CÔNG CỤ SỐ VÀ CHIẾN LƯỢC HIỆN ĐẠI: CÁCH MẠNG HÓA VIỆC HỌC TỪ VỰNG CHO SINH VIÊN CHUYÊN NGÀNH TIẾNG ANH TẠI ĐẠI HỌC LẠC HỒNG

Võ Thị Thanh Lan[*], Đỗ Hoàng Quốc Bảo, Trần Ngọc Song Thư
Khoa Ngôn ngữ Anh, Trường Đại học Lạc Hồng, 10 Huỳnh Văn Nghệ, Bửu Long, Biên Hòa, Đồng Nai, Việt Nam
Tác giả liên hệ: *thanhlan@lhu.edu.vn*

TÓM TẮT

Nghiên cứu này khám phá những khó khăn mà sinh viên năm nhất và năm hai chuyên ngành tiếng Anh tại Khoa Ngôn ngữ Anh, Đại học Lạc Hồng, Việt Nam gặp phải trong việc học từ vựng, đồng thời xem xét tiềm năng ứng dụng các công cụ kỹ thuật số vào quá trình học tập. Sử dụng phương pháp nghiên cứu hỗn hợp kết hợp khảo sát và phỏng vấn, nghiên cứu đã thu hút 171 người tham gia. Kết quả cho thấy các rào cản chính trong việc ghi nhớ từ vựng là thiếu cơ hội thực hành và khó khăn trong việc ghi nhớ từ vựng trong thời gian dài. Bên cạnh đó, nghiên cứu nhấn mạnh hiệu quả của các công cụ kỹ thuật số trong việc giải quyết những thách thức này bằng cách cung cấp ngữ cảnh thực tế, tăng cường khả năng ghi nhớ và giúp người học hình dung cũng như tích cực tương tác với các khái niệm từ vựng mới. Mặc dù không tránh khỏi những hạn chế về kích thước mẫu nghiên cứu, nghiên cứu vẫn đóng góp việc giới thiệu các công cụ kỹ thuật số hiện đại kết hợp với phương pháp học tập chủ động có thể đóng vai trò quan trọng trong việc cải thiện khả năng học từ vựng và nâng cao trình độ ngôn ngữ nói chung cho sinh viên năm nhất và năm hai chuyên ngành tiếng Anh.

CUTTING-EDGE DIGITAL TOOLS AND ACTIVE STRATEGIES: REVOLUTIONIZING VOCABULARY ACQUISITION AMONG ENGLISH MAJORS AT LAC HONG UNIVERSITY

Vo Thi Thanh Lan[*], Do Hoang Quoc Bao, Tran Ngoc Song Thu
Faculty of English Language, Lac Hong University, 10 Huynh Van Nghe, Buu Long, Bien Hoa, Vietnam
*Corresponding Author: *thanhlan@lhu.edu.vn*

ABSTRACT

This study explores the challenges first-year and second-year English majors at the Faculty of English Language, Lac Hong University, Vietnam, face in acquiring vocabulary and examines the potential benefits of integrating digital tools into the learning process. Adopting a mixed-method approach that combines surveys and interviews, the research involved 171 participants. The findings highlight key obstacles to vocabulary retention, such as limited opportunities for practical application and difficulties in sustaining long-term memory. Furthermore, the study emphasizes the effectiveness of digital tools in overcoming these challenges by providing real-world context, enhancing memory retention, and enabling learners to visualize and actively engage with new vocabulary concepts. While acknowledging limitations such as the small sample size, the study suggests that modern digital tools, paired with active learning strategies, can significantly enhance vocabulary acquisition and overall language proficiency for first-year and second-year English majors.

Available online at: https://js.lhu.edu.vn/index.php/lachong

1. INTRODUCTION

A strong vocabulary is essential for successful language learning as it enables learners to comprehend, express, and engage effectively in communication (Saksittanupab [1]). Tran [2], using a descriptive analysis approach, highlighted vocabulary's pivotal role in communication, which suggests that even with adequate grammatical knowledge, insufficient vocabulary can severely limit communication. Saksittanupab's study extended this perspective through an experimental study involving 50 EFL learners, proving that spaced repetition techniques significantly enhance vocabulary retention. These insights underline the importance of effective vocabulary learning strategies in second and foreign language contexts.

Obtaining sufficient vocabulary proficiency in both breadth and depth for effective communication and academic success remains a challenge for Vietnamese college students. Pham [3] found that 20 percent of Vietnamese freshmen had a vocabulary of fewer than 1,900 words. Among the total, 63 percent had a vocabulary range of 2,000–2,900 words, which was sufficient for basic communication but inadequate for reading academic texts. Only a few students possessed over 5,000 words, which is considered the minimum threshold for understanding at an advanced level. In another study, Nguyen [4] investigated the challenges students faced in learning English for Specific Purposes (ESP) vocabulary and found that learners encounter challenges in comprehension, retention, and practical usage due to insufficient exposure and limited hands-on experience. The study underscores a general disconnect between theoretical knowledge and real-world application, emphasizing the necessity for more immersive and practical learning experiences, but it lacks supplying specific figures for the imposed issues. These findings highlight the ongoing challenges students face with both vocabulary development and learning strategies, underscoring the importance of integrating technology-assisted vocabulary learning with traditional vocabulary learning to enhance vocabulary retention and improve practical application.

Challenges in vocabulary acquisition are not unique to Vietnam. Susanto [5], through a qualitative case study, explored the difficulties EFL learners in Indonesia face, identifying barriers such as selecting appropriate word meanings, using idiomatic expressions, and applying words in context. These findings align with Rashid et al. [6], who conducted a literature review on vocabulary's role in applied linguistics and concluded that inadequate vocabulary usage undermines both academic performance and communication proficiency. However, many of these studies focus primarily on learners' difficulties without examining the effectiveness of combining digital tools with traditional learning techniques.

Due to the limited effectiveness of traditional vocabulary learning techniques, there has been an increasing emphasis on integrating technology to support vocabulary acquisition. Khoshsima and Khosravi [7] conducted a quasi-experimental study with 60 EFL learners and found that digital tools such as Anki and WhatsApp had a positive impact on vocabulary retention compared to traditional methods. Similarly, Yassin [8] examined the role of YouTube videos in EFL classrooms, demonstrating that they not only enhanced vocabulary comprehension but also fostered cultural awareness, as observed through learner feedback and classroom observations. While these studies highlight the effectiveness of technology in vocabulary learning, they do not provide comparative analyses of different technological approaches or assess the potential benefits of integrating these methods with traditional vocabulary learning strategies. Therefore, further research is needed to explore hybrid approaches that combine technology and conventional methods for optimal vocabulary retention and practical application.

To address gaps in vocabulary learning research, this current study examines how Vietnamese first-year and second-year university students recall and apply vocabulary in alignment with best practices. While research highlights vocabulary as a crucial aspect of language acquisition, few studies reveal certain statistics on the problems faced by Vietnamese learners in acquiring vocabulary and compare digital tools and modern methods with traditional approaches. Additionally, many fail to assess the long-term benefits of these strategies in non-English-speaking contexts. By integrating survey and interview data, this study bridges theory and practice, presenting evidence-based strategies to enhance vocabulary acquisition through technology and contemporary techniques. The obtained results are particularly relevant to learners in Vietnam and similar linguistic environments.

During conducting the research, the following questions were formulated:

1. What challenges do first-year English majors at Lac Hong University face in acquiring and retaining new vocabulary?

2. How can digital tools support vocabulary learning by addressing these challenges?

3. What features of digital tools are most effective in enhancing vocabulary acquisition and application?

2. CONTENT

2.1 Participants

The study sample consisted of 171 English majors from the Faculty of English Language at Lac Hong University, including 91 students in the second semester of their first year and 80 students in the first semester of their second year. Since both groups followed a comparable academic trajectory, they had similar experiences in learning vocabulary. The participants shared the same difficulties, including an overreliance on traditional memorization methods, confusion with technical ESP vocabulary, and challenges in using and recontextualizing vocabulary in everyday life. The only meaningful difference was that second-year students' marginally greater familiarity with digital resources like YouTube and Anki. However, both groups acknowledged

how user-friendly these online tools were for improving retention. Participation in the study was voluntary, with all students providing informed consent. Ethical standards, including confidentiality and transparency, were strictly maintained.

2.2 Data Collection Instruments

This study utilized both quantitative and qualitative methods. The main steps included: conducting interviews with freshman and sophomore English majors at Lac Hong University. Data collection was conducted through questionnaires, and data analysis was through synthesis and comparison. The findings were then examined to draw conclusions and provide recommendations for the educators and learners at the Faculty of English Language.

As Taherdoost [9] explains, mixed-method approaches work well for collecting both qualitative and quantitative data. They combine open-ended questions which exploit detailed perspectives, with closed-ended questions, which provide clear and structured data. This combination helped the study thoroughly address its goals while ensuring reliable and well-rounded results.

The primary data collection instrument was a carefully designed questionnaire consisting of 13 questions. Questionnaires allow researchers to collect data from a large number of participants in a short amount of time, making them highly efficient. They are particularly useful for studies requiring a broad understanding of trends and patterns across large populations (Schoonenboom and Johnson [10]). The use of digital platforms like Google Forms enhances scalability by enabling researchers to reach participants remotely and collect responses securely and quickly. The questionnaire of the current research was divided into three distinct sections to address different aspects of the research topic. The first section, comprising eight questions, focused on the students' vocabulary learning habits, strategies, and challenges. The second section contained two questions that examined the role of technological tools in vocabulary learning. The third section aimed to understand the participants' experiences with learning vocabulary through apps and English videos on YouTube. When organizing the questionnaire into these sections, the researchers guaranteed that the data captured was both focused and comprehensive. To facilitate data collection, the questionnaire was administered using Google Forms to attain quick, secure, and efficient responses. Before its implementation, the questionnaire underwent rigorous pilot testing to ensure clarity and reliability.

In addition to the questionnaire, semi-structured interviews were conducted with 21 participants. This method allowed for a deeper exploration of the students' perspectives as the flexible format of the interviews enabled follow-up questions in an open discussion while maintaining a focus on research objectives (Ruslin, Mashuri and Rasak [11]). The qualitative data obtained through these interviews added richness and depth to the quantitative findings for a full insight of the research questions in educational settings.

2.3 Research Procedures

Within 3 months (from the beginning of September to the end of November, 2024), the research followed a structured and systematic process to certify accuracy and reliability in data collection and analysis.

The first step involved the design of the questionnaire. Questions were meticulously crafted to capture key data points, such as vocabulary learning habits, the use of technological tools, and preferences for traditional versus digital learning methods. To enhance the questionnaire's effectiveness, a pilot test was conducted, and the feedback obtained was used to refine the final version. Once finalized, the questionnaire was distributed to 91 first-year and 80 second-year English majors through Google Forms. Students were given a two-week period to complete the questionnaire so that they had ample time to provide mindful responses.

Simultaneously, semi-structured interviews were conducted with a selected subset of participants. These interviews provided a platform for students to elaborate on their experiences, challenges, and preferences. The one-on-one format allowed researchers to examine more specific topics and to obtain a wider range of perspectives.

Following data collection, the quantitative responses from the questionnaire were analyzed by statistical tools. Measures such as percentages, means, and standard deviations were calculated to identify patterns in students' vocabulary acquisition habits. A Chi-Square test was conducted to assess whether the observed differences in retention levels among the three learning methods were statistically significant. Qualitative data from the interviews were transcribed and thematically analyzed to highlight recurring themes and unique insights.

2.4 Findings and Discussion

2.4.1 Challenges in Vocabulary Learning

Table 1. *Challenges freshmen and sophomores face when learning new vocabulary*

Challenge	Frequency	Percentage
Remembering the spelling	99	57.89%
Understanding the meaning	74	43.27%
Using words in conversation	108	63.16%
Finding time to review	40	23.39%
Others	7	4.09%

The bar graph illustrates the primary challenges faced by first-year and second-year English students in learning new vocabulary, based on responses from 171 participants. The key difficulties identified include remembering spelling, understanding meaning, using vocabulary in communication, and finding time for review.

The most frequently reported challenge was using vocabulary in conversation, with 63.16% of respondents citing difficulty in this area. This highlights a significant gap in opportunities for students to practice speaking and applying new words in real-life contexts. The second major issue was remembering spelling, which affected 57.89% of students, underscoring the need for enhanced memorization techniques. Understanding the meaning of vocabulary followed closely, with 43.27% of students reporting difficulties, suggesting challenges in grasping abstract meanings or contextual usage. Meanwhile, 23.39% of respondents struggled to find time for review, and only 4.09% reported experiencing other challenges.

The results emphasize that to improve vocabulary learning, it is essential to create opportunities for students to practice applying new words in communication, provide effective learning methods such as memorization techniques, contextual learning, and support them in developing a consistent review plan. These findings align with the research by Susanto [5], which pointed out that almost all students face challenges with pronouncing words, writing and spelling them accurately, and using them correctly within grammatical structures.

In conclusion, overcoming vocabulary learning challenges requires a multifaceted approach. By incorporating practical applications, effective memorization tools, and context-based learning strategies, students can significantly enhance their vocabulary acquisition and usage.
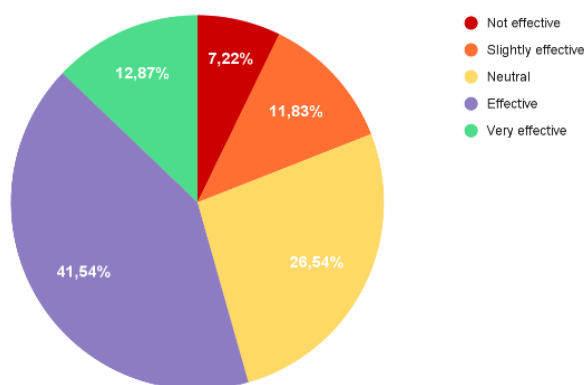
2.4.2 Effectiveness of Vocabulary Apps

Figure 1. *The Effectiveness of Vocabulary Apps from Students' Perspective*

The pie chart presents data on the effectiveness of using vocabulary apps in helping students remember new words, based on responses from 137 participants. The results are divided into five levels of effectiveness: "Not effective", "Somewhat effective", "Neutral", "Effective" and "Very effective".

The majority of respondents (41.54%) rated vocabulary apps as effective while 12.87% found them very effective. This indicates that a significant portion of students benefited from using these tools, likely due to their accessibility and interactive features. At the same time, 26.54% of participants provided neutral responses, which may suggest inconsistent usage or a lack of motivation in self-study. Conversely, 11.83% of

respondents found the apps only slightly effective, and 7.22% regarded them as not effective, which highlighted their overall utility but also pointed to potential limitations for some users.

The effectiveness of vocabulary learning apps has both strengths and weaknesses. On the positive side, the survey results highlight the significant potential of these apps to support students in language learning. For example, Ajisoko [12] looked at the use of the Duolingo app to enhance English vocabulary learning. In this study, 10 students practiced at a "frequent" intensity (20 XP per day) for 30 days, and the results showed that test scores improved significantly before and after using the app. Additionally, learners reported positive experiences, including increased motivation, better retention, and easier application of the material to everyday life. In the same way, Polakova and Klimova [13] conducted a case study of Angličtina Today, a mobile application tailored to the needs of students, in a blended learning context. The findings showed that students who used the application as part of a blended learning format outperformed students who studied face-to-face using a traditional learning method; they showed that improved vocabulary knowledge and high levels of satisfaction with the application due to its ease of use and motivational impact.

However, some students were still dissatisfied with the effectiveness of the applications due to such issues as complex or unfriendly interfaces, limited content, or lack of understanding of how to effectively use the applications. Several factors influence the effectiveness of these applications. For example, Ajisoko [12] valued the importance of frequent use, as students who frequently used the app achieved better results. Furthermore, apps with interactive features, such as allowing users to create personalized lessons, often received higher ratings from learners.

In brief, while vocabulary apps are largely effective, their benefits can be maximized through regular, intentional use and by integrating them with complementary offline learning techniques. This combined approach supports students in building their vocabulary more effectively and applying it in real-world contexts.

2.4.3 Vocabulary Learning Methods

Table 2. *Statistical Analysis of Vocabulary Learning Methods*

Method	Frequency	Percentage
Using vocabulary apps	65	38.01%
Making sentences with new words	73	42.69%
Using flashcards	41	23.98%
Writing words out several times	96	56.14%
Writing in a diary	45	26.32%

Other methods (e.g., Gemini, natural recall, etc.)	12	7.02%

This section discusses the vocabulary learning methods employed by the selected English majors, revealing preferences for both traditional and digital approaches. The chart categorizes these methods including traditional strategies such as writing words out several times, making sentences with new words, using flashcards, and writing in a diary, alongside digital approaches like using vocabulary apps. The analysis shows that traditional methods remain predominant among students.

The most popular method, chosen by 96 students (56.14%), is writing words out several times. This is followed by making sentences with new words, practiced by 73 students (42.69%). Less frequently used methods include writing in a diary, with 45 students (26.32%), and using flashcards, adopted by 41 students (23.98%). Among digital methods, vocabulary apps are utilized by 65 students (38.01%), indicating that while less common than traditional methods, they are gaining acceptance.

Statistical Insights:

- **Mean:** The average number of students across all methods is 55.33, reflecting moderate usage overall.

- **Variance:** The variance of 708.25 highlights considerable variability in the popularity of different methods.

- **Standard Deviation:** A standard deviation of 26.61 suggests noticeable dispersion, with some methods being significantly more favored than others.

Traditional methods dominate due to their perceived effectiveness. Writing words out reinforces neural connections and enhanced retention while making sentences helps students grasp word context and usage for complete comprehension. Despite this, digital tools are increasingly being embraced, with 38.01% of students using vocabulary apps. These tools offer notable advantages such as convenience, accessibility, and interactivity. Research by Klimova and Polalova [14] supports this trend by stating that mobile apps provide benefits like corrective feedback, exam preparation support, and ease of access to arouse students' interest.

The aforementioned data reveal that while traditional methods remain favored, the growing use of digital tools highlights a gradual shift in learning strategies. It echoed the importance of blending conventional and technological approaches for effective vocabulary acquisition.

2.4.4 Comparative Effectiveness of Digital Tools and Traditional Strategies in Vocabulary Retention

The contingency table presents the distribution of vocabulary retention levels across three learning methods: traditional learning, Anki, and YouTube. Vocabulary retention is categorized into three levels: Low Retention (≤30%), Moderate Retention (31%–70%), and High Retention (≥71%). The purpose of this analysis is to evaluate whether digital tools such as Anki and YouTube lead to significantly better vocabulary retention compared to traditional learning methods.

Table 3. *Observed and Expected Frequencies for Retention Level and Study Method*

Retention level	Traditional methods	Anki	YouTube	Total
Low (≤ 30%)	45 (49.5%)	10 (14.3%)	8 (11.8%)	63 (36.8%)
Moderate (31%-70%)	32 (35.2%)	30 (42.9%)	28 (41.2%)	90 (52.6%)
High (≥ 71%)	14 (15.4%)	30 (42.9%)	32 (47.1%)	76 (44.6%)
Total	91 (100%)	70 (100%)	68 (100%)	229 (100%)

- Traditional Method:

Nearly half of the participants (49.5%) using traditional methods fell into the Low Retention category.

Only 15.4% achieved High Retention, indicating that traditional strategies may be less effective for long-term vocabulary acquisition.

- Anki:

A substantial 42.9% of Anki users demonstrated High Retention, a statistically significant improvement over traditional methods.

Only 14.3% of learners using Anki were in the Low Retention category, suggesting that spaced repetition and digital tools enhance retention.

- YouTube:

The highest proportion of participants in the High Retention category (47.1%) used YouTube, demonstrating its effectiveness in vocabulary learning.

Just 11.8% of YouTube users fell into the Low Retention category, reinforcing the benefits of audio-visual learning for language acquisition.

The results confirmed a significant association between learning methods and vocabulary retention (χ^2 = [insert value], $p < 0.05$).

Respondents in the interviews of the current research also shared consistent insights. When asked, "*How do you use digital tools like Anki and YouTube to improve your vocabulary learning?*", the interviewees indicated that using Anki along with watching YouTube greatly enhanced their vocabulary retention more than traditional methods. One student explained, "*Anki allows me to review words every day so I don't forget them while YouTube lets me see how those words are used in real life.*" Another said, "*I first learn new words when I watch YouTube videos, and then I enter them in Anki so that I can remember the words long-term.*" Students overwhelmingly agreed that YouTube made learning more exciting and provided real-world context, while Anki reinforced their memory through repetition and practice.

As one student put it, *"Before, I would memorize words but would forget them very quickly. Now, I watch a YouTube video to understand the word, and then each day I can practice using Anki. It combines both worlds the best!"* These comments show that adding supplementary digital tools creates a powerful, interactive way to learn vocabulary, engaging students and supporting retention better than traditional input.

These findings indicate that digital tools, particularly YouTube and Anki, significantly enhance vocabulary retention compared to traditional learning methods. Likewise, Alghamdi and Elyas [15] discovered that Saudi EFL students' vocabulary retention and recall were much improved with the use of electronic flashcards as opposed to traditional methods. Their study indicated that learners who relied on digital learning cards were more engaged with their learning, recalled more quickly, and were able to retain vocabulary better over the long term. Overall, this demonstrates the validity of digital learning technologies in language learning contexts.

3. RECOMMENDATION

Based on the aforementioned research findings, the following recommendations provide practical solutions for English majors at Lac Hong University (LHU) to improve vocabulary acquisition. They follow logical and scientifically supported steps, offering clear, actionable guidance for students and educators. Each step uses modern digital tools that help students learn, practice, and retain vocabulary more effectively. Relying on context-based learning, active use of words, and strategic review techniques, these strategies aim to make vocabulary mastery more engaging, accessible, and lasting.

Step 1: Understand vocabulary in context

Understanding vocabulary in context is the first step in effective learning. Exposure to words in real-life scenarios helps learners grasp their meanings, usages, and nuances. YouTube serves as an invaluable resource as it offers a range of educational videos tailored to diverse interests. For life-related vocabulary, the MSA (My Story Animated) channel provides engaging storytelling videos with subtitles and introduces learners to idiomatic expressions and practical usage. For academic topics, TED Talks offer insightful content across disciplines such as science, technology, and education. The programs enable students to explore advanced vocabulary in context.

Hapsari and Adi [16] highlight YouTube's potential to enrich vocabulary learning while Hestiana and Anita [17] emphasize the benefits of subtitles to facilitate comprehension. Subtitles enable learners to follow along, understand unfamiliar words, and see how vocabulary is applied in real-time. Ali Mansoor et al. [18] add that short stories, like those on MSA, simplify vocabulary retention by linking words to relatable contexts and make them easier to remember.

Step 2: Use Spaced Repetition for Memorization

Once learners encounter new vocabulary, memorization becomes essential. Anki, a digital flashcard application, leverages spaced repetition to help students retain information more effectively. By presenting flashcards just before learners are likely to forget, Anki optimizes review sessions for long-term retention.

Creating Anki flashcards is straightforward. Learners can write contextual sentences on the front of each card and include the word's meaning, pronunciation, and part of speech on the back. Additional features, such as adding images or audio, further enhance memorization by appealing to multiple senses. Research by Khoshsima and Khosravi [7] and Mujahidah et al. [19] demonstrates that students using Anki show significantly better vocabulary retention and find the tool both simple and enjoyable to use. Regular review sessions of just 10 – 20 minutes per day can yield substantial improvements, even for students with limited time.

Step 3: Apply Vocabulary Actively in Writing

Memorizing vocabulary is not enough; applying it in writing reinforces its retention and usage. Tools like Write & Improve (Cambridge) provide an excellent platform for practicing written English. Learners can write essays or sentences using newly acquired vocabulary and receive instant feedback on grammar, vocabulary, and clarity.

Manipatruni et al. [20] report significant improvements in students' writing skills through the use of this tool. Regular writing exercises not only strengthen understanding of vocabulary but also boost confidence in applying it in various contexts. By focusing on both correctness and fluency, learners develop a comprehensive grasp of the language.

Step 4: Practice Speaking in Real-Life Scenarios

Using vocabulary in conversations is crucial for developing fluency and confidence. Language exchange apps like HelloTalk connect learners with native speakers, offering opportunities to practice vocabulary in real-life contexts through text, voice, or video chats. These apps include features such as translation tools and message corrections, fostering a supportive learning environment.

Damayanti et al. [21] found that learners using HelloTalk reported improvements in their speaking skills, citing its interactive features as particularly helpful. Additionally, joining English-speaking clubs or participating in role-playing activities can further enhance conversational abilities by simulating real-world situations.

Step 5: Combine Digital and Traditional Learning Approaches

Blending traditional methods with digital tools provides a balanced and effective approach to vocabulary learning. Traditional strategies, such as writing words repeatedly or creating sentences, reinforce memory through active engagement. On the other hand, digital tools like Memrise or Duolingo offer interactivity and gamification, making learning more enjoyable and accessible. Research by Nuralisah and Kareviati [22] highlights the effectiveness of apps like Memrise, which not only aid vocabulary retention but also make learning enjoyable. Similarly, Ajisoko [12] confirmed that

Duolingo helps users enhance their understanding and practice of vocabulary.

This hybrid approach combines the strengths of both methods. Traditional techniques build a solid foundation while digital tools add variety and flexibility, catering to diverse learning preferences.

Step 6: Regularly Review and Reflect on Progress

Consistent review is crucial for long-term vocabulary retention. Setting aside weekly sessions to go over learned words strengthens memory and helps identify areas that need more focus. Reflecting on successful strategies and adjusting learning plans can further improve progress. Namaziandost, Sawalmeh and Soltanabadi [23] claimed that students who reviewed vocabulary regularly using spaced practice remembered words better and retained them longer than those using massed practice. This highlights the significance of making regular review an essential part of effective vocabulary learning.

Once again, as mentioned in the previous study of Khoshsima and Khosravi [7], Anki, a mobile-assisted spaced-repetition tool, greatly improved academic vocabulary among university students. As Anki's adaptive algorithm schedules reviews based on learner performance, they significantly enhanced both receptive (recognition) and productive (usage) vocabulary knowledge. By focusing more on difficult words and reducing redundancy for known ones, Anki promoted long-term retention and practical application. The mobile accessibility of the tool also allowed learners to review vocabulary flexibly and consistently, increasing engagement.

To sum up, students should approach vocabulary learning and retention skilfully to effectively accumulate lexical items and their practical usage for real communication scenarios. When following the step-by-step, digitally integrated methodology outlined above, EFL learners can clearly grasp the purpose and benefits of the recommended apps to build robust vocabulary resources for achieving their desired outcomes. This strategic approach not only enhances vocabulary acquisition but also fosters confidence and competence in applying new words in various contexts.

4. CONCLUSION

This research examines the difficulties faced by first-year English majors at Lac Hong University in memorizing vocabulary, using a mixed-methods approach that combines a 13-item survey (171 participants) and follow-up interviews (21 students). The findings reveal key challenges, including a lack of real-life context for vocabulary use, difficulty engaging with long word lists, and anxiety when tackling complex vocabulary tasks.

Beyond identifying these obstacles, this study contributes significantly by proposing AI-enhanced digital tools as an innovative solution for vocabulary learning. Adaptive learning software, AI-powered flashcards, and personalized feedback systems can help instructors provide tailored learning experiences. These tools not only supply contextualized examples but also incorporate gamified and interactive exercises to boost student engagement.

Though the study has limitations, such as sample size and unexplored factors like motivation, learning preferences, and initial proficiency, it establishes a foundation for future research. Longitudinal studies could further assess the long-term effectiveness of AI-assisted vocabulary learning over a full semester. Additionally, an online collaborative platform where students exchange strategies could enhance this approach.

Ultimately, this research bridges traditional vocabulary instruction with modern AI advancements. By advocating for personalized, adaptive, and context-rich learning tools, it presents a forward-thinking framework for improving lexical acquisition among English majors, paving the way for more effective teaching strategies.

6. REFERENCES

[1] Saksittanupab, P. (**2024**). Enhancing Vocabulary Acquisition and Retention: The Role of Spaced Repetition in Language Learning. *Journal of Modern Learning Development*, 9(5), 205–215. Retrieved from https://so06.tci-thaijo.org/index.php/jomld/article/view/273598

[2] Tran, T. A. H. (**2023**). Study on methods of learning English vocabulary for communication. UNIVERSITY OF KHANH HOA JOURNAL OF SCIENCE, 1(2023), 30 - 36. Retrieved from

https://scholar.dlu.edu.vn/thuvienso/bitstream/DLU123456789/208280/1/CVv479S12023030.pdf

[3] Pham, M. L. (**2022**). An investigation into English vocabulary learning strategies used by English major freshmen at a school of Thai Nguyen university. *Tap Chi Khoa Hoc va Cong Nghe*, 227(04), 84–90.

DOI: https://doi.org/10.34238/tnu-jst.5506

[4] Nguyen, T. V. P. (**2024**). Challenges in ESP vocabulary acquisition: A study of Vietnamese non-English majors. English Language Teaching and Linguistics Studies, 6(1), 109.

DOI: https://doi.org/10.22158/eltls.v6n1p109

[5] Susanto, H. (**2021**). A study on students' difficulties in Learning Vocabulary. Journey: *Journal of English Language and Pedagogy*, 4(2), 46–50.

DOI: https://doi.org/10.33503/journey.v4i2.1413

[6] Rashid, M. H., Lan, Y., & Hui, W. (**2022**). The importance of vocabulary in teaching and learning in applied linguistics. Linguistics and Culture Review, 6, 1548–1557.

DOI: https://doi.org/10.21744/lingcure.v6ns2.2177

[7] Khoshsima, H. , & Khosravi, M. (**2021**). Vocabulary Retention of EFL Learners through the Application of ANKI, WhatsApp and Traditional Method. *Journal of Foreign Language Teaching and Translation Studies*, 6(4), 77-98.

DOI: 10.22034/efl.2022.325424.1136

[8] Yassin, B. (**2024**). Enhancing English as a Foreign Language (EFL) learning in Saudi Arabia: the academic contribution of YouTube in EFL learning and cultural awareness. Frontiers in Education, 9.

DOI: https://doi.org/10.3389/feduc.2024.1451504

[9] Taherdoost, H. (**2021**). Data Collection Methods and Tools for Research: A Step-by-Step Guide to Choosing Data Collection Techniques for Academic and Business Research Projects. *International Journal of Academic Research in Management,* *10*(1), 10–38. https://elvedit.com/journals/IJARM/wp-content/uploads

[10] Schoonenboom, J., & Johnson, R. B. (**2021**). How to construct a mixed methods research design. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 73(1), 107–131.

DOI: https://doi.org/10.1007/s11577-021-00711-2

[11] Ruslin, R., Mashuri, S., & Rasak, M. (**2022**). *Semi-structured interview: A methodological reflection on the development of a qualitative research instrument in educational studies.*

DOI: https://doi.org/10.9790/7388-1201052229

[12] Ajisoko, P. (**2020**). The use of duolingo apps to improve English vocabulary learning. *International Journal of Emerging Technologies in Learning (iJET)*, 15(07), 149.

DOI: https://doi.org/10.3991/ijet.v15i07.13229

[13] Polakova, P., & Klimova, B. (**2022**). Vocabulary mobile learning application in blended English language learning. Frontiers in Psychology, 13, 869055.

DOI: https://doi.org/10.3389/fpsyg.2022.869055

[14] Klimova, B., & Polakova, P. (**2020**). Students' perceptions of an EFL vocabulary learning mobile application. Education Sciences, 10(2), 37.

DOI: https://doi.org/10.3390/educsci10020037

[15] Alghamdi, A. A., & Elyas, T. (**2020**). The effect of electronic flashcards on EFL students' vocabulary learning: The case of Saudi Arabia. *Randwick International of Education and Linguistics Science Journal*, 2(1), 114–125.

DOI: https://doi.org/10.47175/rielsj.v1i2.79

[16] Hapsari, F. N., & Adi, S. S. (**2023**). Exploring students' Perception About Using YouTube Educational Videos In Learning New Vocabulary. Exposure, 12(1), 98–114.

DOI: https://doi.org/10.26618/exposure.v12i1.10444

[17] Hestiana, M., & Anita, A. (**2022**). The role of movie subtitles to improve students' vocabulary. *Journal of English Language Teaching and Learning*, 3(1), 46–53.

DOI: https://doi.org/10.33365/jeltl.v3i1.1715

[18] Ali Mansoor, A. A., Mohammed, O. S. M., Ahmed, H. R., Munasser Awadh, A. N., Abdulfatah, H. M., & Sheikh, E. Y. (**2022**). English language teaching through a short story: A technique for improving students' vocabulary retrieving. Cogent Education, 10(1).

DOI: https://doi.org/10.1080/2331186X.2022.2161221

[19] Mujahidah, Hasanah, N., Yusuf, M., Zulfah, & Fatmasyamsinar, A. A. (**2024**). The implementation of AnkiApp to improve students' vocabulary mastery. *SALTeL Journal (Southeast Asia Language Teaching and Learning)*, 7(1), 9–18.

DOI: https://doi.org/10.35307/saltel.v7i1.115

[20] Manipatruni, V. R., Kumar, N. S., Karim, M. R., & Banu, S. (**2024**). Improving writing skills through essay writing via "Write & improve" for error analysis and "Padlet" for collaborative writing & peer review. *World Journal of English Language*, 14(4), 204.

DOI: https://doi.org/10.5430/wjel.v14n4p204

[21] Damayanti, A., Hifdil, M., & Beny Hamdani, I. (**2024**). Indonesian EFL Students' Perception on Hello Talk Application in Fostering Speaking. *English Language Teaching for EFL Learners Journal*, 6(01), 18-32.

DOI: https://doi.org/10.24252/elties.v6i01.46017

[22] Nuralisah, A. S., & Kareviati, E. (**2020**). The effectiveness of using memrise application in teaching vocabulary. *PROJECT (Professional Journal of English Education)*, 3(4), 494.

DOI: https://doi.org/10.22460/project.v3i4.p494-500

[23] Namaziandost, E., Mohammed Sawalmeh, M. H., & Izadpanah Soltanabadi, M. (**2020**). The effects of spaced versus massed distribution instruction on EFL learners' vocabulary recall and retention. Cogent Education, 7(1), 1792261.

DOI: https://doi.org/10.1080/2331186x.2020.1792261