

Exploring The Impact of AI Chatbots on Vocabulary Development of Teacher Education Students: A Narrative Inquiry

Mary Grace Hingpis Aruta*, Jovito Bordo Madeja

Elementary Education Department, School of Education, Eastern Visayas State University, Tacloban City, Philippines, 6500.

*Corresponding Author's Email: marygrace.aruta@evsu.edu.ph

Abstract

The development of one's vocabulary is essential to both linguistic ability and academic success. With the ubiquity of artificial intelligence, these AI chatbots provide interactive and adaptive learning experiences, present a novel alternative that may improve vocabulary acquisition and possess various educational applications in language learning, such as engagement improvement, instant feedback and personalized learning. The study aimed to explore students' experiences and perspectives on how AI chatbots might be used to improve vocabulary learning and closely investigate how AI chatbots affect teacher education students' vocabulary development. Using narrative inquiry approach, seven students served as participants of the study. The data gathered underwent the three-stage coding analysis to carefully examine, interpret and recognize the underlying themes and patterns from the narratives. There are different roles played by chatbots in enhancing vocabulary as perceived by the participants, such as study aids and resources for vocabulary development and fluency. These features significantly contribute to vocabulary enhancement among English language learners. Themes reveal that ease of navigation, dependability and instant feedback provided by chatbots make them an effective tool for vocabulary development. Participants further revealed improved fluency, grammar and overall language skills due to chatbot usage.

Keywords: Artificial Intelligence, English Teacher, Narrative Inquiry, Vocabulary.

Introduction

Vocabulary Development is one crucial aspect of language proficiency, especially for teacher education students who need to communicate effectively in the teaching practice. However, teacher education students often face challenges in acquiring and applying vocabulary knowledge in their teaching (1). The development of one's vocabulary is essential to both linguistic ability and academic success. It affects writing abilities, reading comprehension and the efficacy of communication (2). Routine exercises and rote memorization are common components of traditional vocabulary instruction strategies, which may not effectively engage students or meet their unique learning needs (3). With their ability to provide interactive and adaptive learning experiences, AI chatbots present a novel alternative that may improve vocabulary acquisition (4).

Artificial intelligence (AI) chatbots have gained prominence as a tool for promoting learning and

development in educational settings and their integration has attracted a lot of attention recently. AI tools demonstrated promise in a range of educational applications, such as engagement improvement, instant feedback and personalized learning (5, 6). Existing studies found that when intensifying students' lexicology, AI-assisted tools are viewed to be effective.

AI chatbots can offer customized vocabulary exercises, immediate feedback and contextually relevant examples, all of which can improve vocabulary retention and usage (7, 8). Additionally, the conversational aspect of chatbots promotes engagement and active learning, both of which are essential for successful vocabulary development (9). While existing research examined the use of AI chatbots in improving language skills, such as communication, writing and research, the impact of these AI chatbot tools on vocabulary development remains underexplored, especially within the context of the

This is an Open Access article distributed under the terms of the Creative Commons Attribution CC BY license (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted reuse, distribution and reproduction in any medium, provided the original work is properly cited.

(Received 10th December 2025; Accepted 12th March 2026; Published 08th April 2026)

study that focuses on teacher education students. It is imperative for these students to possess a strong foundational vocabulary repertoire for their teaching in the future. In addition, insights gained from this study can inform educators handling these students whether or not these AI chatbots can be an instructional resource tool for vocabulary improvement. Moreover, a narrative inquiry approach could provide more personal metalinguistic data and valuable insights into the lived experiences of these teacher education students regarding their use of AI chatbots in vocabulary learning.

This study attempts to investigate how AI chatbots affect teacher education students' vocabulary development. The study looks at students' experiences and perspectives on how AI chatbots might be used to improve vocabulary learning. This study is important because it can help with the development and application of AI-based tools for teacher preparation. Teachers and developers can create more effective and engaging learning environments that support the linguistic and professional growth of future teachers by understanding how AI chatbots affect vocabulary development (10).

Generally, this narrative inquiry research aims to determine the following within the study context: the role of chatbots in enhancing the vocabulary of teacher education students; the features of these AI chatbots that help in enhancing the vocabulary; and the perception of the students on the role of chatbots in enhancing vocabulary.

In the Philippine context, artificial intelligence has been integrated effectively in most classroom situations. It further enhances students' language development and acquisition through personalized learning experience and real-time feedback (11). AI-powered tools in classrooms are revolutionizing the way students learn languages, making the process more engaging and efficient through adaptive learning technologies and interactive platforms (12). These AI chatbots were found to support students' accuracy and fluency in speech with their use of better hedging words, grammar and lexical structures (13). Similarly, AI chatbots were viewed to improve significantly students' articulation skills, such as intonation, stress and vowel sounds (14, 15).

One critical component of language proficiency is vocabulary acquisition, which involves learning

new words and understanding words' meanings, usage and nuances. Vocabulary development is a crucial aspect of language acquisition, since it provides a solid foundation for the improvement of other language abilities and macro skills (16). Traditional methods of vocabulary teaching often include rote memorization and passive learning, which can be less engaging for students (17). In contrast to traditional methods, recent language studies have shed light on the effects of ChatGPT-mediated tools in language classrooms and have shown significant potential in the pedagogy of EFL vocabulary. A quasi-experimental study among Saudi high school students, which explored the impact of ChatGPT-based application on vocabulary acquisition, revealed significant improvement in learning vocabulary and positive attitudes among students using the ChatGPT tool (18). Integrating AI in English learning was found to enhance students' vocabulary mastery while providing engaging, interactive, personalized and effective support (19).

AI chatbots offer an alternative by providing interactive and contextual learning experiences. Engagement and motivation are critical factors in effective language learning. Studies have shown that AI chatbots can increase student engagement through interactive and gamified learning experiences (20). A previous study reported that higher motivation and enjoyment in using chatbots for vocabulary learning compared to traditional methods (21). Corollary to this, findings suggest that the use of AI chatbot as resource for English-speaking proficiency was found to speed up the English learning process and assist students in meeting the courses' goals. Further, AI chatbots was found to be effective in enhancing students' English-speaking learning outcomes, confidence, engagement and motivation (22). These conversational agents simulate human-like interactions, making them effective in language learning settings where practice and repetition are crucial (23). Interactive practice and individualized feedback improve accuracy and fluency and make learning more enjoyable (24).

Various educational institutions have been using AI in their pedagogy and existing studies found significant and positive results in its use. Chatbots were seen to contribute to the productive vocabulary and facilitate vocabulary acquisition. A mixed-method study involving EFL teachers

underpinned several perceived benefits of AI integration in language learning, including improved language skill development and increased student motivation in learning. Moreover, they found that AI improves language learning, boosts creativity and fosters students' active participation in language learning (25). Further, it posited that educators need to understand and harness the potential of these technologies for classroom use, especially in L2 vocabulary instruction (26). Moreover, studies among ESL tertiary-level students highlighted the impact of ChatGPT on students' academic writing skills and students' perceptions. It indicated significant positive impact of ChatGPT as a dialogic tool that provides immediate feedback in writing tasks (27).

Moreover, reports showed a substantial decrease in foreign language learning boredom for learners engaged in the AI-enhanced flipped classroom, which lead to the potential of strategically embedding AI within flipped learning models to cultivate more autonomous, engaged and effective language learning experiences (28).

According to recent studies, AI can increase the learners' motivation in English learning because of its gamification features and instant feedback (29). Further, the chatbot's language processing capabilities allow it to understand and respond to conversations in correct English grammar, even when the questions or statements posed by the users contain grammatical mistakes, thus increasing the willingness of the learners to improve their vocabulary skills independently. This chatbot can be a venue for story and idea exchanges and can even serve as a therapeutic tool, which indirectly enhance student's vocabulary (30).

Furthermore, research established that students have positive attitudes towards using AI chatbots to improve their vocabulary skills, with AI-powered chatbots making a significant contribution to their vocabulary development (31). Findings suggest that students are more motivated and engaged in learning English when chatbots are used, as they provide a valuable tool for expanding their vocabulary and advancing their language proficiency. Other reports posit the effectiveness of an AI Chatbot in improving students' vocabulary mastery (32). When students interact with a micro-learning chatbot, it showed

increased motivation and positive emotions compared to a neutral-feedback group, suggesting chatbots can boost engagement and affective factors in learning (33).

Methodology

The study employed a narrative inquiry approach to gain deeper understanding of the participant's thoughts and experiences (34). Narratives of human experience from interviews are central to the study. This present study explored the potential impact of AI chatbots in enhancing the vocabulary of English language students specifically at the Eastern Visayas State University. Using purposive sampling, seven students [7] served as participants of the study. They were selected based on this criterion, i.e., they should be using AI chatbots either for personal or academic work. Meanwhile, the study did not account for the student's year level and competence. Using the narrative inquiry approach, this number of participants is sufficient to capture the lived experiences and information needed. In fact, three [3] to ten [10] sample size is adequate for narrative inquiry (35). Initially, target participants were ten [10] students. However, during the interviews, these seven [7] participants yielded repeated data and no new information emerged from the narratives.

A semi-structured interview question was used in collecting data. The semi-structured questionnaire underwent a validation process for interview protocol validation in three [3] experts in both content and method (36). These experts were provided with the interview guide along with the research questions to ascertain the scope of the study that should be included in the instrument. The experts ensured the relevance, comprehensiveness and alignment of the interview guide questions to the research questions. After which, revisions were made according to the suggestions of the experts.

In analyzing the narratives, a three-stage coding analysis was employed: pre-coding, axial coding and selective coding. Through the analysis, inquirers were able to carefully examine, interpret the data and recognize the underlying themes, patterns and meanings, including the methods in which people express and build their experiences after the interview. The data analysis begins with the inductive coding of narrative blocks, ensuring

that all segments referring to related “life events” receive consistent coding. Participants’ narratives have been categorized based on major themes in the study: experience with the use of AI chatbots, at what instances they used these chatbots, the features of chatbots that aided their vocabulary development and whether or not these chatbots helped them increase their vocabulary knowledge. Once coded, all stories under each life-event category are grouped and examined to identify both parallels and divergences. Particularly, the participants shared their personal narratives and evaluated their own experiences in terms of the effectiveness of these AI chatbots. After this stage, nested codes are developed for each life event based on the chosen story structure framework. These codes then serve as the basis for compiling the narratives within each life event. The final step involves crafting a core narrative for each life event that reflects the shared experiences of participants (37). Moreover, to maintain credibility and dependability, the study conducted triangulation through member checking and the participants were informed of the results of the data analysis for clarification and confirmation.

Results

The integration of chatbots into the learning experiences of English language students has sparked interest in understanding their role in vocabulary enhancement. This study explores how chatbots function as comprehensive academic assistants, offering students a range of educational support, from aiding in essay writing to expanding vocabulary through the introduction of new words. By examining the interface and features of chatbots, we delve into their impact on language proficiency, precision and idea generation, revealing how they contribute to students' overall language development. The study also captures students' perceptions of chatbots, shedding light on their positive perception and the nuanced balance between reliance and independence in using these tools. This research uncovers the multifaceted contributions of chatbots in enriching the vocabulary and language skills of teacher education students as language learners, providing insights into their role in education.

Role of Chatbots in Enhancing Vocabulary

There are different roles played by chatbots in enhancing vocabulary as perceived by the participants. They defined the roles as (a) study aids and resources for vocabulary development and (b) enhanced vocabulary and fluency.

Study Aids and Resources for Vocabulary Development

Responses from participants indicate that chatbots serve as a significant study aid, particularly in enhancing vocabulary. For instance, P1 (“When teachers give assignments and I don’t know about the discussions, I use chatbots. Words that are not familiar to me, I search and paraphrase them. Say, words from ChatGPT, I paraphrase it in Quill Bot. It enhances my English vocabulary through fluency.”) uses chatbots to clarify discussions and paraphrase unfamiliar words, demonstrating the role of chatbots in vocabulary development and fluency enhancement. P2 (“AI chatbots provide wide information on reporting and also provides detailed explanation on certain topics which are very helpful for my studies... find chatbots very helpful in my vocabulary to unlock new words”) emphasizes the use of chatbots in essay writing and report structuring, highlighting their utility as a resource for vocabulary development. This is further supported by P3 (“It helps me in spelling, grammar and sentence construction.”), who acknowledged the role of chatbots in generating ideas and improving spelling, grammar and sentence construction. P7 (“I also use ChatGPT in structuring my report.”) and P8 (“I get ideas and comprehension examples. They explain concepts in simpler terms.”) use chatbots for the improvement of mechanics and structuring concepts in simpler terms.

Enhanced Vocabulary and Fluency

This theme focuses on the role of chatbots in enhancing language skills, including vocabulary, grammar and fluency. Participants reported substantial improvements in their vocabulary and fluency due to chatbot usage. For example, P1 (“It enhances my English vocabulary through fluency.”) and P4 (“Chatbots produce words that are unfamiliar to me; then, I search for its meaning.

Now, I learn new words and use it on my own. These new words become part of my speaking vocabulary.”) mentioned that chatbots help them learn new words, which subsequently become part of their speaking vocabulary. Similarly, P5 (Chatbots help me in improving my vocabulary, grammar, sentence structure and language skills) pointed out that chatbots aid in improving vocabulary, grammar, sentence structure and overall language skills. P6 (Through chatbots, I learn many different terminologies and words that I get to use in my daily conversations) reiterated this by stating that chatbots enhance essay fluency and introduce new terminologies for daily conversations.

Features of Chatbots That Help in Enhancing Vocabulary

Simple Navigation and Ease of Use

Participants found chatbots easy to use and navigate, which facilitates vocabulary enhancement. P1 (“Example, I’m using Claude (just like ChatGPT). With just a click, it gives me information that I want.”) highlighted the simplicity and efficiency of obtaining information from chatbots like Claude. P3 (“It is easy to use and navigate. Simplify ideas and concepts with just a click.”) and P6 (“It is easy to navigate and provides instant answers and [feedback].”) echoed this sentiment, emphasizing the ease of navigation and instant feedback provided by chatbots. The ability to simplify ideas and concepts was also noted, aiding in comprehension and vocabulary development.

Idea Generation and Simplification

Chatbots also play a crucial role in the generation of ideas and the simplification of complex concepts. P3 (“It helps me in spelling, grammar and sentence constructions.”) and P8 (“I get ideas and comprehension examples. They explain concepts in simpler terms.”) stated that chatbots aid in spelling, grammar and sentence construction and generate ideas that make it easier to comprehend. P6 (“I use chatbots in developing my essays. I write it first and then chatbots improve my work by providing words.”) also stated that chatbots help in providing words that improve essay writing. The ability of chatbots to generate ideas and simplify complex concepts makes it easier for students to comprehend and articulate their thoughts in essays and reports.

Dependability and Instant Feedback

The dependability of chatbots was another critical aspect identified by participants. P2 (“These chatbots are very dependable.”) and P4 (“I use Cici, a chatbot/ChatGPT, which provides sources for free.”) mentioned the reliability of chatbots in providing consistent answers and free resources. P5 (“Chatbots give ideas and new unfamiliar words. So, I learn them through searching their meaning.”) and P7 (“They provide valuable sources and I learn new because it provides synonyms which widen my vocabulary.”) appreciated the instant feedback and the provision of synonyms, which significantly contributed to vocabulary enhancement.

Language Improvement

The features of chatbots also extend to language improvement. Participants like P6 (“I can say that the best feature of chatbots is [they] significantly improve my grammar such as [consistency] of tenses in my work.”) and P8 (“Like Gemini and Bard, they are simplified and provide additional data. They provide more reliable sources.”) noted the substantial improvement in grammar and the provision of reliable sources. Chatbots were credited with enhancing vocabulary through the introduction of new words and synonyms, thus broadening the lexical repertoire of students.

Perceptions of Chatbots in Vocabulary Enhancement

Positive Perception

Overall, participants held a positive perception of chatbots as enhancing their vocabulary. P1 (“Chatbots help me in my tasks.”), P2 (“I like using chatbots in my studies because it helps me a lot to understand concepts.”) and P3 (“It totally helps me in my vocabulary development.”) expressed satisfaction with the role of chatbots in aiding their studies and vocabulary development. P5 (“Definitely. I would recommend the use of chatbots/ChatGPT’s to aid learning as it is helpful to me, too.”) and P6 (“Chatbots are easy to use and work. I would recommend the use of chatbots to my fellow students.”) recommended the use of chatbots to their peers, citing their helpfulness in learning and task completion. P7 (“Chatbots are very helpful in terms of [improving] my speaking and writing vocabulary.”) highlighted the improvements in speaking and writing vocabulary, further supporting the positive perception.

Cautious Optimism

Despite the positive feedback, some participants also expressed caution. For example, P4 ("It significantly improves my vocabulary; however, sometimes, it is not reliable. There are times that chatbots produce answers that are not what I expect [out-of-context].") acknowledged the significant vocabulary improvements but noted occasional unreliability and out-of-context answers from chatbots. P8 ("I would recommend the use of chatbots to my classmates. However, we should not be dependent on them.") recommended using chatbots but advised against complete dependency, reflecting a balanced view of the benefits and limitations of chatbot usage.

Discussion

Based on the results, the authors found that chatbots are essential study aids and resources for students' improved language proficiency, vocabulary development, grammar and fluency. AI chatbots act as a facilitator for individualized learning and a motivator for expanding their lexical repertoire. Particular aspects of chatbots, such as easy navigation and ability to expound concepts, led to students' overall improvement in their vocabulary, grammar, sentence structure and general language proficiency. This finding corroborates with existing study that key factors in vocabulary retention and usage, such as immediate feedback, personalized suggestions and interactive nature, are significant features of AI chatbots that support lexical development and overall language proficiency (38). Consistently, previous reports highlighted that AI chatbots offer instant feedback, enabling students to fix mistakes and encourage right usage, both of which enhance fluency. In general, chatbots are a useful tool for learning languages (39-43).

Interestingly, findings further reveal that AI chatbots' built-in user-friendly interface makes the tool easy to navigate and enables access to information effortlessly. The authors also established that immediate feedback and simplification of complex concepts are the two features of chatbots that improve students' vocabulary and comprehension, which ultimately contribute to their language learning. In addition, these chatbots provide a substantial contribution to idea production, making these educational tools dependable, reliable and useful. In effect, this

enhances students' vocabulary development by providing accurate verbal information, examples and linguistic inputs. Previous studies documented that user-friendly design of chatbots enhances language learning by providing instant feedback and detailed explanation of concepts make chatbots effective educational tools in vocabulary acquisition (44, 45). Moreover, previous reports emphasize that this positively affects students' writing and comprehension skills, promoting concept growth and creativity in academic writing (46, 47). In addition, studies have shown that chatbots can effectively scaffold vocabulary learning by providing consistent and accurate information and improve language acquisition by providing diverse linguistic resources and dependable learning support (48, 49).

Furthermore, the authors noted significant positive perceptions of chatbots in deepening their vocabulary learning during academic tasks. This coincides with existing reports on chatbots as effective tools for language development and student engagement, leading to improved language proficiency (50-52). While students recommend its use, they suggested utilizing these chatbots with proper caution and called for balanced usage. Context, reliability and language use are among prospective issues that may arise. This balanced perspective is supported by existing information that while chatbots can enhance language learning, issues with accuracy and context can arise, emphasizing the importance of integrating chatbots as supplementary tools rather than relying on them exclusively (53, 54).

The findings clearly support that students' language proficiency, specifically vocabulary development, can be further enhanced using AI chatbots. Similarly, functionalities of chatbots (feedback, interactivity and concept simplification) can increase students' linguistic knowledge and encourage vocabulary practice. In addition, students hold positive perceptions towards AI chatbots as a tool for vocabulary learning. Nevertheless, they emphasized caution for balanced usage of said tools, especially on the issues of context, reliability and language accuracy. The study further suggests that AI chatbots are a valuable support tool in vocabulary acquisition and may be integrated into language learning to maximize their usage. However, these implications may be explored quantitatively lens to obtain actual

vocabulary growth, as the current study posits certain limitations. For instance, the sample size is relatively small and the study focused on the experiences of a specific group of students. Future studies may look into different educational contexts across diverse programs and use a larger sample size. Additionally, long-term effects of chatbots on other language macro skills can provide insight into AI's efficacy.

Conclusion

In conclusion, chatbots play a significant role in the vocabulary enhancement of teacher education students as English language learners. These tools provide an accessible platform for their vocabulary expansion and offer features such as instant feedback and exposure to new words and ideas that lead to the development of their vocabulary. The features of chatbots are a key factor in enhancing vocabulary development among these students. By providing personalized support, instant feedback and diverse language learning opportunities, chatbots accommodate individual language learning needs. This feature contributes to the effectiveness of chatbots in improving overall language proficiency. In addition, these students hold positive perception of chatbots as tools for vocabulary enhancement and overall language learning. They appreciate the ease of use, accessibility and effectiveness of chatbots in supporting their language learning goals. While acknowledging some limitations, students expressed satisfaction with the impact of chatbots on their vocabulary development. Overall, chatbots are a valuable resource for enhancing the vocabulary of these students. Their adaptability, ease of use and ability to provide instant feedback contribute significantly to vocabulary development. While the overall perception of chatbots is positive, it is essential to approach their usage from a balanced perspective, recognizing their benefits and limitations. Hence, educators may incorporate the use of chatbots as supplementary tools to enrich students' overall language experience.

The Department of Education may consider implementing the use of chatbots in teaching English. Meanwhile, English language teachers should be mindful of the implications of AI chatbots in their academic papers for integrity purposes. Moreover, AI Chatbot users should not

depend on AI itself; instead, use it as a supplementary guide. Finally, a similar study may be performed on a larger population, not only focusing on the use of chatbots in vocabulary development but also in other subjects, such as mathematics and others, to determine if the same findings will be established.

Abbreviations

AI: Artificial Intelligence.

Acknowledgements

The authors express their heartfelt thanks to the journal's board in reviewing the research article. We also appreciate the teacher education students of the University, where the authors work for their inputs and willingness to take part in the study.

Author Contributions

Mary Grace Hingpis Aruta: conceptualization, writing draft, data gathering, data analysis, discussions, conclusion, recommendations, final editing, validation, Jovito Bordo Madeja: conceptualization, writing the draft, outlining the methods, data gathering, data analysis, drafting the results, discussing results, analysis.

Conflict of Interest

Not applicable.

Data Availability

All narratives that support the findings of the study are available from the corresponding author upon request.

Declaration of Generative AI and AI Assisted Technologies in the Writing Process

This paper used Artificial Intelligence (AI-assisted) tools in improving the overall grammar, clarity, tone and coherence. The authors did not use AI tools in analyzing the data nor did it affect the overall results of this study.

Ethics Approval

The researchers sought approval from the University President for the conduct of the study. Participants were provided informed consent and were anonymously identified using unique to maintain the secrecy of the narratives. Personal information and recordings were stored in a file only accessible to the researchers for confidentiality.

Funding

None.

References

- Alqahtani M. The importance of vocabulary in language learning and how to be taught. *Int J Teach Educ.* 2015;3(3):21–34. doi: 10.52950/TE.2015.3.3.002
- Graves MF. *The vocabulary book: Learning and instruction.* New York (NY): Teachers College Press; 2006. ISBN: 0-8077-4627-4
- Nation ISP. *Learning vocabulary in another language.* Cambridge: Cambridge University Press; 2001. ISBN: 0-521-804981
- Han Z. ChatGPT in and for second language acquisition: A call for systematic research. *Stud Second Lang Acquis.* 2024;46(2):1–6. doi: 10.1017/S0272263124000111
- Chen L, Chen P, Lin Z. Artificial intelligence in education: A review. *IEEE Access.* 2020;8:75264–78. doi: 10.1109/ACCESS.2020.2988510
- Coniam D. Evaluating the language resources of chatbots for their potential in English as a second language. *ReCALL.* 2008;20(1):98–116. doi: 10.1017/S0958344008000815
- Xiao F, Zhao P, Sha H, *et al.* Conversational agents in language learning. *J China Comput Assist Lang Learn.* 2023;4(2):300–25. doi: 10.1515/jccall-2022-0032
- Xu Y, Aubele J, Vigil V, *et al.* Dialogue with a conversational agent promotes children's story comprehension via enhancing engagement. *Child De v.* 2022;93(2):e149–67. doi: 10.1111/cdev.13708
- Eteng-Uket S, Ezeoguine E. The impact of artificial intelligence chatbots on student learning: A quasi-experimental analysis of learning outcome and engagement. University of Port Harcourt. <https://files.eric.ed.gov/fulltext/EJ1470567.pdf>
- Hutauruk B, Purba R, Sihombing S, *et al.* The effectiveness of artificial intelligence by chatbot in enhancing the students' vocabulary. *JETAL J English Teach Appl Linguist.* 2024;6(1):13–9. doi: 10.36655/jetal.v6i1.1610
- Department of Education. VP Sara urges education ministers to reshape education, embrace technology in GEIs 2023. 2023. <https://www.deped.gov.ph/2023/09/23/vp-sara-urges-education-ministers-to-reshape-education-embrace-technology-in-geis-2023/>
- Department of Education. *Alternative Learning System (ALS) Strategic Plan V6 (Final).* 2022. <https://www.deped.gov.ph/wp-content/uploads/2022/06/ALS-Strategic-Plan-V6-Final-Web.pdf>
- Duong T, Suppasetseree S. The effects of an artificial intelligence voice chatbot on improving Vietnamese undergraduate students' English-speaking skills. *Int J Learn Teach Educ Res.* 2024;23(3):293–21. doi: 10.26803/ijlter.23.3.15
- Hoang TN, Duong HN, Le HD. Exploring chatbot AI in improving vocational students' English pronunciation. *Asia Online J.* 2023;14(2):140–55. doi: 10.54855/acoj.231429
- Ho PXP. Using ChatGPT in English language learning: A study on I.T. students' attitudes, habits and perceptions. *Int J TESOL Educ.* 2024;4(1):55–68. doi: 10.54855/ijte.24414
- Brooks G, Clenton J, Fraser S. Exploring the importance of vocabulary for English as an additional language learners' reading comprehension. *Stud Second Lang Learn Teach.* 2021;11(3):351–376. doi: 10.14746/ssllt.2021.11.3.3
- Sattarova M. A comparative analysis of traditional and modern approaches in language teaching. *Ment Enlight Sci-Methodol J.* 2024;5(09):214–23. doi: 10.37547/mesmj-V5-I9-31
- Aldowsari A. The impact of using a ChatGPT-based application to enhance Saudi students' EFL vocabulary learning. *Int J Lang Lit Stud.* 2024;6(4):380–97. doi: 10.36892/ijlls.v6i4.1955
- Kurniawan MA, Husain N, Badu H, *et al.* The effectiveness of ChatGPT usage in enhancing students' vocabulary mastery. *Indones J Educ Res.* 2025;1(3):9–16. doi: 10.5281/zenodo.17186230
- Kerly A, Hall P, Bull S. Bringing chatbots into education: Towards natural language negotiation of learning goals. *Knowl-Based Syst.* 2007;20(2):177–85. doi: 10.1016/j.knosys.2006.11.014
- Hill J, Ford WR, Farreras IG. Real conversations with artificial intelligence: A comparison between human-human online conversations and human-chatbot conversations. *Comput Hum Behav.* 2015;49:245–50. doi: 10.1016/j.chb.2015.02.026
- Du J, Daniel BK. Transforming language education: A systematic review of AI-powered chatbots for English as a language speaking practice. *Comput Ed uc Artif Intell.* 2024;7:100275. doi: 10.1016/j.caeai.2024.100230
- Fryer L, Ainley M, Thompson A, *et al.* Stimulating and sustaining interest in a language course: An experimental comparison of Chatbot and Human task partners. *Comput Hum Behav.* 2017;75:461–8. doi: 10.1016/j.chb.2017.05.045
- Rosyada A, Taopan L. Using AI in English language learning: Perspectives of Indonesian EFL learners. *Salus Cultura J Pembangun Manusia Kebudayaan.* 2025;5(1):46–53. doi: 10.55480/saluscultura.v5i1.384
- Üretmen KE, Doğan C. EFL teachers' insights on incorporating AI in language education. *J Theor Educ Sci.* 2025;18(3):630–57. doi: 10.30831/akukeg.1658985
- Wu X, Li R. Unraveling effects of AI chatbots on EFL learners' language skill development: A meta-analysis. *Asia Pac Educ Res.* 2024. doi: 10.1007/s40299-024-00853-2
- Mahapatra S. Impact of ChatGPT on ESL students' academic writing skills: a mixed methods intervention study. *Smart Learn Environ.* 2024;11(1):1–18. doi: 10.1186/s40561-024-00295-9
- Namaziandost E. Integrating flipped learning in AI-enhanced language learning: Mapping the effects on metacognitive awareness, writing development and

- foreign language learning boredom. *Comput Educ Artif Intell.* 2025;9:100446.
doi: 10.1016/j.caeai.2025.100446
29. Baskara FR. Chatbots and flipped learning: enhancing student engagement and learning outcomes through personalized support and collaboration. *Int J Recent Educ Res.* 2023;4(2):223–38.
doi: 10.46245/ijorer.v4i2.331
 30. Oktadela R, Elida Y, Ismail S. Improving English vocabulary through artificial intelligence (AI) chatbot application. *J English Lang Educ.* 2024;8(2): 63–7.
doi: 10.31004/jele.v8i2.308
 31. Lam BE, Nguyen PH, Tran TBT. Exploring the application of ChatGPT in learning English of students: A study on perception of sophomores at Nguyen Tat Thanh University. *J Sci Technol.* 2024;7(3):1–13.
doi: 10.55401/fg15by35
 32. Losi RV, Putra E, Ali N, *et al.* Investigating artificial intelligence (AI) as a vocabulary learning tool: students' perception to use ChatGPT *Proc Int Conf Relig Educ.* 2024;3:561-6.
ISSN: 2829-3355
 33. Tadris I, Tadris D, Fatima. AI chatbot to improve students' vocabulary mastery. *IDEAS J English Lang Teach Learn Linguist Lit.* 2025;13(1):2154–64.
doi: 10.24256/ideas.v13i1.6855
 34. Yin J, Goh TT, Hu Y. Interactions with educational chatbots: the impact of induced emotions and students' learning motivation. *Int J Educ Technol High Educ.* 2024;21:47:1–23.
doi: 10.1186/s41239-024-00480-3
 35. Connelly FM, Clandinin DJ. Stories of experience and narrative inquiry. *Educ Res.* 1990;19(5):2–14.
doi: 10.2307/1176100
 36. Patton MQ. *Qualitative research and evaluation methods.* 3rd ed. Thousand Oaks (CA): Sage Publications; 2002.
ISBN: 978-1-4129-7212-3
 37. Nasheeda A, Abdullah HB, Krauss SE, *et al.* Transforming transcripts into stories: A multimethod approach to analysis. *Int J Qual Methods.* 2019;18:1-9.
doi: 10.1177/1609406919856797
 38. Riessman CK. *Narrative analysis.* Thousand Oaks (CA): Sage Publications; 1993.
ISBN: 0-8039-4753.
 39. Abdullah A, Khan MS, Wahida SH. Artificial intelligence-powered vocabulary acquisition: perceptions and performance of university students in Pakistan. *Contemp J Soc Sci Rev.* 2025;3(3):2325–38.
doi: 10.63878/cjssr.v3i3.1257
 40. Jingyi S. Enhancing English speaking motivation among Chinese university students: The role of immediate feedback in AI-driven chatbots. *Int J Acad Res Progress Educ Dev.* 2025;14(2):710–26.
doi: 10.6007/IJARPED/v14-i2/25239
 41. Wiboolyasarini W, Wiboolyasarini K. AI-driven chatbots in second language education: a systematic review of their efficacy and pedagogical implications. *Amper.* 2025;14:100224.
doi: 10.1016/j.amper.2025.100224
 42. Yildiz M. Exploring the potential of chatbots and ChatGPT in enhancing vocabulary knowledge. *Transforming the Language Teaching Experience in the Age of AI.* Hershey (PA): IGI Global. 2023:160–88.
doi: 10.4018/978-1-6684-9893-4.ch010
 43. Körner A, Tolzin A, Janson A, *et al.* Common ground improves learning with conversational agents. *Behav Inf Technol.* 2025:1-17.
doi: 10.1080/0144929X.2025.2541222
 44. Zhang Z, Huang X. The impact of chatbots based on large language models on second language vocabulary acquisition. *Heliyon.* 2024;10(3):e2537.
doi: 10.1016/j.heliyon.2024.e25370
 45. Fryer LK, Carpenter R. Bots as language learning tools: The impact of simplicity and feedback on comprehension and writing skills. *Lang Learn Technol.* 2020;24(3):90-110.
doi: 10.64152/10125/44068
 46. Oktarin IB, Saputri MEE, Magdalena B, *et al.* Leveraging ChatGPT to enhance students' writing skills, engagement and feedback literacy. *Edelweiss Appl Sci Technol.* 2024;8(4):2306-19.
doi: 10.55214/25768484.v8i4.1600
 47. Petrović J, Jovanovic M. The role of chatbots in foreign language learning: the present situation and the future outlook. *Artificial Intelligence: Theory and Applications.* *Stud Comput Intell.* 2021:313-30.
doi: 10.1007/978-3-030-72711-6_17
 48. Behforouz B, Ghaithi AA, Balush AZ. Revolutionizing vocabulary acquisition through AI chatbots. *Int J Learn Teach Educ Res.* 2025;24(7):1.
doi: 10.26803/ijlter.24.7.1
 49. Winkler R, Söllner M. Unleashing the potential of chatbots in education: A state of the art analysis. *Acad Manag Proc.* 2018;1:15903.
doi: 10.5465/AMBPP.2018.15903abstract
 50. Zhang S, Shan C, Lee J, *et al.* Effect of chatbot-assisted language learning: a meta-analysis. *Educ Inf Technol.* 2023;28(11):1-21.
doi: 10.1007/s10639-023-11805-6
 51. Waziana Wandewi W, Hastomo T, *et al.* Students' perceptions about the impact of AI chatbots on their vocabulary and grammar in EFL writing. *RegisterJ.* 2024;17(2):352-82.
doi: 10.18326/rgt.v17i2.352-382
 52. Lyu B, Lai C, Guo J. Effectiveness of chatbots in improving language learning: A meta-analysis of comparative studies. *Int J Appl Linguist.* 2024;35(1): 12668.
doi: 10.1111/ijal.12668
 53. Davar NF, Dewan MAA, Zhang X. AI Chatbots in education: Challenges and opportunities. *Information.* 2025;16(3):1–25.
doi: 10.3390/info16030235
 54. Nasution MO, Arianto A. Exploring the role of AI chatbot in English language teaching and learning. *J English Lang Educ.* 2024;9(5):34.
doi: 10.31004/jele.v9i5.513

How to Cite: Aruta MGH, Madeja JB. Exploring the Impact of AI Chatbots on Vocabulary Development of Teacher Education Students: A Narrative Inquiry. *Int Res J Multidiscip Scope*. 2026; 7(2): 606-615.
DOI: 10.47857/irjms.2026.v07i02.09629