บทความวิจัย

การรับรู้เบื้องต้นของนักศึกษาไทยในระดับปริญญาตรีในการเรียนภาษาอังกฤษ
ผ่านแอปพลิเคชัน Duolingo

Thai Undergraduate Students' Initial Perceptions of Learning English
through Duolingo

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บทคัดย่อ

งานวิจัยนี้ศึกษาการรับรู้เบื้องต้นของนักศึกษาไทยในระดับปริญญาตรี ในการใช้แอปพลิเคชั่น Duolingo ในการเรียน
ภาษาอังกฤษ กลุ่มตัวอย่างเป็นนักศึกษาชั้นปีที่สาม เอกภาษาญี่ปุ่น และเรียนวิชาโทภาษาอังกฤษจำนวน 25 คน นักศึกษา
กลุ่มนี้มีคุณลักษณะที่เหมาะสมสำหรับการวิจัย คือมีนักศึกษาจำนวน 24 คน ไม่เคยใช้โปรแกรม Duolingo มาก่อน และ
นักศึกษาหนึ่งคนเคยใช้โปรแกรมนี้เป็นเวลาน้อยกว่าหนึ่งสัปดาห์ แสดงว่านักศึกษากลุ่มนี้ไม่มีความคุ้นเคยกับโปรแกรมนี้
เครื่องมือที่ใช้ในการวิจัยคือแบบสอบถามแบบให้ค่าห้าระดับและการสัมภาษณ์แบบปลายปิด ผลการวิจัยพบว่านักศึกษามี
ความชอบในการใช้โปรแกรม Duolingo ในการเรียนภาษาอังกฤษ อย่างไรก็ตามมีประเด็นที่ต้องพิจารณาคือการโฆษณาและ
ระบบการให้รางวัลของแอปพลิเคชั่น

คำสำคัญ: การรับรู้เบื้องต้น Duolingo การเรียนภาษาอังกฤษ นักศึกษาไทยระดับปริญญาตรี

Abstract

This study examined Thai undergraduate students' initial perceptions of using Duolingo to learn English. The
samples of this study were 25 Thai 3rd year undergraduate Japanese major students. The samples were
taking English as a minor subject. The samples were chosen as they were readily available and possessed
the necessary attributes for this study. Twenty-four out of twenty-five students had never used Duolingo
previously, and one student had used the application for less than one week. The students were therefore
deemed to be unfamiliar with the application. The study used a 5-point Likert scale questionnaire and
closed-end interview questions. The results of this study showed that students were generally favourable

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toward the Duolingo application. However, issues were noted concerning advertising and the rewarding system.

Introduction

Duolingo is an American language education application that can be used to learn various widely spoken languages and several less-studied languages. In this respect, the application offers over forty different languages and is regarded as the most popular language-learning application in the world. Duolingo was developed from an idea by Professor Luis von Ahn at Carnegie Mellon University and his post-graduate student Severin Hacker. The initial idea behind the application was to offer free language learning to everyone. The free version of the application is funded by a Duolingo English test, advertising, and a subscription model that removes advertising and provides the user with unlimited lives (hearts). Various studies have shown Duolingo to have high satisfaction levels among its users (Nguyen & Su, 2022).

Duolingo uses a gamified approach to language learning and offers league positions and badges to its users. Depending on the language being learned, the application teaches through interactive exercises, translation exercises, short quizzes, and stories. The more popular courses are aligned to the Common European Framework for Languages (CEFR). For example, learners can currently study up to B2 independent user level in both French and Spanish. However, other widely spoken languages such as Chinese (Mandarin) are currently not aligned to the framework. Several studies have found the application to be an effective tool for language acquisition (Nguyen & Su, 2022).

Recently, Thai nationals have been able to learn English through the Duolingo application. This paper discusses and examines Thai undergraduate language students' perceptions of using the Duolingo application to learn English.

Non-English major language students may struggle to find time to practice their language skills. In the case of students taking English as a minor subject, classroom learning time would predominately focus on their major language. Being proficient in more than one additional language could open up more career opportunities for students in the future. An application such as Duolingo may provide a convenient method to practice and learn an additional language. The application could be used while waiting for public transport or travelling to and from the university. Short practice sessions can add up and assist in the language learning process. Unfortunately, there is still a shortage of research regarding Thai students' perceptions of the Duolingo application. This study provides original data on students' perceptions of the Duolingo application within a Thai higher education context. Such data can be used to make decisions on additional learning tools that can be used outside of a traditional classroom setting.

Objective

To examine students' initial perceptions of the Duolingo application.

Literature Review

Many of today's instructional methods and approaches come from an era before the creation of digital technology. For centuries, schools, colleges, and universities have been instructing students in a similar manner. In the modern digital era, students can learn whatever they want to learn at a time and place of their convenience (Brown et al., 2016; Issroff & Scanlon, 2002). In this respect, today's students are living in an age where it has never been easier to learn a foreign language. However, technology-assisted learning is known to have benefits and drawbacks. Convenience, time savings, and potentially lower overall expenses are examples of some of the benefits. In contrast, a lack of face-to-face interaction and a lack of a sense of social community are two drawbacks. Reorganization and restructuring may be necessary for technology to be successfully incorporated into an educational program. These processes are both expensive and time-consuming and may require the hiring of new employees and the retraining of existing ones. Therefore, a ready-made, free solution may be the answer to some of the drawbacks of technology-assisted learning. However, care is needed to ensure a suitable application is introduced into the learning process (Bates, 2015; Christensen et al., 2008).

Various applications can be downloaded from the Apple App Store or the Android Play Store. These free and paid-for applications have transformed the world of self-learning. However, there is a vast range of applications available which can make it difficult for the learner to choose one that will suit their preferred learning style. In this respect, an attractive, fun, easy-to-use application will more likely be adopted by the language learner. One of the applications that encourages English learning is Duolingo. This application has been shown to work well for enhancing students' English language proficiency (Tiara et al., 2021). In addition, Duolingo can make learning a language a fun and joyful experience. As a result, it can increase students' English vocabulary skills. Previous studies have been generally positive towards the use of Duolingo for learning vocabulary and other aspects of the language. The application can make students feel more at ease, make learning enjoyable, and inspire them to learn English. All of these aspects are seen as major advantages for supporting students' learning. Duolingo may have a positive impact on students' abilities as it can stimulate, motivate, and increase enthusiasm for language learning (Tiara et al., 2021).

Further studies have shown the Duolingo application to be beneficial for both teachers and students. Through using the Duolingo application, students have the opportunity to improve their English skills whenever it is convenient. Fadilah's study found the application had a significant impact on learning and increased students' knowledge. Students revealed that learning English through the application was an enjoyable experience and Duolingo made the process fun. It is possible to conclude that the students responded favourably to using Duolingo to learn English (Fadilah, 2023).

Munday (2016) investigated the effectiveness of Duolingo when combined with conventional teaching techniques. The study used beginner and intermediate level students studying at the university level as the participants. Forty-six of the participants at the beginner level and sixteen at the intermediate level used Duolingo and provided feedback on the application. According to the findings, 82% of the beginner level students and 70.3% of the intermediate level students agreed or strongly agreed that

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Duolingo was beneficial for language learning. In regard to enjoyment levels, 80.4 % at a beginner level and 43.8% at an intermediate level found the application to provide an enjoyable learning experience.

Aulia et al., (2020) used a post-test to investigate how eighth-grade Indonesian students' understanding of English vocabulary was affected when using Duolingo. The vocabulary test data was analyzed using an independent sample t-test. The study found that there was a significant difference between those students who used Duolingo and those who did not use the application. In this regard, the experimental group's mean score was found to be higher than that of the control group. This suggests that students' vocabulary mastery was significantly improved when using the Duolingo application. The study also found that less academically accomplished children appeared to be favourable towards the Duolingo application.

Rachels & Rockinson-Szapkiw (2018) carried out a quasi-experimental study involving pretest-posttest on 164 students in the third and fourth grades. The study aimed to determine the impact of Duolingo on native English speakers' proficiency in Spanish. An analysis of covariance revealed that there were no significant differences in students' Spanish achievement levels when taught with traditional face-to-face instruction and through the Duolingo application. The results of the study suggest that Duolingo is a useful application that may be used in language learning to assist students in improving their language proficiency and as a possible substitute for in-class instruction.

Guaqueta et al. (2018) study aimed to gain a better understanding of how language learning applications support vocabulary development in an English as a foreign language context. The participants of the study were 20 high school students, who adopted a blended learning technique. The students alternated between the Duolingo and Kahoot applications. The study found that using both applications had a favourable impact on vocabulary growth and development. The results showed that the average group test score rose from 36.7 on the pre-test to 73.45 on the post-test. The survey revealed that students believed the technology to be a helpful and fun method for enhancing the dynamic nature of learning.

Habibie (2020) investigated students' desire and motivation to improve their English writing skills through the Duolingo language application. Thirty female and ten male students from the English department served as the study's participants. A mixed strategy approach was used in the study with questionnaires and interviews utilised for data collection. According to the findings of the study, Duolingo improved students' motivation levels when learning English writing skills. Duolingo may also encourage users to keep progressing in their language learning. The application could be useful in assisting language learners in acquiring the target language. The results of the study were consistent with several earlier studies examining and exploring mobile applications for language acquisition. Students found the application to be convenient to use in their daily routines and the application can encourage independent learning.

An Indonesian study examined students' perceptions regarding using the Duolingo application to increase their vocabulary levels. A mixed-method approach was employed in the study. Ninety-five undergraduate-level students from various Indonesian public and private universities were involved in the study. In order to gather the data, a semi-structured interview and an online questionnaire were used. The results showed that using Duolingo assisted students in learning English vocabulary more effectively.

Furthermore, Duolingo may also encourage students' willingness and motivation to practice their English skills (Apoko et al., 2023).

Irzawati & Unamo (2023) explored how students regarded Duolingo when learning English as a foreign language. Twenty students from a program not focused on English language education participated in the study. The researchers used an interview and a questionnaire to gather data. The findings showed that the students had favourable opinions and attitudes regarding the use of Duolingo. The students' answers revealed that using Duolingo to learn English was enjoyable, interesting, and inspiring. Overall, the students' attitudes and perceptions towards using Duolingo for English instruction purposes were shown to be positive.

Grammar is a fundamental part of the English language that aids students in successfully reading, writing, speaking, and understanding the language. Although learning should be fun, grammar can be seen as a little boring and uninteresting to learn. In this regard, Redjeki & Muhajir (2020) examined students' perceptions of learning grammar through the Duolingo application. The results of the study revealed that students who used Duolingo to learn English found it to be enjoyable, engaging, modern, and user-friendly. The participants acknowledged that Duolingo had increased their interest in studying the English language. In addition, the findings suggested that Duolingo could enhance English proficiency levels as the application offers a variety of activities related to everyday situations. Education gamification can increase enthusiasm for learning grammar. Prior research has demonstrated that Duolingo is a learning tool that utilizes gamification which can in turn improve students' grammar skills. By using the application, students could gain valuable experience in writing, reading, speaking, listening, and translating. Through Duolingo's exercises, users could also gain a better understanding of grammar. Students' English grammar skills could be improved through the repetition-type exercises.

The concept of gamification in learning is relatively new. Wood (2015) states that "gamification" is a word that has become synonymous with receiving rewards. The majority of gamification systems focus on improving skills with points, levels, leaderboards, accomplishments, or badges. This approach to education encourages users to interact with the application and receive benefits. In this respect, gamification is an approach that can help students improve their grammar skills. One application that applies this method to learning is Duolingo. A 2019 study by Syahputra examined to what extent Duolingo reduced student grammatical errors in writing. The participants were 25 second-grade students from Methodist Senior High School in Banda Aceh, Indonesia. The findings of the study indicated that using the Duolingo gamification approach was successful in reducing student grammatical errors when writing.

Methodology

This study used a questionnaire survey and interview questions to obtain data on students' perceptions of the Duolingo application. The questionnaire was adapted from an existing model that had previously been checked for validity. To ensure accuracy, the questionnaire was translated from English to Thai and then back-translated from Thai to English by experts proficient in both languages. The translated questionnaire was shown to be clear and accurate. The reliability of the questionnaire was checked and all

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Alphas were shown to be above .60 (.95) which is seen as reliable for data collection. Data were collected through a 5-point Likert scale questionnaire which measured students' levels of agreement as: strongly agree (5), agree (4), not sure (3), disagree (2), and strongly disagree (1). The levels were analyzed as follows: Mean: 1.0-1.80 = Very Low Level of Agreement, Mean: 1.81-2.60 = Low Level of Agreement, Mean: 2.61-3.40 = Average Level of Agreement, Mean: 3.41-4.20 = High Level of Agreement, Mean: 4.21-5.0 = Very High Level of Agreement. The data were analyzed using descriptive statistics (mean and standard deviation). The study surveyed 25 mixed-gender, Japanese major students studying in a 3rd year undergraduate program at a Thai public university. The students were chosen to participate in this study as they were unfamiliar with the Duolingo application, possessed the necessary characteristics, and were readily available.

Results

The following section provides data collected through the questionnaire survey (see Table 1).

Table 1 The results of the questionnaire on students' perceptions of the Duolingo application

Questionnaire Statement	N	Mean	S.D.
Duolingo can help me improve my speaking skills.	25	3.20	.58
Duolingo can help me improve my listening skills.	25	4.72	.46
Duolingo can help me improve my reading skills.	25	3.48	.51
Duolingo can help me improve my writing skills.	25	3.48	1.00
Duolingo can help me improve my grammar skills.	25	4.08	.95
Duolingo can help me improve my vocabulary levels.	25	4.68	.48
Duolingo is visually appealing.	25	4.88	.33
Duolingo is fun to use.	25	4.72	.61
Duolingo is easy to download and use.	25	4.76	.52
Duolingo's audio is clear and easy to understand.	25	4.64	.57

The questionnaire data revealed a high to very high level of agreement for all except one of the statements (Duolingo can help me improve my speaking skills). The results were therefore shown to be favourable towards the use of Duolingo. The interviews indicated that the majority of the students (22 out of 25) enjoyed the matching exercises. Eighteen out of twenty-five enjoyed the sentence-building exercises. None of the twenty-five students enjoyed the typing exercises. In addition, based on the interview, the students liked the layout and graphics used within the app. The visual appeal motivated students to use the app. The students did not find the exercise fun and found it difficult to type accurately on a phone keyboard. Most students use the app while travelling or in a free moment. They mostly use the app on their smart phones. The typing exercises are not practical on small devices. Twenty out of the twenty-five students surveyed initially thought that the application was useful. The app introduces students to new vocabulary. The students found it fun to learn new words through the app. Words are repeated during the

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lessons. This helps students remember the new words. Eighteen of the students suggested that the relatively short lesson lengths were about right. Twenty-two of the students said they would use the application again. The three other participants were unsure whether they would use the application again due to the availability of other applications. Overall, the app was found to be a fun method for learning vocabulary and learning the correct pronunciation of a word. Regarding The most common complaints from the students were related to the adverts and rewarding system (heart system). These were deemed to slow down and interrupt learning.

In regard to improving speaking skills, the data shows an average level of agreement. A very high level of agreement was found for improving listening skills. Students showed a generally high level of agreement in that Duolingo can improve reading and writing skills. Regarding grammar, students highly agreed that Duolingo could help them improve this skill. A very high level of agreement was shown for the Duolingo app in regard to improving vocabulary levels. Very high levels of agreement were found for the visual appeal of the app. It was also shown to be fun to use, easy to download and use with clear and easy to understand audio. None of the students found the app difficult to download. All feedback regarding this aspect was positive. Overall, the students showed very high levels of agreement for all of these statements.

Discussion

The present study's findings demonstrated that utilizing Duolingo has increased students' ability in all four areas of English, especially grammar and vocabulary. It was suggested the grammar structure was recognized through practice. The app though does not explain grammar in great detail. Students get used to the position of words in a sentence. Additionally, students find it more entertaining and beneficial to feel driven to improve their language skills while using gamification-based platforms (Yundayani et al., 2023). This might be appropriate for beginners using the application for the first time, but not for more experienced users. This study was carried out with students that were unfamiliar with the app. The initial perceptions may be useful when choosing an app for use within a course. An attractive and fun app can encourage learning. The initial perception, if positive, will motivate. According to Ivan Budiani et al. (2020), the students thought the application was simple, practical, and entertaining to use for Spanish practice. For writing skills, one study on the effect of Duolingo on the writing competency of the tenth-grade students postulated that utilizing Duolingo as an instructional tool helps students become more proficient writers. The results showed that the experimental group outperformed the control group and that they responded favorably to the idea that Duolingo may improve their general writing ability. It was clear that the experimental group achieved far better than the control group in content, organization, grammar, and vocabulary out of the four writing criteria, whereas the control group scored higher in mechanics. However, despite its benefits, this technology-based learning application does not offer interactive learning environment, especially improving speaking skill and provide some technical vocabulary like engineering terminology (Yundayani et al., 2023). The current finding shows good agreement with the aforementioned idea in the sense that the app is not as useful for speaking exercises. Pronunciation is graded by AI voice recognition. The students

may feel uncomfortable using this function. The finding that the speaking skill is not as useful contradicts with the earlier research on the use of Duolingo to improve speaking English (Fitria et al., 2023; Stevani, 2024).

Conclusion

Overall, the findings from the collected data were largely positive towards the Duolingo application. The results of the student interviews indicated that there were several advantages and disadvantages when using Duolingo to learn English. Duolingo can provide students with a suitable platform for immersing themselves in a new context and enhancing their English language proficiency skills. Additionally, the application's features can encourage, inspire, and motivate students to learn the language. However, some of the features of the application were not seen as favourable. The typing exercises were found to be impractical and the adverts and hearts system on the free version of the application slowed down learning. Overall, the application was well received. A longer-term study would be beneficial to discover whether students would continue to use Duolingo and what benefits students can gain by the long-term use of the application.

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