

The Impacts of Language Learning Apps on Students' Perceptions of Language Proficiency

Wani Nurfahani Mohd Sapuan¹, Haslina Hassan², Nurul Liya Saffura Rostam³, Amri Muaz Azmimurad⁴

¹⁻⁴English Department, Academy of Language Studies, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia

DOI: <https://dx.doi.org/10.47772/IJRISS.2024.8080255>

Received: 07 August 2024; Accepted: 13 August 2024; Published: 17 September 2024

ABSTRACT

Technology has transformed ESL education to meet the current demands of the Fourth Industrial Revolution (4IR), Sustainable Development Goals (SDGs) and Malaysia Higher Education Framework 4.0. This study examined how language learning apps impact students' perceptions of their language proficiency and how these perceptions affect their language learning experience. The study used surveys in the form of questionnaires with ESL learners in a Malaysian public university. The findings revealed that Duolingo is the most popular app among participants, with high satisfaction. Furthermore, language apps motivated and engaged students, primarily through personalised learning and social interaction. However, concerns were reported among participants, such as limited speaking practice and technical issues when technology was used in their learning. Nevertheless, most participants reported increased self-confidence in using English and actively tracking their language progress through these language-learning apps. In conclusion, this research provides valuable insights into commonly used language apps among students and student perceptions towards how these apps affect their language learning. While these apps show promise in ESL education, addressing challenges is crucial for their effective use in language education. These insights can inform strategies and curriculum design, contributing to language proficiency and global development goals in Malaysian higher education's ESL teaching and learning landscape.

Keywords— language learning apps; ESL learners; language learning; technology in education; perception

INTRODUCTION

The global significance of English language learning for non-native speakers cannot be overstated [1]. As English has become the lingua franca of business, academia, and global communication, the demand for effective ESL education has surged. In response to this demand, technology has played a transformative role in ESL instruction [2]. This study features the impacts of using language learning apps to gauge language proficiency from students' perspectives and how these perceptions impact their language learning experience.

It is worth noting that the integration of technology in education is not isolated in the realm of language learning. It is part of a broader educational shift driven by what is often referred to as the "Fourth Industrial Revolution" (4IR). As described by [3], the 4IR results from incorporating "exponential technologies" like AI, biotechnologies, and nanomaterials into the educational curriculum. This further underscores the importance of understanding the impacts of integrating technology in language education across various learning domains.

Furthermore, the context relates to the Sustainable Development Goals (SDGs), often called the Global

Goals, established by the United Nations in 2015 with the universal objective of addressing poverty, saving the earth, and fostering global peace and prosperity by 2030. The effort to attain these SDGs necessitates a collaborative effort, bringing together collective ingenuity, expertise, technological advancements, and financial support from all segments of society [4]. In the context of harnessing technology within educational environments, SDG 4 within the Sustainable Development Goals has a mission: to provide comprehensive, fair, and high-quality education for all [5]. This objective acknowledges the pivotal role that technology plays in broadening access to education, advancing digital literacy, and enhancing educational outcomes.

Finally, applying technology in language learning is also aligned with the Malaysia Higher Education Framework 4.0. The framework has four primary focal points: future-ready curriculum, talent planning, research and innovation, and agile governance [6]. These areas of focus are aimed at preparing Malaysia's higher education system and its graduates to thrive in the context of rapidly evolving technology and global competitiveness, ensuring that they are well-equipped to meet the challenges and opportunities presented by IR4.0 and the demands of the global job market [7].

Problem Statement

Language learning apps can be highly advantageous for language teaching and learning. Nonetheless, it is crucial to conduct a thorough evaluation of their efficiency and influence within diverse educational settings [8]. This study seeks to address the issue of how the use of language learning apps influences how students perceive their language proficiency.

In an age where technology is increasingly integrated into education, it is crucial to understand whether these apps positively or negatively affect students' self-assessment of language skills. The problem at hand is to determine if students who use language-learning apps evaluate their language proficiency and if these perceptions align with the impact of language-learning apps on their overall learning experience. This research aims to shed light on the potential impact of technology in shaping students' confidence and self-evaluation of their language proficiency, which can have implications for language education strategies and curricular design.

Research Objectives

The research aims to investigate the effects of language learning apps on students' language proficiency perceptions, focusing on the factors influencing these perceptions and their impact on the overall language learning experience. This research aims to:

1. identify language learning apps that students use.
2. investigate the factors that affect how students view their language proficiency when using language learning apps.
3. assess the impact of using language learning apps on students' overall language learning experiences.

Research Questions

Following are the research questions of this study:

1. What is the most common language learning apps that students use?
2. What factors influence students' self-perceptions of language proficiency when using language learning apps?
3. How do language learning apps impact students' overall language learning experience?

Significance of the Study

Technology integration into ESL education holds great promise in transforming how languages are taught, providing students with customised, data-driven learning opportunities. Nonetheless, it brings about a range of difficulties that, if not resolved, could impede the efficiency of these resources. The importance of this research lies in comprehending and minimising the effects of language learning apps on ESL learners to the most significant degree.

LITERATURE REVIEW

Overview of Technology in Language Education

The convergence of technologies, as highlighted by [9], holds the potential to reshape education. These technologies provide valuable tools for assessing students' understanding, identifying learning gaps, and offering real-time solutions. In addition, [10] emphasised the utility of technology such as Chat GPT. This technology offers valuable assistance by generating highlights on various topics and composing research reviews.

The integration of technology in education and assessments is indeed transformative, reshaping the teaching and learning landscape. This integration is reflected in [11] research, where he stressed that significant research has been done on particular tools that could transform foreign language education over the last two decades.

[12] also described the recent trends in English learning where technology-driven language learning has emerged as highly attractive to the requirements of digital natives. According to the researchers, digital technologies have influenced multiple facets of language education, including contemporary learning management systems, independent self-guided learning, collaborative learning, and the acquisition of the target language within a socio-constructivist framework. This is supported by [13], who found in their study on using language learning apps in students' language learning that most students gained more confidence when using language learning apps.

Language Learning Apps in Education

[11] listed several apps for language learning such as Busuu, Drops, Duolingo, Fluenz, Lingo Play, LiveMocha and Living Language.

- Busuu offers 12 languages with 80 million learners, covering reading, writing, speaking, and listening skills, connecting users with native speakers.
- Drops employs augmented reality to teach 2 million users essential vocabulary from 28 languages in short daily sessions, using their environment.
- Duolingo aims to make language education free and enjoyable, with 200 million users. It utilises various methods to enhance retention and engages learners through gamified lessons.
- Fluenz offers guided personalised tutoring, with seven languages to choose from, including Mandarin Chinese.
- Lingo Play gamifies language learning, allowing users to study or compete with features like online tournaments and certification.
- LiveMocha, although no longer operational, provided detailed instruction in six languages, focusing on conversational exercises and motivation.
- Living Language is a subscription-based platform offering courses in 52 languages, emphasising confidence and conversational practice in various contexts.

Furthermore, [14] highlighted the use of Duolingo in language learning among students. The language

learning apps feature game-based learning as the concept. Students found it interesting and practical to be used as the medium for language learning. This agrees with [15], they believe students prefer language learning apps because they are free, fun, different, and valuable. How students view these language learning apps affects how well and often they use English learning apps as learning tools.

According to [16], there needs to be a steadfast ranking for the best free language learning apps as reviews and research continually evolve. The researcher emphasises a selection of leading free language learning apps accessible on Android and Apple app stores, as recognised by PCmag UK. These include Busuu, Duolingo, Beelingup, Memrise, and HelloTalk. Several language apps in the list are consistent with [17]. His study narrowed down the five most popular language-learning apps: Duolingo, Rosetta Stone, Memrise, LingQ and Busuu.

Challenges of Integrating Technology in Language Education

[18] cited [19] research, highlighting that language learning apps offer a learner-centric approach with adaptable usage. Nevertheless, they fall short in offering collaborative learning opportunities, as most of these apps primarily emphasise language structure. [11] added the challenges in integrating technology in English language classrooms as he found that the adoption within the classroom is lacking. However, language learning apps could enhance foreign language education and incorporate many essential components for language learning.

[20] in their review of trends, challenges, and opportunities for mobile language learning apps, identified three notable trends that may pose challenges in integrating technology into language teaching and learning. These trends include the tendency of language learning apps to teach vocabulary in isolated units rather than within relevant contexts. Additionally, the authors noted that these apps exhibit limited adaptability to accommodate the skill sets of individual learners. Lastly, they observed a scarcity of explanatory corrective feedback provided by these apps to learners.

In the findings by [12], it is highlighted that no significant connection is observed between utilising digital platforms for learning, digital literacy skills, and attitudes. The findings translate that neither attitude nor digital literacy skills serve as predictors for the use of digital platforms in the context of learning. This is supported by [21] as they highlighted in their study that despite the potential benefits of language learning applications, which include becoming more confident and comfortable in learning English personally, many students are still unfamiliar with using these applications for English learning. Thus, a significant transformation in education is needed to ensure students can benefit from the integration of technology into English language learning.

METHOD

Research Design

This research employs quantitative techniques for gathering and analysing data, mainly focusing on conducting a survey within educational settings. This survey offers a thorough and all-encompassing view of the issues of incorporating technology like language learning apps into ESL education.

Data Collection Methods

Data is collected through surveys distributed via Google form to ESL learners. These surveys incorporate a well-structured questionnaire, encompassing inquiries concerning the impacts of language learning apps on language proficiency levels from students' perspectives adapted from past literature. The questionnaire employs multiple-choice questions, where several questions allow participants to choose more than one

answer to gauge responses effectively.

Research Population

The research population focuses on diploma students from a public university in Selangor, Malaysia. This specific group of participants is chosen for several reasons. Firstly, they are ESL (English as a Second Language) learners, integral to the research focus on the impact of language learning apps in English education. Secondly, public university students in Selangor are a diverse demographic group with varying levels of English proficiency, making them a representative sample for understanding the impacts of language learning apps on students' language proficiency in the ESL context.

Moreover, diploma students in a public university setting typically have some degree of exposure to technological resources, as these technologies are increasingly integrated into higher education. This exposure enhances the relevance of their experiences to the research objectives. By homing in on this specific group, the research aims to provide insights that can be directly applicable to ESL learners in similar educational contexts, ensuring the findings are practical and relevant. Participant selection follows ethical guidelines that involve obtaining informed consent from all students willing to participate in the study. At the same time, their privacy and rights are rigorously protected throughout the research process.

Research Participants

In this research, convenience sampling plays a vital role in participant selection. Given the practical constraints of accessing ESL students within a public university in Selangor, Malaysia, convenience sampling offers an efficient way to collect data. This approach involves selecting participants based on their accessibility. This allows for a practical and manageable approach to gathering data from the target population.

Thirty students enrolled in an English course, Integrated Language Skills 3, were selected as the research participants. The students are third-semester diploma students. They are all Malaysians, ranging from 18 to 25 years old. The programme that they enrolled in the university is Diploma in Sports Science. This three-year diploma program is structured to provide a curriculum to individuals keen on pursuing leadership and managerial roles within the sports and recreational sectors. The programme imparts a robust theoretical framework in sports and recreational management, complementing diverse practical learning opportunities.

Throughout the program, students can acquire knowledge related to the business aspects of the sports and recreation field. Those who complete this program are anticipated to meet the employment needs for administrative and managerial positions in various sports organisations and recreational establishments.

Data Analysis

Descriptive data analysis using descriptive statistics is an essential aspect of this research, offering valuable insights into the impacts of language learning apps on students' language proficiency in ESL education. This analysis would help in understanding the impacts experienced in the context of integrating technology into ESL education. The analysis provides a comprehensive overview of how students perceive the impacts of the language learning apps on students' language proficiency can be retrieved. This data analysis approach reveals the primary trends and characteristics of ESL students' experiences with language learning apps in learning English.

RESULTS AND DISCUSSION

The Common Language Learning Apps among Students

TABLE 1 LANGUAGE LEARNING APP(S) USED BY STUDENTS

Item	Language Learning App	Percentage (%)
1	Duolingo	56.7
2	Memrise	13.3
3	Rosetta Stone	0
4	Babbel	0
5	Others	43.3

The results reported that 70 per cent of participants used language learning apps to improve their language proficiency. As shown in Table 1, Duolingo was rated the highest with 56.7 per cent, whilst none of the participants rated for Rosetta Stone and Babbel apps. The finding is relevant to the popularity of Duolingo as a language learning app with 200 million users, as stated in [11]. This is also supported by [14], who said Duolingo is the most popular online language-learning app. Furthermore, [16] and [17] list the Duolingo app as one of the most famous language learning apps.

Factors that Influence Students’ Language Learning Experience when Using Language Learning Apps

Based on the findings, there are positive and negative factors that contribute to the students’ use of English language learning apps. Students use English language learning apps because the apps are motivating and engaging.

Table 2 shows that most participants chose personalised learning experiences (50%) and social interaction with other learners (43.3%) as their primary motivations for using language learning apps in their English education. These show very significant positive factors that contribute to the students’ use of the learning apps. The former is in line with the findings from [21] where it was found that the participants enjoy using the language learning apps due to its flexibility and the availability of using the apps even outside of the classroom settings. Besides, being able to still have social interaction while using an online apps is an interesting factor that showed quite a positive response while it is in contrast with the findings by [22].

Furthermore, 70 per cent of the participants found that language learning apps are more engaging than traditional learning methods. This is parallel to [15] as they viewed language learning apps as appealing to students because they are free, engaging, unique, and practical. [22] shared the same view as they found that language-learning apps are popular because they are practical and accessible.

TABLE 2 STUDENTS’ PRIMARY MOTIVATION TO USE LANGUAGE LEARNING APPS

Item	Motivation Aspects	Percentage (%)
1	Personalised learning experiences	50
2	Social interaction with other learners	43.3
3	Convenience	30
4	Gamification (e.g.: rewards, points, badges)	13.3

However, the survey also revealed the participants’ concerns about the challenges and limitations of using language learning apps to improve their language proficiency (refer to Table 3). Among the factors rated high by the participants, the apps lacked speaking practice (70%) and came with technical issues (36.7%).

Participants’ concerns are aligned with those of [18], who referenced [19] research. They found that while language learning apps are adaptable and learner-centred, they often lack collaborative learning features, as they mainly focus on language structure. The finding is aligned with the reviews by [20], which indicate that language learning apps often focus on language components in isolation, neglecting the crucial aspect of collaborative learning element within relevant contexts.

TABLE 3 STUDENTS’ CONCERNS ON LANGUAGE LEARNING APPS

Item	Concerns	Percentage (%)
1	Lack of speaking practice	70
2	Technical issues with the app	36.7
3	Lack of motivation	30
4	Difficulty in understanding cultural nuances	23.3
5	Limited vocabulary or content	16.7

The Impacts of Language Learning Apps on Students’ Perceptions of Language Proficiency

It is identified that most participants responded positively towards the impacts of language learning apps on their language proficiency in terms of their self-confidence and learning progress (refer Table 4). All participants showed positive responses towards the improvement of their self-confidence in using the English language since they started using language learning apps. In fact, 73.3 per cent of them tracked their language learning progress within the apps.

TABLE 4 SELF CONFIDENCE UPON USING LANGUAGE LEARNING APPS

Item	Level	Percentage (%)
1	Increased significantly	46.7
2	Increased somewhat	53.3
3	Decreased somewhat	0
4	Decreased significantly	0

The finding is supported by [21], who assert, based on their research, that students who regularly utilise language learning applications for independent learning outside the classroom tend to become more confident and comfortable in learning English independently. Similarly, [13] found that most students gained more confidence in their language learning when using language learning apps. They were all motivated during the test and eager to see their final score.

Furthermore, the result showed that most participants rated three and above (83.3%) on a scale of 5 (the highest) in describing their satisfaction with their language learning apps of choice. Hence, the results align with those of [12], who highlighted the current trend of technology-driven language learning appealing to the new generation.

TABLE 5 OVERALL SATISFACTION WITH LANGUAGE LEARNING APP(S)

Item	Rate	Percentage (%)
	1 (the lowest) – 5 (the highest)	
1	1	13.3
2	2	3.3
3	3	40

4	4	40
5	5	3.3

CONCLUSION

In conclusion, the study reveals valuable insights into the common language learning apps among students and their perceptions of these apps. A significant portion of the participants expressed high levels of satisfaction with their chosen language learning apps, with Duolingo emerging as the most favoured choice. The findings indicate that students perceive language learning apps as motivating and engaging tools, with personalised learning experiences and social interaction as key motivators. Interestingly, students found these apps more engaging than traditional learning methods. However, the study also highlights concerns such as the lack of speaking practice and technical issues that may affect the use of language learning apps.

On a positive note, most participants reported improved self-confidence in using the English language and actively tracked their language learning progress within the apps. These insights underscore the potential benefits of language learning apps while emphasising the need to address specific challenges for more effective integration into language education.

ACKNOWLEDGMENT

The researchers extend their special gratitude to the Academy of Language Studies for assisting the grants application process and initiating the effort to the development of research practices among academic staff. The invaluable guidance from experts has been truly remarkable in paving the way for the preparation of this manuscript.

REFERENCES

1. Nishanthi, R. (2018). Importance of learning English in today's world. *International Journal of Trend in Scientific Research and Development*. 3. https://www.researchgate.net/publication/329505353_Important_of_learning_English_in_today_world.
2. Ho, C., Y. (2020). Communicative language teaching and English as a Foreign Language Undergraduates' communicative competence in Tourism English. *Journal of Hospitality, Leisure, Sport & Tourism Education*. 27. <https://doi.org/10.1016/j.jhlste.2020.100271>
3. Penprase, B. (2018). The fourth industrial revolution and higher education. In Mamcy, W. G. (ed). *Higher Education in the Era of the Fourth Industrial Revolution*, pp. 207-229. Springer Singapore. https://www.researchgate.net/publication/325899393_The_Fourth_Industrial_Revolution_and_Higher_Educat
4. Fallah Shayan, Niloufar, Nasrin Mohabbati-Kalejahi, Sepideh Alavi, and Mohammad Ali Zahed. (2022). Sustainable Development Goals (SDGs) as a Framework for Corporate Social Responsibility (CSR). *Sustainability* 14(3), 1222. <https://doi.org/10.3390/su14031222>
5. Adipat, S. & Chotikapanich, R. (2022). Sustainable Development Goal 4: An education goal to achieve equitable quality education. *Academic Journal of Interdisciplinary Studies*. 11. https://www.researchgate.net/publication/365155425_Sustainable_Development_Goal_4_An_Education_Goal_to_Achieve_Equitable_Qual
6. Ministry of Higher Education Malaysia. (2018). Framing Malaysian Higher Education 4.0: Future proof talents. 2018. <https://jpt.mohe.gov.my/portal/index.php/en/publication/61-framing-malaysian-higher-education-4-0-future-proof-talent>
7. Kolandan, S. (2019). Industry Revolution 4.0 and education system in Malaysia: Are we ready for the challenges? https://www.researchgate.net/publication/331393089_Industry_Revolution_40_and_Education_Sys
8. Huu, P., T., & Tran, N. (2023). Examining the impact of mobile apps on language teaching and learning in a public university: An experimental study. *International Journal of Linguistics, Literature and*

- Translation. 6, pp.113-121.
https://www.researchgate.net/publication/371859182_Examining_the_Impact_of_Mobile_Apps_on_Language
9. Jagwani, A. (2019). A review of machine learning in education. *Journal of Emerging Technologies and Innovative Research*. 6(5), 384–6.
 10. Qasem, F. (2023). ChatGPT in scientific and academic research: Future fears and reassurances. *Library Hi Tech News*, 40(3), pp. 30-32. <https://doi.org/10.1108/LHTN-03-2023-0043>
 11. Powers, C. (2019). The use of apps in foreign language education: A survey-driven study. *North Texas Journal of Undergraduate Research*, 1(1). <https://journals.library.unt.edu/index.php/undergrad/article/view/78>
 12. Hussien Mohamad Alakrash, Norizan Abdul Razak, & Pramela Krish. (2022). The application of digital platforms in learning English language. *International Journal of Information and Education Technology*, 12(9). <http://www.ijiet.org/vol12/1699-IJiet-4290.pdf>
 13. Cesar, A., G., & Angela, Y., C. (2018). The use of language learning apps as a didactic tool for EFL vocabulary building. *English Language Teaching*; 11(2). <https://files.eric.ed.gov/fulltext/EJ1166513.pdf>
 14. Permatasari, D. & Aryani, F. (2023). Duolingo: An enchanting application to learn English for college students. *ELTR Journal*. 7. https://www.researchgate.net/publication/372357284_duolingo_an_enchanting_application_to_learn_english_for_college_students
 15. Fan, X., Liu, K., Wang, X. & Yu, J. (2023). Exploring mobile apps in English learning. *Journal of Education, Humanities and Social Sciences*. 8. https://www.researchgate.net/publication/368377800_Exploring_Mobile_Apps_in_English_Learning
 16. Hassan Marie. (2021). Mobile Apps: A trend in language learning? Assessing the engagement of independent learners with new media. University of Bedfordshire. <https://uobrep.openrepository.com/bitstream/handle/10547/625741/MARIE%20Hassan%20REPOSITORY%20FULL%20COPY%20UPDATED.pdfsequence=4>
 17. Athanasios Karasimos. (2022). The battle of language learning apps: A cross platform review. *Research Papers in Language Teaching and Learning*. 12. https://rpltl.eap.gr/images/2022/09_Karasimos.pdf
 18. Sayed Ahmad Almousaw. (2021). Examining English language learning apps from a second language acquisition perspective. *International Journal of Higher Education*. 10(5). <https://files.eric.ed.gov/fulltext/EJ1318935.pdf>
 19. Kim, H., & Kwon, Y. (2012). Exploring smartphone applications for effective mobile-assisted language learning. *Multimedia-Assisted Language Learning*, 15(1), pp. 31-57. https://www.researchgate.net/publication/331831915_Exploring_Smartphone_Applications_for_Effective_MobileAssisted_Language_Learning
 20. Catherine, R., H., Jason, S., W., & Joey, J., L. (2016). A review of mobile language learning applications: Trends, challenges, and opportunities. *The EUROCALL Review*, 2(2). https://www.academia.edu/31232650/A_review_of_mobile_language_learning_applications_trends_challenges_and_opportunities
 21. Tuti Hidayati & Sari Diana. (2019). Students' motivation to learn English using mobile applications: The case of Duolingo and Hello English. *JEELS (Journal of English Education and Linguistics Studies)*. 6. https://www.researchgate.net/publication/335595244_students'_motivation_to_learn_english_using_mobile_applications
 22. Jing, C., & Kim, H., J. (2019). Attitudes towards English language learning apps from Korean and Chinese EFL students. *English Teaching*, 74(4). http://journal.kate.or.kr/wp-content/uploads/2020/01/v74_4_09.pdf
 23. United Nation. (2015). Sustainable Development Goals. <https://www.un.org/sustainabledevelopment/blog/2015/12/sustainable-development-goals-kick-off-with-start-of-new-year/>