

BỘ GIÁO DỤC VÀ ĐÀO TẠO
TRƯỜNG ĐẠI HỌC QUẢN LÝ VÀ CÔNG NGHỆ HẢI PHÒNG



KHÓA LUẬN TỐT NGHIỆP

NGÀNH : NGÔN NGỮ ANH

Sinh viên : Phạm Hải Dương

HẢI PHÒNG – 2025

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**THE APPLICATION OF “DUOLINGO” TO
PROMOTE ENGLISH STUDENTS’ SELF-STUDY AT
HAIPHONG UNIVERSITY OF MANAGEMENT AND
TECHNOLOGY**

KHÓA LUẬN TỐT NGHIỆP ĐẠI HỌC HỆ CHÍNH QUY
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Tên đề tài: The Application Of “Duolingo” To Promote English
Students’ Self-Study At Haiphong University Of Management And
Technology

NHIỆM VỤ ĐỀ TÀI

1. Nội dung và các yêu cầu cần giải quyết trong nhiệm vụ đề tài tốt nghiệp

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2. Các tài liệu, số liệu cần thiết

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Họ và tên :

Học hàm, học vị :

Cơ quan công tác : Trường Đại học Quản lý và Công nghệ Hải Phòng

Nội dung hướng dẫn:

Đề tài tốt nghiệp được giao ngày tháng năm 2025

Yêu cầu phải hoàn thành xong trước ngày tháng năm 2025

Đã nhận nhiệm vụ ĐTTN

Sinh viên

Đã giao nhiệm vụ ĐTTN

Giảng viên hướng dẫn

Hải Phòng, ngày tháng năm 2025

XÁC NHẬN CỦA KHOA

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM

Độc lập - Tự do - Hạnh phúc

PHIẾU NHẬN XÉT CỦA GIẢNG VIÊN HƯỚNG DẪN TỐT NGHIỆP

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Giảng viên hướng dẫn

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Abstract

The application of technology in education in general and in English language teaching in particular has received positive feedback from both teachers and students, as it enhances the effectiveness of teaching methods and the quality of learning. Currently, due to the availability of various technological applications, many students, especially first-year students, often struggle to choose a suitable technology application that aligns with their training program and personal characteristics.

In this study, the author examines the use of "Duolingo" in improving first-year students' self-study abilities in English at Hai Phong University of Management and Technology. Three primary research tools—survey questionnaires, semi-structured interviews, and classroom observations—were used to collect data. The research findings indicate that, despite certain challenges related to technological aspects, learners' language proficiency, and time constraints, the participating students found Duolingo to be a useful and applicable application. They agreed that it could help improve their self-study abilities and enhance their learning quality. Additionally, they became more confident, and their learning process became more effective.

Keywords: *"Duolingo" application, self-study, technology application, English language teaching*

Acknowledgement

While working on my graduation thesis, I received support, help, and dedicated guidance from teachers at the university, family, friends... Everyone was always by my side during the process. To me, my graduation thesis is a noble thing and I know I must cherish it.

First of all, I would like to express my deep gratitude to the Doctor – Mrs Tran Thi Ngoc Lien, who guided me in writing my graduation thesis this time! She is one of the instructors who has taught me and my classmates for the past 4 years.

She is always an encourager, an inspiration, and helps us a lot in our studies as well as extracurricular activities, events... organized by the department or the school. This graduation thesis would not have been successful without the guidance and advice of Mrs. Tran Thi Ngoc Lien

Next, I would like to send my sincere thanks to the teachers of the Faculty of Foreign Languages, Hai Phong University of Management and Technology, for their dedicated teaching and guidance not only on professional knowledge but also on work skills.

And I also want to thank Lingo House Language Center for always supporting me during my internship, where I really found myself and needed to know what to do in the future. To me, it was like a lighthouse that showed me the way when I was in the final stages of not knowing where my future would go.

My family and friends in class as well as all students of the Faculty of Foreign Languages have given me the opportunity to continuously exchange and learn. They are always by my side and help me when I encounter difficulties or adversity, walking together through happy and sad times.

Finally, I just want to say again, Thank you everyone for everything we've overcome together!

CHAPTER I: INTRODUCTION

1.1. Rationale

Over the past decade, foreign language teaching has expanded significantly, with numerous studies highlighting the importance of language acquisition. Research suggests that when students learn a second language, they naturally develop grammatical systems through exposure to linguistic data rather than through conscious memorization (M. Teresa Fleta Guillén, *Meeting 16*, 2006, pp. 51-62). This process aligns with pedagogical theories that view learning as a continuous adaptation to different contexts (Pinker, 1995, p. 18). However, English learning presents challenges, as students often struggle with mastering communication skills. Many lack effective study techniques, leading to difficulties in content retention and fluency. To overcome these obstacles, dedication, structured practice, and technological support are essential (Kuhl, 2000, p. 54).

Despite increasing efforts to enhance education, many students at the primary and secondary levels struggle to organize their studies. A common issue is their misconception of effective learning, resulting in inconsistent academic performance. These students often lack organizational skills and familiarity with study techniques that could improve their progress. Traditional teaching methods still dominate in many educational institutions, treating students as passive recipients rather than active learners. This outdated approach limits the development of critical thinking and self-directed learning, making it harder for students to adapt to modern educational demands.

To address these challenges, **this research explores the use of Duolingo to support English self-study among students at Haiphong University of Management and Technology**. Duolingo is an interactive, gamified application that facilitates language acquisition through structured exercises, real-life scenarios, and immediate feedback. Unlike traditional methods, it allows students to learn at their own pace, reinforcing vocabulary and grammar in an engaging manner. The accessibility of Duolingo also ensures that students can practice anytime, reducing dependency on formal classroom instruction and fostering self-motivation.

Developing independent learning skills is crucial for academic success. Self-directed learners tend to be more confident, motivated, and efficient in their studies. By incorporating Duolingo into their learning routines, students can enhance their

autonomy and problem-solving abilities. The platform encourages consistency and engagement, helping learners retain information more effectively. This research aims to highlight how Duolingo serves as a valuable tool in promoting self-study, particularly for first-year students who need additional support in transitioning to higher education.

Ultimately, English education should equip students with the knowledge and skills necessary for future opportunities. Effective self-study techniques can help learners take control of their academic development, improving both language proficiency and overall performance. Studies on technology-assisted learning suggest that tools like Duolingo can bridge gaps in traditional education by providing personalized learning experiences. This research presents practical strategies to integrate Duolingo into English learning at Haiphong University of Management and Technology, ensuring that students maximize their potential and adapt to modern educational requirements.

1.2. Aims of the study

Approaches to learning provide an effective framework for evaluating self-study methods. Research in second language acquisition highlights how learners' beliefs about language learning influence their behaviors and academic performance. Many students rely on prior learning patterns and experiences as a foundation for acquiring English.

According to Ranabahu and Tamala (2006), self-learning plays a crucial role in language acquisition. They emphasize that educators must introduce students to diverse learning strategies and create supportive environments where they can take risks without fear of failure. Their research highlights the importance of adopting self-learning techniques to improve learners' achievements, as these strategies cater to students' individuality and enhance their ability to learn independently.

With the rise of digital learning tools, language-learning applications such as Duolingo have emerged as valuable resources for self-study. This study aims to explore the application of Duolingo in promoting English self-study among students at Haiphong University of Management and Technology. Specifically, the study seeks to:

- Inquire about the impact of using the Duolingo tool on students' self-study ability.

- Explore students' attitudes toward the application of this tool.

1.3. Scope of the study

This study explores the role of self-studying in English language acquisition among second-year students at Haiphong University of Management and Technology (HPU), with a particular focus on the application of Duolingo as a self-learning tool. In Vietnam, English is widely taught at all levels of education; however, despite intensive instruction from preschool to high school, students often do not achieve the expected proficiency in language skills (Karahan, 2007). This study aims to investigate the factors influencing self-study habits in a college setting and assess the effectiveness of Duolingo in enhancing students' motivation and learning outcomes.

The research examines both the positive and negative factors that affect students' motivation for self-study and identifies potential strategies to support independent language learning. Additionally, it addresses the lack of research on demotivating factors in learning English as a foreign language at the university level. The study is limited to second-year students at HPU, focusing on their engagement with Duolingo and how it impacts their reading, writing, listening, and speaking skills.

The findings of this study will provide valuable insights for both students and educators, offering recommendations on how to integrate digital learning tools into self-study practices effectively. By leveraging Duolingo as a learning aid, this research seeks to enhance students' language proficiency and foster a more autonomous approach to English learning.

1.4. Method of the study

The research is based on the results of a survey of second-year students of the Faculty of Foreign Languages, HPU. Ultimately, what is the deciding factor in improving English skills through self-study through the use of Duolingo application

This study was carried out using this following methods:

- Research, gather information and references from books, internet.
- Suggestion from involved individual.

- Conduct survey questionnaires for English-majored students at HPU to discover the matter and difficulties when learning foreign language and gather result after practice measures.

1.5. Design of the study

This study employed a descriptive quantitative research design to investigate how the Duolingo application promotes self-study among English majors at Haiphong University of Management and Technology. Data were gathered using a questionnaire distributed to selected students. The results were analyzed statistically to identify trends and assess the impact of Duolingo on learners' self-study habits.

To present the findings clearly and systematically, the thesis is divided into five chapters:

- **Chapter 1: Introduction** – Presents the background of the study, the problem statement, objectives, research questions, significance, and scope and limitations.
- **Chapter 2: Literature Review** – Discusses relevant theories, prior research, and conceptual frameworks related to language learning and educational technology.
- **Chapter 3: Research Methodology** – Describes the research design, participants, data collection instruments, procedures, and methods used to analyze the data.
- **Chapter 4: Findings and Discussion** – Presents the findings of the study, interprets the results, and provides conclusions and recommendations for future research or practice.
- **Chapter 5: Conclusion and Recommendations** – Summarizes the main findings of the study, presents conclusions drawn from the results, and offers recommendations for students, teachers, institutions, and future researchers.

CHAPTER II : LITERATURE REVIEW

2.1. Self-Study in Language Learning

2.1.1. The important of English

English is widely recognized as a global language, serving as a primary means of communication in various domains, including education, business, science, and technology. According to Crystal (2003), English has attained the status of a **lingua franca**, facilitating international communication and enabling access to a vast amount of knowledge. The dominance of English in academic research, professional settings, and global media underscores its significance in modern society.

In the educational field, English proficiency is a key factor in academic success, particularly in non-English-speaking countries where much of the scientific literature and research materials are published in English (Graddol, 2006). In Vietnam, English is taught at all levels of education, from primary school to higher education. However, studies indicate that despite the emphasis on English learning, many students struggle to achieve proficiency due to limited exposure and ineffective learning strategies (Nguyen & Nguyen, 2020).

From a cognitive perspective, the process of learning English as a foreign language is influenced by various factors, including motivation, learning autonomy, and technological support. Krashen's **Input Hypothesis** (1982) highlights the importance of comprehensible input in language acquisition, emphasizing that learners acquire a language effectively when they are exposed to meaningful and understandable content. Additionally, Vygotsky's **Sociocultural Theory** (1978) stresses the role of interaction in language learning, suggesting that students learn best in environments that encourage communication and collaboration.

With the rise of digital learning tools, platforms such as Duolingo have been integrated into language education to enhance self-study and learner autonomy. Research suggests that mobile-assisted language learning (MALL) tools contribute to **improving vocabulary retention, listening comprehension, and motivation in learning English** (Stockwell, 2013). These advancements align with the principles of **self-directed learning** (Knowles, 1975), which emphasizes the learner's ability to take control of their learning process, set goals, and utilize available resources effectively.

Thus, the importance of English extends beyond formal education, influencing career opportunities, global mobility, and intercultural communication. Given its significance, adopting **innovative and autonomous learning strategies** is essential to ensure effective English acquisition among students.

2.1.2. What is self-studying ?

Many perspectives have been discussed regarding self-study and students' ability to learn independently. However, most researchers, scholars, teachers, and students share a common viewpoint: "Self-learning ability is a competency related to personal development and career growth, emphasizing individuality and the ability to expand one's own knowledge and skills." Katarina and her colleagues suggest that "Self-study is a learning method that creates space for reflection, problem identification, solution development, and evaluation."

Self-study involves exploring learners' professional experiences to enhance their learning quality. It can be conducted through reflection, critical analysis, and self-assessment via interactions with others (LaBoskey, 2004; Pinnegar & Hamilton, 2009; Samaras, 2011). It is a process in which individuals actively direct their own learning journey, define their learning goals, and take responsibility for achieving them. Dedication, motivation, and self-direction are essential for becoming a successful self-learner (<https://www.mightynetworks.com/resources/self-learning>).

Self-study is an activity carried out at one's own pace and timeline, involving goal-setting and progress tracking. Most importantly, the standards for progress and success are determined by the learner. This means that no one dictates what to do or what constitutes successful learning of a skill or knowledge (<https://www.quaeducationgroup.com/blog/self-study-what-is-it-and-how-to-do-it>). From a broader perspective, Taylor and Diamond (2020) assert that "Self-learning is related to social equity and community responsibility."

In Vietnam, the concept of self-study has been explored, researched, and debated by many scholars. Nguyễn Hiến Lê (1992) defines self-study as "learning voluntarily, without external compulsion, through self-exploration and inquiry to gain knowledge. Whether a teacher is present or not is irrelevant. A self-learner has full autonomy, choosing what to learn, when to learn, and how to learn." Similarly, Lưu Xuân Mới (2003) emphasizes that self-study is "a form of individual cognitive activity carried out by students either in class or outside of class, following or deviating from a prescribed curriculum and textbooks."

Further detailing the self-study process, Nguyễn Cảnh Toàn and colleagues (2009) describe self-learning as "a process in which learners actively think, use intellectual abilities (such as observation, analysis, comparison, and synthesis), and sometimes even physical effort (when using tools) along with their personal attributes to acquire knowledge."

From these perspectives, self-study can be understood as a personalized learning activity requiring self-discipline, clear awareness of learning objectives, and appropriate learning strategies based on individual conditions and social environments. The ultimate goal of self-study is to help learners accumulate the knowledge, experiences, and skills they aspire to achieve.

2.1.3. The important of self-studying

According to Ne'matova Nigora (2024), self-study is an excellent way for students to enhance their learning experience. They can use self-study to learn beyond what textbooks and teachers provide. By practicing self-learning, children are encouraged to delve deeper into topics of interest, leading to improved learning abilities. One of the main benefits of self-study is that students gain control over their own learning. When students have control, they are more motivated to learn. Self-study not only helps children develop learning skills but also enables them to explore new topics or tackle difficult homework assignments. This independent information-seeking process allows students to gain a deeper understanding, become more confident, and significantly boost their motivation. Additionally, self-study enables students to learn at their own pace, focusing on subjects they are most interested in (or wish to understand better), thereby reducing stress, anxiety, and boredom they may experience in a traditional classroom setting. Self-learning encourages curiosity, allowing students to choose what they enjoy, ultimately creating a more effective learning environment.

Vijay Garg (2024) outlines several advantages of self-study, including:

- Expanding students' cognitive abilities.
- Freedom to learn without restrictions.
- Helping learners focus on a limited number of interests.
- Making learning more engaging compared to traditional methods.
- Encouraging students to develop a sense of responsibility and accept accountability.

- Allowing learners to explore various interesting books rather than relying solely on monotonous teacher notes or textbooks.
 - Enabling students to create their own study materials.
 - Reducing the fear of criticism.
 - Offering flexibility to study at preferred times according to individual schedules.
 - Enhancing natural retention, as students engage in problem-solving independently rather than passively receiving information from teachers.
 - Providing opportunities for enthusiastic learners to deeply engage with a subject.
 - Fostering strong work ethics.
 - Boosting confidence and self-satisfaction in accomplishing academic goals.
 - Improving test performance, as students become accustomed to independent problem-solving, which increases their confidence.
- (Source: [Sikkim Express](#))

According to Zhu, Bonk, and Doo (2020), the benefits of self-study activities are diverse. First, effective self-study management can empower students to take greater responsibility for their learning, fostering a sense of ownership and intrinsic motivation (Bosch, 2017). By creating structured frameworks and providing clear guidance, educators can encourage students to set goals, plan their study time efficiently, and track their progress (R. Stroupe & K. Kimura, 2013). Moreover, well-designed self-study management strategies can promote self-regulated learning skills such as goal-setting, time management, and metacognition, which are essential for academic success and beyond (C. A. Wolters & A. C. Brady, 2021).

In summary, self-study competency is crucial for learners, providing significant value in enhancing autonomy and enabling them to achieve their academic goals.

2.1.4. Understanding the Difficulties of Self-Learning

Self-directed learning, while offering flexibility and autonomy, also presents several challenges that can hinder its effectiveness—particularly for individuals new to a subject or without structured guidance. One of the primary difficulties lies in not knowing what to learn. Beginners often face confusion about which resources to prioritize, which courses to take, or which materials are truly relevant

to their personal or professional goals. This lack of direction can lead to wasted time on irrelevant content and overlooked essential concepts.

Time constraints are another major barrier. Research consistently shows that lack of time is the most common obstacle to self-learning, especially for individuals balancing multiple responsibilities such as deadlines, meetings, and ongoing projects. Even when resources are available, carving out time to engage meaningfully with them can be a significant challenge.

Motivation also plays a critical role. While some learners are naturally curious and proactive, others may lack the internal drive to pursue learning outside of their immediate responsibilities. Without external incentives or clear expectations, many individuals may not engage in learning activities, regardless of their potential benefits.

Moreover, an overabundance of learning options can be counterproductive. Learning platforms often contain hundreds of courses, articles, and videos, which can overwhelm users rather than empower them. Faced with too many choices, learners may feel mentally fatigued and uncertain about where to begin, ultimately leading to disengagement.

Finally, self-directed learners often gravitate toward topics they find interesting, rather than those they need to learn. While interest can enhance engagement, it can also lead to selective learning—where important but less appealing subjects are ignored. For example, an employee interested in management may focus on leadership courses while neglecting necessary technical training. This tendency can create knowledge gaps and limit the overall effectiveness of self-learning initiatives.

2.2. The Role of Technology in Language Learning

2.2.1. Educational Technology and Language Acquisition

In recent years, educational technology has become an essential component in the field of language acquisition. The integration of digital tools into language learning environments has significantly transformed the way learners engage with new languages, offering greater flexibility, accessibility, and interactivity (Chapelle, 2003). Language acquisition, once limited to classroom instruction and printed materials, is now increasingly supplemented—or even replaced—by digital platforms, applications, and online resources.

According to Richards and Rodgers (2014), the use of educational technology enables learners to personalize their language learning experience, catering to individual learning styles, proficiency levels, and learning goals. Furthermore, interactive features such as immediate feedback, gamified activities, and multimedia input enhance learners' motivation and engagement, two critical factors in successful language acquisition (Stockwell, 2012).

One notable shift has been the rise of mobile-assisted language learning (MALL), where learners use mobile devices such as smartphones and tablets to study languages anytime and anywhere. This trend is particularly impactful for self-study contexts, as learners gain autonomy over their learning process and can reinforce their language skills in informal settings (Godwin-Jones, 2011).

In the context of second language acquisition (SLA), digital tools support input and output opportunities, scaffolding vocabulary acquisition, grammar understanding, pronunciation, and communicative competence. As highlighted by Ellis (2008), meaningful exposure to input and opportunities for output are essential for language development, and technology provides innovative means for both.

The widespread adoption of language learning applications such as Duolingo, Memrise, and Babbel exemplifies the intersection between educational technology and language acquisition. These platforms offer structured, level-based content and use motivational strategies such as streaks, points, and leaderboards to encourage continued learning (Vesselinov & Grego, 2012). As such, technology serves not only as a medium for instruction but also as a motivational and engagement tool that supports consistent and sustained language learning efforts.

In conclusion, educational technology plays a pivotal role in contemporary language acquisition. Its ability to offer personalized, engaging, and accessible learning experiences makes it an indispensable element in both formal and informal language learning settings.

2.2.2. Technology-Supported Self-Learning

Self-learning, or autonomous learning, has increasingly gained recognition in the field of education, particularly with the advancement of digital technologies. In language learning, technology-supported self-learning refers to the use of digital tools and platforms that enable learners to study and practice a language

independently, without continuous guidance from a teacher (Little, 1991). The growing availability of educational technology has made self-learning more accessible and effective, especially for learners seeking flexibility in time, location, and pace.

Technological tools such as mobile applications, online courses, interactive software, and virtual learning environments support learners in setting their own goals, choosing suitable learning materials, and monitoring their progress. Benson (2011) emphasizes that these tools empower learners to take responsibility for their own learning, which is a core principle of autonomy. Moreover, many platforms are designed to provide instant feedback, adaptive learning paths, and data tracking, all of which enhance the learning experience and help users identify areas of strength and weakness (Reinders & White, 2016).

In the context of language education, self-learning through technology allows students to focus on the specific language skills they need to improve—be it vocabulary, grammar, listening, speaking, reading, or writing. Multimedia resources such as videos, audio recordings, and interactive quizzes offer learners multiple modes of input and practice, promoting deeper understanding and retention (Godwin-Jones, 2018).

Additionally, the gamification elements found in many language learning apps—such as Duolingo, Quizlet, or LingQ—serve to increase learner motivation. These features, including badges, levels, progress tracking, and competitive elements, encourage consistent engagement and promote a habit of daily practice (Munday, 2016). Such environments make self-learning not only more effective but also more enjoyable and sustainable over time.

Furthermore, technology-supported self-learning is particularly relevant in contexts where access to formal instruction is limited. It offers an inclusive solution for learners in remote or under-resourced areas, providing them with quality language learning opportunities at little or no cost.

In conclusion, technology has revolutionized self-learning by offering flexible, accessible, and interactive solutions that cater to individual learner needs. This advancement supports the development of learner autonomy, fosters motivation, and enables continuous language improvement beyond the traditional classroom setting.

2.3. Mobile-Assisted Language Learning (MALL)

2.3.1. Definition and Advantages of MALL

Mobile-Assisted Language Learning (MALL) refers to the use of mobile devices such as smartphones, tablets, and other portable digital tools to support and enhance the process of language learning. As a subfield of technology-enhanced language learning (TELL), MALL emphasizes flexibility, mobility, and learner-centered instruction, allowing users to engage with language content at any time and in any location (Kukulska-Hulme & Shield, 2008). The integration of mobile technology into language learning practices has significantly altered the landscape of self-directed learning and has been increasingly embraced in both formal and informal educational settings.

One of the primary advantages of MALL is its ability to provide ubiquitous learning opportunities. Unlike traditional classroom settings, mobile devices offer learners the chance to study in diverse environments—during commutes, in waiting areas, or at home—thus maximizing language exposure and practice time (Traxler, 2007). This increased accessibility fosters greater autonomy and helps learners incorporate language learning into their daily routines.

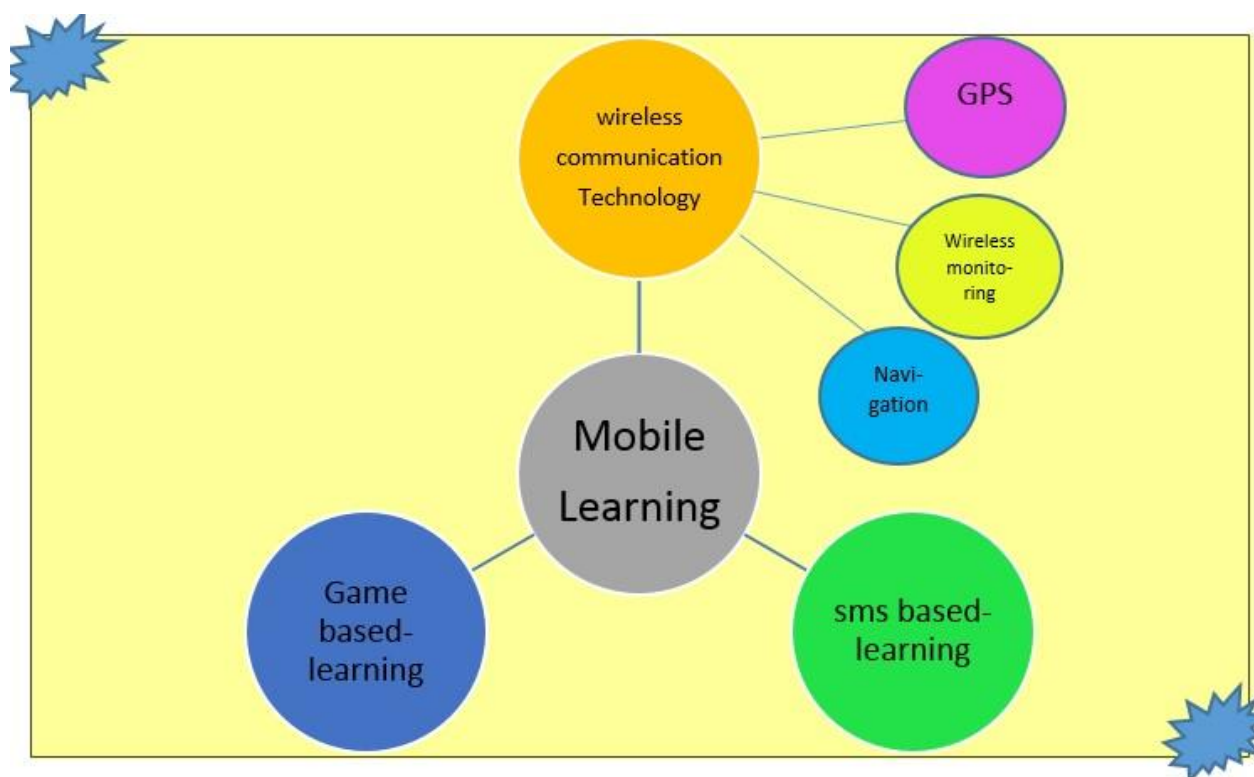
Moreover, MALL promotes individualized learning experiences. Mobile apps often include adaptive features that adjust to the learner's level and progress, delivering personalized content that meets specific learning goals (Burston, 2014). These applications also support a range of language skills, including vocabulary acquisition, grammar practice, listening comprehension, and pronunciation through multimedia content and interactive formats.

Another notable advantage of MALL is its capacity to enhance learner motivation and engagement through gamification and real-time feedback. Many language learning apps, such as Duolingo or Memrise, employ game-like elements such as point systems, achievements, and leaderboards, which make learning more enjoyable and stimulate regular practice (Kim & Kwon, 2012). The immediacy of feedback available in these applications also helps learners correct errors and reinforce correct usage instantly, which is vital for effective language acquisition.

Additionally, mobile technologies facilitate social interaction and collaborative learning. Learners can connect with peers or language communities through messaging apps, forums, or language exchange platforms, creating opportunities for authentic communication and cultural exchange (Viberg & Grönlund, 2013).

This social dimension adds a valuable communicative element to self-study and enhances learners' confidence in using the language in real-life situations.

In summary, MALL represents a significant advancement in the domain of language education. Its portability, adaptability, interactivity, and potential for personalization make it a powerful tool for supporting language learners, particularly in self-directed and informal contexts.



2.3.2. MALL in the Vietnamese Context

In recent years, Mobile-Assisted Language Learning (MALL) has gained growing attention and application in Vietnam, particularly in the context of English language education. As mobile device ownership continues to rise among Vietnamese students, the use of smartphones and tablets for language learning has become increasingly common, especially among university learners who seek flexible, accessible, and affordable tools to improve their English proficiency (Nguyen & Habók, 2021). This trend is aligned with the broader national focus on integrating technology into education, as outlined in Vietnam's educational innovation policies.

Vietnamese learners often face challenges such as limited classroom time, large class sizes, and uneven access to qualified English teachers, especially in rural

areas. In this context, MALL offers a viable supplementary solution by allowing students to practice language skills outside the classroom environment. Mobile applications such as Duolingo, Elsa Speak, and Hello English are widely used by Vietnamese learners for vocabulary building, grammar review, pronunciation practice, and listening comprehension (Le & Dang, 2022).

Research on Vietnamese learners' attitudes toward MALL suggests generally positive perceptions. According to Pham and Ho (2020), students appreciate the convenience and interactivity of mobile apps, especially those with gamified features that increase motivation and reduce learning anxiety. These tools empower students to take control of their learning and make language practice a part of their daily habits.

However, the implementation of MALL in Vietnam is not without its challenges. Issues such as inconsistent internet connectivity, limited digital literacy among some students and teachers, and the lack of localized content in mobile applications can hinder the effectiveness of MALL (Nguyen & Pham, 2020). Moreover, while students may use mobile apps informally, formal integration of MALL into university curricula remains limited due to insufficient training and support for educators.

Despite these obstacles, the future of MALL in Vietnam appears promising. As mobile technology becomes more affordable and accessible, and as the Ministry of Education and Training continues to promote digital transformation in education, MALL is expected to play a more prominent role in supporting English language learning across the country.

In conclusion, MALL presents both opportunities and challenges within the Vietnamese context. Its growing adoption among students indicates strong potential for enhancing English language learning, particularly when supported by appropriate infrastructure, teacher training, and contextually relevant content.

2.4. Overview of Duolingo

2.4.1. Features and Functionality

Duolingo, one of the most widely used language learning applications globally, is designed to support self-directed learning through a combination of gamified features, structured lessons, and user-friendly functionality. The platform utilizes principles of mobile-assisted language learning (MALL) and computer-assisted

language learning (CALL) to enhance user engagement and promote consistent language practice. Its key features and functionality contribute significantly to its popularity among learners of various ages and proficiency levels, including Vietnamese university students.

One of the core features of Duolingo is its **gamification system**, which includes experience points (XP), levels, streaks, hearts, and leaderboards. These elements are strategically implemented to enhance motivation and promote regular engagement (Munday, 2016). Learners earn XP through completing lessons, and maintaining a daily learning streak encourages the development of consistent study habits. The use of hearts, which are lost upon answering incorrectly, adds a challenge that incentivizes accuracy and focus.

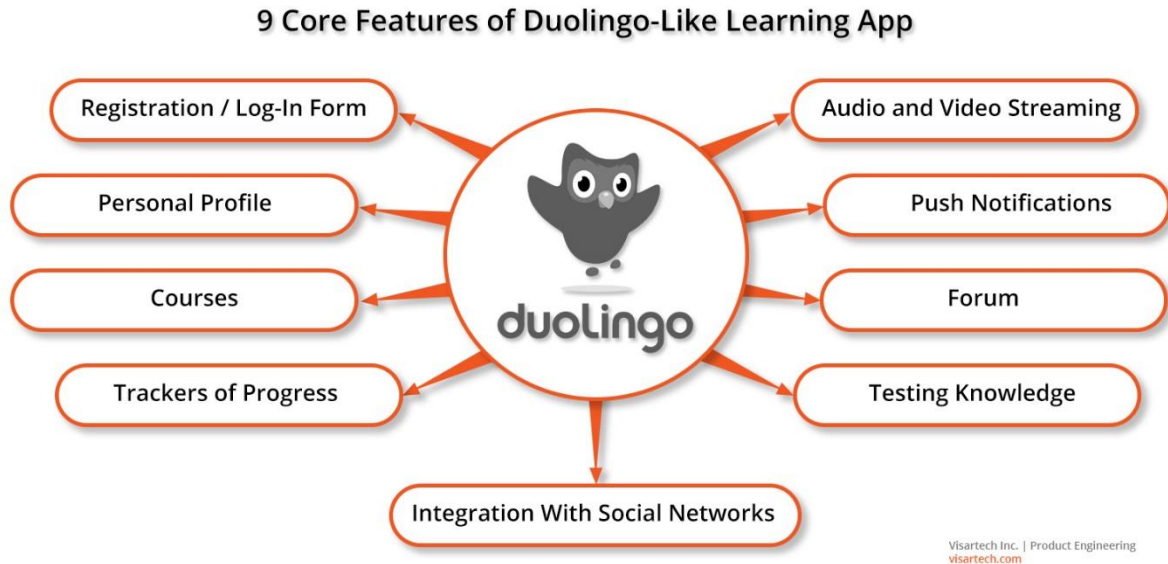
Another important functionality is **adaptive learning**, which allows the app to personalize lesson difficulty based on the learner's performance. As noted by Loewen et al. (2020), this feature helps ensure that learners are exposed to material appropriate to their current level, reducing frustration and promoting optimal learning outcomes. Duolingo's lessons are organized into skill trees, guiding users through progressively more complex vocabulary, grammar, and sentence structures.

Duolingo also incorporates **multimodal input and interaction**, including text, audio, images, and speech recognition. These modes support various learning styles and reinforce language skills across reading, writing, listening, and speaking domains (Godwin-Jones, 2011). For example, speaking exercises utilize speech recognition to provide immediate feedback on pronunciation, while listening tasks enhance auditory comprehension through native speaker recordings.

Additionally, the platform's **accessibility and convenience** are key to its effectiveness in self-study. Duolingo is available as a free app on multiple platforms (iOS, Android, web), with offline functionality available for premium users. This allows learners to practice anytime and anywhere, aligning with the principles of ubiquitous learning.

Moreover, Duolingo offers **progress tracking** and performance analytics. Learners can view their progress over time, revisit previously learned skills, and receive reminders to maintain consistency. These features foster self-monitoring and metacognitive awareness—important aspects of autonomous learning (Benson, 2011).

In summary, Duolingo's combination of gamification, personalization, multimodal input, and mobile accessibility makes it a powerful tool for language learners. Its features are particularly well-suited for students in contexts like Vietnam, where mobile learning can supplement formal instruction and support individual learning needs.



2.4.2. Duolingo as a Self-Study Tool

Duolingo has emerged as one of the most prominent mobile applications for independent language learning. Its intuitive design, user-friendly interface, and motivational elements make it a highly effective tool for self-study. In recent years, it has been widely adopted by learners who seek flexible and autonomous ways to improve their language proficiency, particularly in contexts where traditional classroom instruction is limited or insufficient.

As a self-study tool, Duolingo enables learners to set their own pace, select specific learning goals, and tailor their study routines according to individual schedules. This flexibility aligns with the principles of learner autonomy, which emphasize the importance of self-direction, goal-setting, and reflective learning (Benson, 2011). The app's short, manageable lessons are ideal for microlearning—a strategy well-suited for busy learners who benefit from frequent, short periods of study (Burston, 2014).

Duolingo supports self-study through its structured content progression, which is organized into a skill tree that moves from basic to more complex language structures. Each lesson reinforces a specific language point and uses spaced repetition to aid retention. This pedagogical approach helps learners develop a strong foundation while also revisiting previous content to strengthen long-term memory (Loewen et al., 2020).

Another key feature that supports self-study is Duolingo's immediate feedback mechanism. When users make mistakes, the app provides corrections and brief explanations, allowing learners to identify and learn from errors in real time. This instant feedback is crucial for effective self-learning, especially in the absence of a teacher (Godwin-Jones, 2011).

Furthermore, Duolingo includes personalized review features, such as the "practice" button and timed quizzes, which help learners target weaker areas. The progress tracking and performance summaries enable users to monitor their development and stay motivated, fostering a sense of ownership and responsibility for their learning journey (Munday, 2016).

In the Vietnamese context, where many students face challenges in accessing quality language instruction, Duolingo has proven particularly useful. Studies have indicated that Vietnamese university students find Duolingo helpful for vocabulary acquisition, grammar practice, and pronunciation improvement in a low-pressure, engaging environment (Le & Dang, 2022). Its free access and mobile compatibility make it especially suitable for learners from diverse socio-economic backgrounds.

In conclusion, Duolingo offers a comprehensive set of tools and features that facilitate effective self-study. Its adaptive learning design, instant feedback, and motivational elements empower learners to take control of their language learning process, making it a valuable supplement or alternative to formal instruction.



2.5. Empirical Studies on Duolingo's Effectiveness

2.5.1. Academic Performance and Language Skills

The integration of technology into language education has prompted researchers to explore its influence on students' academic performance and language skill development. Among various digital tools, language learning applications like Duolingo have been widely studied for their potential to support improvements in core English language skills, including vocabulary, grammar, listening, reading, writing, and speaking. These improvements are closely tied to learners' overall academic performance, especially in contexts where English proficiency is essential for academic success.

Studies have shown that technology-supported language learning, particularly through mobile applications, can lead to measurable gains in academic achievement. According to Loewen et al. (2020), learners using Duolingo demonstrated statistically significant improvements in receptive language skills such as vocabulary and grammar. The app's structured lessons, repetitive practice, and immediate corrective feedback contribute to more effective retention and internalization of language rules, which in turn positively affect performance in academic English tasks.

Moreover, the interactive and multimodal nature of Duolingo enhances engagement and supports the development of multiple language skills simultaneously. Listening exercises, for instance, improve learners' ability to comprehend spoken English, while pronunciation tasks offer opportunities for productive oral practice. According to Godwin-Jones (2011), such multimodal input is especially beneficial in reinforcing language acquisition, as it mirrors authentic communicative environments.

In the Vietnamese context, language proficiency is a key factor in students' academic success, particularly at the tertiary level where English is often used in reading academic texts, writing assignments, and accessing international resources. Nguyen and Habók (2021) found that Vietnamese university students who regularly used mobile learning apps reported noticeable improvements in language skills, which correlated with higher performance in English language coursework.

Furthermore, the self-paced nature of Duolingo enables learners to revisit and reinforce specific skills according to their needs, which is particularly useful for exam preparation. This kind of personalized learning supports better academic outcomes by allowing students to focus on their weaknesses and manage their study time effectively (Benson, 2011).

While the impact of such tools varies depending on learner motivation and consistency, existing research indicates that the use of mobile applications like Duolingo can be an effective complement to formal instruction. It enhances not only linguistic competence but also academic performance, especially when used regularly and in combination with other learning strategies.

2.5.2. Student Motivation and Engagement

Student motivation and engagement are crucial factors influencing the success of language learning, particularly in self-directed and technology-supported environments. With the rise of mobile-assisted language learning (MALL), tools such as Duolingo have been widely adopted not only for their educational value but also for their ability to foster learner motivation and maintain engagement through interactive and gamified elements.

Duolingo incorporates various motivational strategies to sustain learner interest, such as daily streaks, experience points (XP), leaderboards, badges, and level progression. These gamified features promote intrinsic and extrinsic motivation by

transforming learning into an enjoyable and rewarding experience (Munday, 2016). According to Deci and Ryan's (2000) Self-Determination Theory, motivation is enhanced when learners experience autonomy, competence, and relatedness. Duolingo supports these needs by allowing learners to choose their learning pace (autonomy), providing feedback and progress indicators (competence), and enabling social comparison through leaderboards (relatedness).

Research shows that such features can significantly increase user retention and time-on-task. Vesselinov and Grego (2012) found that learners who used Duolingo regularly reported higher satisfaction and were more likely to continue using the app compared to those using traditional learning methods. This sustained engagement contributes to consistent practice, which is vital in language acquisition.

In the Vietnamese context, students often face academic pressure, large class sizes, and limited interaction time in traditional classrooms, which can negatively affect motivation. Mobile applications like Duolingo offer an alternative avenue for practice in a low-stress and personalized environment. Pham and Ho (2020) reported that Vietnamese university students appreciated Duolingo's game-like format and accessibility, which made learning more enjoyable and helped reduce language anxiety. The app's visual cues, sound effects, and rewards system made learners feel more involved in their own progress.

Additionally, Duolingo's push notifications and reminders play a role in encouraging habit formation, which is a key factor in sustaining long-term engagement. These subtle prompts help integrate learning into daily routines, leading to improved self-discipline and time management—skills that contribute not only to language learning but also to broader academic success (Benson, 2011).

In conclusion, Duolingo's design and functionality actively support student motivation and engagement by making language learning accessible, interactive, and enjoyable. These elements are particularly beneficial in self-study contexts, where sustained learner involvement is essential for achieving meaningful language proficiency.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. The study

3.1.1. The participants

This study was conducted with the participation of thirty (30) junior college students majoring in English at Haiphong University of Management and Technology. The participants displayed varying levels of English proficiency, reflecting the diversity in learning habits and attitudes among the cohort. While a portion of the students demonstrated strong foundational knowledge and familiarity with the language, others struggled due to a lack of focus and limited effort invested in their studies. Some students openly admitted that they lacked clear motivation or personal goals for advancing their English proficiency, which contributed to a sense of stagnation. Conversely, more proficient learners expressed feelings of boredom and disengagement, as they found the repetition of basic content unchallenging. This overall lack of enthusiasm can be attributed to multiple factors, including the repetitive nature of classroom instruction, limited personalized learning paths, and insufficient encouragement for self-directed learning. Consequently, these challenges have impacted students' mental readiness and long-term commitment to studying English, highlighting the need for more engaging and adaptive learning tools such as Duolingo.

3.1.2. Data collection and analysis

A mixed-methods research approach was adopted to effectively carry out this study, combining both quantitative and qualitative methodologies. The quantitative method enabled the researcher to collect numerical data and analyze patterns to justify the research problem through empirical evidence. Meanwhile, the qualitative method provided valuable insights into how students' English learning was influenced by their motivation levels.

To serve these purposes, the primary research instrument was a survey questionnaire designed to assess junior students' motivation and identify factors that could support their learning progress. The questionnaire consisted of seven yes-or-no statements related to students' experiences with the Duolingo application, focusing on how the app influenced their motivation and engagement with English learning.

In addition to the survey, classroom observation was conducted to track students' vocabulary acquisition progress. Observation notes were reviewed and organized into tables to visually represent student development. A checklist adapted from the course curriculum was employed to summarize and present the findings. Over a period of seven consecutive weeks, the teacher observed each student's level of participation in classroom activities and their ability to recall vocabulary.

Student participation was categorized into three levels based on the number of students actively raising their hands or joining vocabulary games: "high" (18–22 students), "moderate" (13–17 students), and "low" (below 13 students). Similarly, vocabulary recall was measured by counting the number of students who gave correct answers, categorized into four levels: "very well" (18–22 students), "quite well" (14–17 students), "quite badly" (10–13 students), and "very badly" (below 10 students). These systematic observations offered further evidence of the app's impact on student engagement and learning outcomes.

	5 (SA)	4 (A)	3 (N)	2 (DA)	1 (SD)
Independent Learning Ability					
1. Actively fulfill and respond to teachers' requests in class					
2. Actively discuss and debate with peers during group work					
3. Actively participate in classroom activities					
4. Proactively plan for self-study sessions					
5. Develop self-confidence, autonomy, and the habit of solving problems independently					
Interest and Desire for Exploration in Learning					
6. Create initial interest in learning					
7. Encourage learners to make efforts in their studies					
8. Increase the amount of time spent learning English					
9. Conduct self-research and deepen knowledge of English					
10. Frequently share learned content with					

friends and teachers					
Learning Effectiveness					
11. Improve the effectiveness of the learning process					
12. Enhance the ability to acquire knowledge					
13. Persevere through difficulties in learning					
14. Adapt quickly to changes in content and teaching methods					
15. Apply acquired knowledge in real-life situations					

The classroom observation form was designed with the main content focusing on students' interest and retention after class.

THE OBSERVATION SHEET

Engagement Level	Week 1	Week 2	Week 3	Week 4	Week 5
High	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moderate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Knowledge Retention Level	Week 1	Week 2	Week 3	Week 4	Week 5
Good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Average	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The interview consisted of three open-ended questions designed to provide qualitative data for the study. The researcher focused on three main areas: independent learning ability, interest and motivation in learning, and overall learning effectiveness. The questions were as follows:

- Do you feel that you have become more proactive and in control of your learning process while using Duolingo?
- Have you increased the amount of time you spend learning English since using Duolingo?
- Do you find your English learning more effective when using Duolingo? Why or why not?

These questions aimed to explore students' perceptions and personal experiences with the Duolingo application, offering insights that support the quantitative data collected through surveys and classroom observations.

3.2. The collected projects

The research was conducted over a period of 15 weeks. The research procedure was organized as follows:

Week	Activity
Week 1	Designing the survey questionnaire, classroom observation sheet, and interview questions
Weeks 2–10	Implementing the use of the Duolingo application
Weeks 8–10	Conducting the survey and analyzing the collected data
Week 10	Conducting student interviews
Weeks 5–10	Observing classroom activities
Weeks 11–15	Writing the research report

3.3. Instruments for collecting data

The data of the study were collected from two sources:

- Survey questionnaire of self-studying factors.
- Observing classroom activities with observation sheet

CHAPTER IV: FINDINGS AND DISCUSSION

4.1. Findings from the survey questionnaire

The preliminary survey results indicate that students hold a generally positive attitude toward the use of Duolingo in English language classes. Data from the questionnaires reveal that students actively participate in and respond to teachers' instructions during classroom activities. This finding is further supported by classroom observation, which showed an increasing trend in student engagement and interaction over time. However, the data also indicate that not all students perceived themselves as actively engaging in discussions or collaborating with peers during group work ($M = 3.30$), and notably, there was considerable variation in responses ($SD = 1.022$).

A majority of students reported that the integration of technology, such as Duolingo, enhanced their confidence, autonomy, and problem-solving habits ($M = 4.27$; $SD = 5.21$), with a high level of agreement among respondents. Nonetheless, when examining the impact of Duolingo on learner autonomy, it is significant to note that students did not consistently perceive themselves as proactive in planning their self-study sessions. This aspect demonstrated considerable individual differences ($M = 3.23$; $SD = 0.93$).

These findings align with previous research that highlights both the potential of mobile-assisted language learning tools to foster learner autonomy and the individual differences that affect their efficacy (Godwin-Jones, 2011; Kukulska-Hulme & Shield, 2008).

Table 1: Duolingo and proactive-learning

	N	Minimum	Maximum	Mean	Std. Deviation
Q1	30	3	5	3.93	0.640
Q2	30	1	5	3.30	1.022
Q3	30	3	5	3.87	0.730
Q4	30	1	5	3.23	0.935
Q5	30	3	5	4.27	0.521

The quantitative data indicate that a majority of surveyed students acknowledged that the application of Duolingo enhanced their autonomy in learning and sparked initial interest in engaging with their studies ($M = 4.23$; $SD = 0.77$). Students strongly agreed that they had developed a habit of sharing lesson content with peers and instructors, suggesting a notable shift in learner behavior. However, it is noteworthy that students expressed varied opinions regarding whether the use of Duolingo motivated them to put more effort into their studies ($M = 3.47$; $SD = 1.04$).

In follow-up interviews, two out of five selected participants reported an increase in their English study time, attributing their improved engagement to the interactive and enjoyable nature of Duolingo. Nonetheless, not all students felt that they had exerted greater effort in learning, emphasizing that personal motivation played a more significant role than technological support. Interestingly, one student even remarked that technology could reduce students' creativity.

Furthermore, while a considerable number of students claimed that Duolingo had improved their ability to conduct in-depth research and gain deeper knowledge ($M = 3.23$), the responses lacked strong consensus ($SD = 0.95$). These findings are consistent with existing literature that suggests mobile-assisted language learning tools may foster autonomy and engagement, but their effectiveness can vary greatly depending on individual learner characteristics (Stockwell, 2010; Wang & Smith, 2013).

Table 2: Duolingo and interest in learning

	N	Minimum	Maximum	Mean	Std. Deviation
Q6	30	3	5	4.23	0.774
Q7	30	1	5	3.47	1.042
Q8	30	3	5	4.33	0.606
Q9	30	2	5	3.67	0.959
Q10	30	2	5	4.07	0.785

Regarding students' learning effectiveness, the findings indicate that most respondents agreed Duolingo helped enhance their academic performance,

improved their comprehension of knowledge, and supported their ability to apply learned content to real-life contexts. However, when asked about their adaptability to changes in course content or teaching methods introduced by instructors, students did not agree that Duolingo contributed to this adaptability.

Notably, there was a significant variation in student perspectives regarding their perseverance in overcoming academic challenges, as reflected in the high standard deviation ($SD = 1.10$). This suggests that while Duolingo may support general learning efficiency, its impact on students' resilience and adaptability remains inconclusive and highly dependent on individual learner characteristics. These observations align with previous research emphasizing that while mobile learning tools can promote knowledge acquisition and application, their influence on adaptive and metacognitive skills is less consistent (Burston, 2015; Viberg & Grönlund, 2013).

Table 3: Duolingo and learning effectiveness

	N	Minimum	Maximum	Mean	Std. Deviation
Q11	30	2	5	3.97	0.809
Q12	30	4	5	4.30	0.466
Q13	30	1	5	3.60	1.102
Q14	30	1	5	2.90	0.803
Q15	30	2	5	3.77	0.898

4.2. Findings from the observation sheet

Classroom survey data demonstrate a progressive increase in student engagement when using Duolingo, with learners showing higher levels of interest over time. Notably, in Week 5, 67% of students reported a high level of attention during English lessons, compared to only 30% in Week 1. This steady growth suggests that consistent exposure to Duolingo contributed positively to learner motivation and attentiveness.

Table 4. Classroom Survey Results on Student Engagement During Lessons

Level of Interest	Week 1	Week 2	Week 3	Week 4	Week 5
High	30%	40%	50%	60%	67%
Medium	57%	43%	40%	30%	30%
Low	13%	17%	10%	10%	3%
Total	100%	100%	100%	100%	100%

In terms of memory retention, although the proportion of students with strong recall abilities improved over time, the increase was moderate. The most substantial improvement was observed in the reduction of students with poor memory retention—from 27% in Week 1 to 0% by Week 4 and Week 5. Meanwhile, the percentage of students with moderate memory retention fluctuated between 45% and 60%, indicating a relatively stable trend. The improvement in memory performance may reflect the repetitive and gamified nature of Duolingo, which has been noted to enhance language acquisition through continuous exposure and practice (de la Fuente, 2021).

Table 5. Classroom Survey Results on Students' Memory Retention

Level of Retention	Week 1	Week 2	Week 3	Week 4	Week 5
Good	30%	30%	37%	40%	47%
Moderate	43%	53%	53%	60%	53%
Poor	27%	17%	10%	0%	0%
Total	100%	100%	100%	100%	100%

These findings suggest that Duolingo may play a supportive role in enhancing learners' attentiveness and memory over time, although individual differences and instructional context remain important factors to consider.

4.3. Discussion

The aim of this study was to investigate the application of Duolingo as a mobile-assisted language learning tool to promote self-study and enhance learner engagement among first-year English majors at Haiphong University of Management and Technology. The findings suggest that students generally held a positive attitude toward the use of Duolingo and perceived it as a valuable resource for improving both classroom participation and independent study.

One of the most notable outcomes was the steady increase in student engagement throughout the course, as reflected in both survey results and classroom observations. The percentage of students reporting high levels of attentiveness rose from 30% in Week 1 to 67% in Week 5, indicating that consistent exposure to Duolingo contributed to heightened interest in English lessons. This aligns with prior research (e.g., Kukulska-Hulme & Shield, 2008; Godwin-Jones, 2011), which suggests that mobile learning applications can enhance motivation and focus through gamified and interactive content.

Survey data also showed that students recognized improvements in their autonomy, confidence, and problem-solving skills, with relatively high mean scores (e.g., $M = 4.27$). This supports the idea that mobile-assisted language learning tools can encourage learners to take more responsibility for their learning. However, this positive perception was not consistent across all dimensions of autonomy. For example, students scored lower when asked whether they proactively planned their self-study sessions ($M = 3.23$), and responses varied significantly ($SD = 0.93$). These findings suggest that while Duolingo may foster engagement and confidence, it may not sufficiently promote higher-order self-regulatory behaviors without additional guidance. This echoes concerns raised in previous studies (e.g., Stockwell, 2010; Wang & Smith, 2013) that learners may not automatically develop strategic learning habits simply by using mobile applications.

Another important finding was the mixed perception of how Duolingo influenced students' efforts and creativity. Although many students reported increased study time and a habit of sharing lesson content with peers, some

respondents noted that their motivation was more dependent on internal factors than on the use of technology. One student even expressed the view that relying too much on apps could reduce creativity. These individual differences highlight that while Duolingo may serve as a helpful tool for many learners, its impact is not uniform and may depend heavily on personal learning styles and levels of intrinsic motivation.

In terms of learning effectiveness, most students believed that Duolingo helped them retain vocabulary and apply knowledge to real-life contexts, which is supported by the moderate increase in memory retention rates over time. However, students were less certain about whether Duolingo helped them adapt to new teaching methods or persevere through academic challenges. The high variation in responses to these questions suggests that the app's benefits may be limited to foundational learning rather than fostering resilience or adaptability—an observation consistent with Burston (2015) and Viberg & Grönlund (2013), who noted the limitations of mobile learning tools in supporting more complex cognitive and metacognitive skills.

These findings have important implications for language educators. While Duolingo can effectively supplement classroom instruction and spark learner interest, it may be most beneficial when integrated into a structured learning environment that includes teacher support, collaborative tasks, and strategic guidance. Encouraging students to reflect on their study habits and set clear goals may further enhance the development of learner autonomy.

Despite the valuable insights gained, several limitations should be acknowledged. The sample size was limited to 30 students from a single university, which may reduce the generalizability of the findings. Additionally, the relatively short observation period may not fully capture the long-term effects of using Duolingo on academic performance and self-regulation. Future studies with larger, more diverse samples and extended time frames are recommended to explore these aspects in greater depth.

CHAPTER V: CONCLUSION

5.1. Recapitulation

This study explored how Duolingo can support self-study among first-year English majors at Haiphong University of Management and Technology. The research focused on three main areas: students' attitudes toward using Duolingo, its impact on their learner autonomy and motivation, and its overall effectiveness in improving learning outcomes.

Using a mixed-methods approach, both quantitative data (through surveys) and qualitative data (from classroom observations and student interviews) were collected. The results showed that most students had a positive attitude toward Duolingo. They felt more confident and independent when using the app, and many believed it helped them stay engaged in their English learning.

The survey data also suggested that Duolingo encouraged students to participate more actively in class and to develop better learning habits. However, not all students experienced the same level of benefit—some reported that they didn't feel more motivated or proactive, highlighting that personal factors still played a big role in how effective the app was for them.

Classroom observations showed a steady increase in student attention and memory retention over five weeks. Students were more focused and remembered content better as they continued using Duolingo. This suggests that consistent use of the app can have a positive effect, though its impact depends on how each student engages with the tool.

In short, the findings suggest that Duolingo can be a helpful tool for supporting learner autonomy and motivation in English learning, but its success depends largely on individual differences in learning style, motivation, and classroom support.

5.2. Implications

The findings of this study carry several implications for both English language teaching and the integration of educational technology, particularly mobile-assisted language learning (MALL) tools like Duolingo.

Firstly, the positive student attitudes toward Duolingo suggest that incorporating technology into the classroom can help create a more engaging and interactive learning environment. Teachers may benefit from integrating Duolingo or similar applications into their lesson plans, not only to support language acquisition but also to promote learner autonomy and motivation. As students become more comfortable using technology for learning, they may also be more likely to continue practicing outside of class, which can enhance their overall language development.

Secondly, although the majority of students reported increased motivation and independence, the variation in responses highlights the need for differentiated instruction. Teachers should be aware that while some students thrive with self-directed learning tools, others may need more structured guidance and support. Providing optional activities, flexible timelines, or blended learning strategies could help address these differences and ensure all learners benefit equally.

Moreover, the improvement in classroom engagement and memory retention observed over time suggests that consistent use of MALL tools can lead to better learning outcomes. This reinforces the idea that mobile applications, when used regularly and thoughtfully, can complement traditional teaching methods and help sustain student interest over the course of a semester.

Finally, the study also points to the importance of student motivation as a key factor in the success of self-study tools. While technology can enhance learning, it is not a substitute for intrinsic motivation or teacher support. Educators should therefore focus not only on introducing new tools but also on fostering a learning culture that encourages curiosity, persistence, and active participation.

In summary, this study highlights the potential of Duolingo to enhance self-study among English majors, but it also emphasizes the importance of context-sensitive implementation and the ongoing role of teachers in guiding and supporting students' learning journeys.

5.3. Limitations

Despite the valuable insights yielded by this study, several limitations must be acknowledged. First, the sample was limited to thirty junior English-major students at Hai Phong University of Management and Technology, which constrains the generalizability of the findings to other cohorts, institutions, or age groups. Second,

the study relied heavily on self-reported data (survey questionnaires and interviews), which may be subject to social desirability bias or inaccuracies in participants' recollections of their study habits and attitudes. Third, the classroom observations spanned only five weeks of Duolingo use; a longer intervention period might reveal different trajectories of engagement, retention, and autonomy development. Fourth, without a control group using alternative learning tools or no app at all, it is difficult to isolate the specific effects of Duolingo from other external factors (e.g., concurrent coursework, peer influence, or instructor interventions). Finally, the quantitative instruments (yes/no and Likert-scale items) offered breadth but limited depth; more nuanced measures of metacognitive strategy use or language proficiency gains (such as pre- and post-tests) were not incorporated, leaving the magnitude of actual gains in English skills only partially substantiated.

5.4. Suggestions for Further Study

Building on the present research, future studies could adopt a larger and more diverse sample—across multiple universities, academic years, or proficiency levels—to enhance external validity and explore how factors such as prior language experience or technological literacy moderate Duolingo's impact. Incorporating a longitudinal design with follow-up assessments (e.g., at three- and six-month intervals) would allow researchers to examine the durability of gains in autonomy, motivation, and retention over time. Implementing a quasi-experimental or true experimental framework with control groups using different mobile-assisted tools (for example, Memrise or Babbel) or traditional pen-and-paper methods would help to clarify Duolingo's unique contributions.

Moreover, future investigations should integrate more comprehensive measures of language proficiency—such as standardized tests, portfolio assessments, or examiner-rated speaking tasks—to quantify skill improvements beyond learner perceptions. Qualitative methods (e.g., focus groups, learning diaries, cognitive-think-aloud protocols) could provide deeper insights into how students navigate the app's features, negotiate challenges, and transfer digital practice to real-world communication. Finally, exploring the role of instructor scaffolding—such as guided goal-setting, reflective debriefings, or peer-supported study groups—would illuminate best practices for embedding Duolingo (and similar MALL tools) within

a blended-learning curriculum, thereby maximizing both technological affordances and pedagogical support

APPENDICES

Appendix A: Survey Questionnaire for Students

Title: The Use of Duolingo in English Self-Study

Target Group: First-Year English Majors at Haiphong University of Management and Technology

1. How frequently do you use Duolingo to support your English learning?
 - Daily
 - 3–4 times a week
 - 1–2 times a week
 - Rarely
 - Never
2. How long do you spend on Duolingo each session?
 - Less than 10 minutes
 - 10–20 minutes
 - 20–30 minutes
 - More than 30 minutes
3. Which language skills do you feel Duolingo helps you improve the most?
(Select all that apply)
 - Vocabulary
 - Grammar
 - Listening
 - Reading
 - Speaking

4. Do you feel Duolingo encourages you to study English more actively outside the classroom?
- Strongly agree
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree
5. What motivates you the most to use Duolingo?
- Gamified learning (XP, streaks, badges)
 - Easy-to-use interface
 - Variety of exercises
 - Progress tracking
 - Teacher recommendation
6. Rate the following features of Duolingo on a scale from 1 (Very Poor) to 5 (Excellent):
- Lesson content
 - Motivation system (streaks, XP)
 - Pronunciation support
 - Translation quality
 - Usability
7. Do you believe that regular use of Duolingo can improve your English self-study habits?
- Yes
 - No

- Not sure

8. Additional comments or suggestions:

Appendix B: Sample Interview Questions for Lecturers

Title: Teacher Insights on Duolingo Use in English Education

1. Are you familiar with Duolingo as a language learning tool? If yes, how did you come to know it?
2. In your opinion, how effective is Duolingo in supporting students' English self-study?
3. What strengths do you think Duolingo offers compared to traditional methods?
4. Are there any limitations you have observed when students rely on Duolingo?
5. Would you recommend Duolingo to your students? Why or why not?

Appendix C: Duolingo Study Log Sample

Date	Time Spent (minutes)	Skill Practiced	XP Earned	Notes
2025-03-15	20	Vocabulary	30	Focused on adjectives
2025-03-16	15	Grammar	25	Practiced verb tense
2025-03-17	25	Listening	35	Audio was challenging

Appendix D: Summary of Survey Data

Table D1: Frequency of Duolingo Use Among Students

Frequency	Number of Students	Percentage
Daily	12	24%
3–4 times a week	18	36%
1–2 times a week	10	20%

Rarely	7	14%
Never	3	6%

Table D2: Time Spent per Session

Time Spent	Number of Students	Percentage
<10 minutes	8	16%
10–20 minutes	22	44%
20–30 minutes	15	30%
>30 minutes	5	10%

Table D3: Perceived Skill Improvements

Skill	Number of Selections
Vocabulary	38
Grammar	30
Listening	25
Reading	20
Speaking	18

Table D4: Motivation Factors

Motivation Factor	Number of Students
Gamified learning	28
Easy-to-use interface	24
Variety of exercises	20
Progress tracking	16
Teacher recommendation	12

Table D5: Student Satisfaction with Duolingo Features

Feature	Average Rating (1–5)
Lesson content	4.2
Motivation system	4.5
Pronunciation support	3.8
Translation quality	4.0
Usability	4.6

Appendix E: Participant Consent Form

Consent Form for Participation in Academic Research

Research Title: The Application of Duolingo to Promote English Students' Self-Study at Haiphong University of Management and Technology

Purpose: This study explores how Duolingo supports English self-study habits among first-year English majors.

Voluntary Participation: Your participation is voluntary and you may withdraw at any point.

Confidentiality: All collected data will be kept confidential and used solely for academic research.

Consent Statement:

I understand the nature of this research and voluntarily agree to participate.

Name: _____

Signature: _____

Date: _____

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