to focus on a single aspect such as vocabulary (Fakhurrriana et al., 2024) or listening skills (Tuong & Dan, 2024), this study investigates various features of the app, including gamification, self-paced learning, exercise variety, and feedback. This provides a comprehensive picture of how such features simultaneously affect student motivation and

engagement. This novelty not only expands the understanding of the Duolingo app but also offers deeper insights into the practical application of these features in the context of English language education, filling a gap that exists in previous research and providing practical implications for technology integration in language teaching.

CONCLUSION AND SUGGESTION

Conclusion

This study revealed that the Duolingo app significantly increased students' motivation in learning English, which was confirmed through the results of questionnaires and focus group discussions (FGDs). The questionnaire showed that the majority of respondents felt motivated by gamification features such as points, badges, and daily challenges, with 60% strongly agreeing that these elements were effective. The FGD results corroborate these findings by emphasizing that the gamification and self-paced learning features in Duolingo make learning more enjoyable and improve confidence and understanding of English. These findings align with previous research showing the benefits of Duolingo in improving vocabulary and listening skills, but provide new insights by exploring the overall impact of different features of the app on student motivation. Thus, this study concludes that Duolingo's gamification and self-paced learning features are key factors in increasing student motivation, making it an effective tool for integration in the English language learning curriculum.

Suggestion

However, this study also has limitations, such as limited sample size and reliance on self-report data from questionnaires and FGDs, which may affect the generalizability of the results. For future research, it is recommended that studies be conducted with larger and more diverse samples and more varied data collection methods, including direct observation and in-depth interviews. Future research could also explore the long-term effects of using Duolingo and the differences in its impact based on students' educational background or initial ability level. Thus, future research can provide a deeper understanding of the effectiveness of this app in a broader context and under various learning conditions.

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