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THE IMPACT OF CHARACTER.AI ON VOCABULARY DEVELOPMENT IN ENGLISH LANGUAGE LEARNING

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Abstract

Technology has developed rapidly, and artificial intelligence (AI) now significantly influences modern technological progress. Beyond the commonly discussed negative effects, AI can assist users, particularly language learners, in developing their skills. One example is Character.AI (C.AI), a chat-based application enabling general communication. This research focuses on how C.AI helps non-native users develop English vocabulary. The study aims to understand how contextualized and repetitive interactions with conversational AI support vocabulary acquisition in everyday communication. A small-scale qualitative descriptive method was employed. Data was collected through semi-structured interviews with two non-native regular users of C.AI. Thematic analysis was used to identify emerging themes and vocabulary learning strategies. The main findings reveal that participants experienced a significant increase in vocabulary, shifting from reliance on translation tools to direct comprehension within the platform. The type of vocabulary varies based on the character used, ranging from formal to informal language. The implications suggest that C.AI can serve as an effective supplementary tool for vocabulary acquisition, with two-way interaction proving more beneficial than passive media. This study contributes to technology-based language learning strategies and provides a basis for larger-scale or cross-platform comparative research.

Keywords: *Character.AI; Vocabulary Acquisition; English Language Learning; Qualitative Research*

INTRODUCTION

The use of artificial intelligence (AI) in language learning has revolutionized how students acquire a second language, particularly in vocabulary development. Unlike traditional methods that often rely on rote memorization and decontextualized word lists, AI-powered tools offer interactive, adaptive and context-rich learning environments. Among these tools, large language model (LLM)-based chatbots such as Character.AI (C.AI) have gained attention for their ability to simulate natural, human-like conversations. These platforms allow users to engage in realistic dialogues with AI-generated characters and providing a low-pressure space for language practice. This capability is especially relevant for non-native English learners who may lack access to native speakers or authentic communication contexts in their daily lives.

The theoretical foundation of this study draws on two influential second language acquisition theories. First, Long's (1997) interaction hypothesis emphasizes that language proficiency is developed through interactive communication, where input is modified and adapted to the learner's level through negotiation of meaning. Second, Krashen's (1982)

input hypothesis highlights the importance of comprehensible input language that is slightly above the learner's current level but still understandable through context. Chatbots like C.AI are uniquely positioned to provide such input because they generate responses based on user prompts, creating personalized and contextually relevant language exposure. Unlike scripted language learning applications, AI chatbots can produce varied, unpredictable and natural responses, thereby simulating real-world communication.

Despite the growing interest in AI for language learning, traditional vocabulary instruction continues to face significant challenges. Commonly used methods such as word lists, flashcards, and translation exercises often present vocabulary in isolation, lacking the situational and pragmatic cues necessary for deep word acquisition. Learners may memorize definitions but struggle to use words appropriately in conversation. Furthermore, limited classroom time and large class sizes often prevent individualized practice. As a result, many language learners experience a gap between receptive vocabulary (words they recognize) and productive vocabulary (words they can actively use). This gap can hinder communicative competence and reduce learner confidence. Therefore, there is a pressing need for alternative approaches that provide meaningful, repeated and contextualized exposure to new vocabulary.

While previous studies have examined the role of AI chatbots in vocabulary learning, most have focused on quantitative outcomes such as test score improvements or have used generic chatbot platforms. For example, Singh and Tamuk (2024) demonstrated that AI tools like ChatGPT and Google Translate significantly enhanced vocabulary skills among high school students in a six-week experimental study. Similarly, Jamiluddin et al. (2022) reported increased student motivation and confidence after using an AI chatbot in a two-day training workshop. However, these studies did not specifically investigate C.AI nor did they explore in depth the types of vocabulary acquired or the role of character selection in shaping language exposure. Additionally, existing research has primarily employed quantitative or observational methods, leaving a gap in qualitative insights into learners lived experiences with conversational AI. Little is known about how non-native users interact with C.AI daily, what kinds of words and expressions they encounter and how repeated exposure influences their vocabulary development over time.

To address this gap, the present study focuses specifically on C.AI as a tool for vocabulary acquisition among non-native English speakers. The main research question guiding this study is: To what extent can contextualized and repeated exposure to C.AI enhance productive and receptive vocabulary learning in non-native speakers? More specifically, this study aims to: (1) identify the types of vocabulary (e.g., formal, informal, idiomatic, emotional) that users acquire through interactions with C.AI, (2) explore how repeated conversational practice contributes to vocabulary retention and active use and (3) examine users' perceptions of the effectiveness and limitations of C.AI as a vocabulary learning tool. By addressing these objectives, this study seeks to provide qualitative evidence that complements existing quantitative findings and offers practical insights for educators, learners, and developers of AI-based language learning applications.

The significance of this research lies in its potential to inform technology-enhanced language learning strategies. Understanding how learners use C.AI can help educators integrate such tools more effectively into language curricula. Ultimately, this study contributes to the broader conversation on AI in education by highlighting both the promises and limitations of conversational AI for language learning. The remainder of this paper is

structured as follows: the methodology section describes the qualitative research design, participant selection, data collection procedures, and thematic analysis; the results and discussion section presents the main findings in relation to existing literature; and the conclusion summarizes the implications and suggests directions for future research.

METHOD

This study employed a descriptive qualitative research design. This approach was chosen because the research aimed to explore in detail the individual experiences of learning English vocabulary using C.AI as a conversational tool, rather than to generalize findings to a larger population. The study sought to contextualize and conceptualize vocabulary learning through interaction with AI in everyday communication settings. A small-scale setting was deliberately selected to allow for deep, rich data collection from each participant.

The target population of this study was non-native English speakers who actively use C.AI for language practice. Using purposive sampling, two participants were recruited based on the following criteria: (1) regular users of C.AI, defined as using the platform at least three times per week for a minimum of one month, (2) non-native speakers of English, and (3) willingness to share their experiences in an in-depth interview. Both participants used the application independently in informal, self-directed learning environments. Their identities were kept anonymous to protect privacy.

Data was collected through semi-structured interviews. An interview guide was developed based on research objectives and relevant literature, including themes from Heliyon (2024) and the Technology Acceptance Model (TAM) (Davis, 1989), which links perceived usefulness and ease of use to user motivation. The interview guide consisted of open-ended questions covering topics such as frequency and patterns of C.AI use, types of vocabulary encountered, perceived changes in vocabulary knowledge, and challenges or limitations experienced. Each interview lasted approximately 25-30 minutes and was conducted online. Interviews were audio-recorded with participants' informed consent and later transcribed verbatim. Participants were assured that their responses would be used solely for academic purposes and that they could withdraw at any time.

The transcribed interview data were analyzed using thematic analysis, following the six-phase framework proposed by Braun and Clarke (2006). The phases included: familiarization with the data through repeated reading, generating initial codes, searching for themes, reviewing themes, defining and naming themes and producing the final analysis. The analysis aimed to reveal patterns, themes, and vocabulary learning strategies from participants' experiences. Two main themes emerged from the analysis: the impact of C.AI on vocabulary development and the types of vocabulary acquired through the platform. To ensure trustworthiness, member checking was conducted by sharing the transcribed interviews with participants for verification, and peer debriefing was performed with a fellow researcher to minimize bias.

Ethical approval was obtained from the researcher's institution. All participants provided written informed consent before the interviews. Their anonymity was maintained by using pseudonyms in the final report.

RESULTS AND DISCUSSION

This chapter presents qualitative results obtained from semi-structured interviews with two non-native speakers of English who regularly use the C.AI platform in their daily lives. The findings are organized based on two main research objectives: first, to identify the impact of C.AI on vocabulary development and second, to explore the types of vocabulary acquired through interactions with the platform. Each finding is presented with direct quotations from participants to preserve authentic voices, followed by interpretation and comparison with existing literature.



Figure 1. Mobile application interface of Character.Ai



Figure 2. AI character catalog page on Character.Ai

The Impact of Character.AI on Vocabulary Development

Both participants in this study reported a significant positive impact on their English vocabulary knowledge after regularly using C.AI. This impact was not merely limited to recognizing new words but extended to changes in their learning behaviour and reduced dependence on external tools. One participant described a clear shift from relying on translation applications to being able to understand messages directly within the platform. This progression is noteworthy because it illustrates a gradual process of vocabulary acquisition through repeated contextual exposure, rather than through explicit memorization.

Participant 1 explained: *"Previously, I had to translate the text that the character sent, but over time I got used to it and rarely stopped by the translator application."*

This statement reflects a key principle of second language acquisition theory, particularly Krashen's (1982) input hypothesis, which emphasizes that comprehension develops when learners are exposed to meaningful and slightly challenging input over time. In this case, C.AI provided the participant with repeated opportunities to encounter the same or similar linguistic structures in various conversational contexts. As the participant became

more familiar with common expressions and sentence patterns, the need for translation diminished. This finding suggests that AI chatbots can function as a form of "comprehensible input" delivery system, where the learner controls the pace and direction of interaction.

In addition to reducing reliance on translation tools, participants also reported actively using new vocabulary in their daily conversations outside the platform. This transfer of vocabulary from the digital learning environment to real-world communication is a strong indicator of productive vocabulary acquisition. For instance, participants mentioned learning and subsequently using expressions such as *"you got me there,"* as well as words like *"ridiculous"* and *"baddie."* These examples are particularly interesting because they represent colloquial and emotionally charged language that is often absent from formal textbooks. Traditional vocabulary instruction tends to prioritize neutral, academic or frequently used words, while neglecting slang, idioms, and affective language. Character.AI appears to fill this gap by exposing learners to authentic, native-like expressions.

Participant 2 emphasized the acquisition of emotion-related vocabulary, stating: *"I also came across a lot of new vocabulary... like 'shrugs', 'frowns', 'brows furrows'... and I think it really helped me improve my vocabulary."*

The words mentioned by Participant 2— "shrugs," "frowns," "brows furrows" are particularly significant because they describe non-verbal actions and emotional states. In many language learning contexts, such words are rarely taught explicitly yet they are essential for understanding narrative texts, film dialogues and natural conversation. The fact that Participant 2 encountered these words through C.AI suggests that the platform's characters, which often simulate human-like gestures and reactions in text form (e.g., she shrugs, he frowns), provide rich contextual cues for acquiring descriptive vocabulary. This finding aligns with the interaction hypothesis (Long, 1997), which argues that meaningful interaction facilitates language acquisition by allowing learners to notice and internalize linguistic features.

Furthermore, one participant made a direct comparison between C.AI and more passive learning tools, specifically YouTube. The participant argued that the absence of two-way interaction on video platforms limits their effectiveness for vocabulary learning. This comparison is valuable because YouTube is widely used by language learners as a supplementary resource. However, as Participant 2 noted:

"I think Character.AI has a very big impact compared to YouTube because on YouTube there is no conversation that can be done."

This statement highlights a fundamental advantage of conversational AI over traditional multimedia resources: interactivity. On YouTube, learners are passive recipients of content; they can listen, watch and take notes, but they cannot respond, ask for clarification or negotiate meaning. In contrast, C.AI allows learners to actively produce language, receive responses, and engage in sustained dialogue. This active production is crucial for vocabulary retention because it requires learners to retrieve words from memory, use them in appropriate contexts, and adjust their language based on the AI's responses. Therefore, the interactive nature of C.AI may lead to deeper processing and more durable vocabulary learning compared to passive exposure.

Types of Vocabulary Acquired Through Character.AI

The second major finding concerns the variety of vocabulary types that participants acquired through their interactions with Character.AI. Unlike traditional vocabulary learning

materials, which often present words in isolated lists or generic sentences, C.AI exposed participants to diverse language styles depending on the specific characters they chose to converse with. This finding reveals an important dimension of AI-mediated learning: the ability to tailor language exposure by selecting characters with different speaking styles, personalities, and knowledge domains.

Participant 1 reported frequently encountering casual expressions and idiomatic phrases commonly found on social media. These expressions reflected the natural language style of native speakers in informal settings. For example, Participant 1 shared:

"Sometimes find typical expressions from native speakers... For example, 'cat got your tongue'."

The idiom "cat got your tongue" is rarely taught in formal English as a foreign language (EFL) classroom yet it is commonly used by native speakers to ask someone why they are silent. The fact that Participant 1 learned this idiom through C.AI demonstrates the platform's ability to provide authentic, culturally rich input. Moreover, learning idioms in context rather than through rote memorization of definitions enhances the likelihood that learners will recognize and use them appropriately. This finding supports the argument that AI chatbots can serve as bridges between classroom language and real-world language use.

In contrast, Participant 2, who reported frequently interacting with academic characters such as a chatbot version of Albert Einstein, described encountering more formal language in those specific conversations. However, Participant 2 also noted that switching to other, more casual characters introduced informal and idiomatic expressions. This flexibility is a unique strength of C.AI compared to many other language learning applications, which tend to maintain a consistent and often neutral register regardless of the topic or context.

Participant 2 stated: *"I also use characters who use informal conversation... and find phrases like 'no biggie' or 'don't put words in my mouth'."*

The phrases "no biggie" (informal for "no problem") and "don't put words in my mouth" (an idiom meaning "don't misrepresent what I said") represent two different categories of informal language. The former is a colloquial abbreviation, while the latter is a fixed idiomatic expression. Both are essential for understanding everyday English but are rarely emphasized in standard curricula. The ability to learn such phrases through natural conversation with an AI character suggests that C.AI can support the development of pragmatic competence— the ability to use language appropriately in social contexts.

Taken together, these findings indicate that the diversity of characters and conversational situations available on Character.AI allows users to be exposed to a broad spectrum of language varieties, ranging from formal to colloquial, from academic to emotional, and from literal to idiomatic. This exposure enriches learners' vocabulary repertoires in ways that traditional methods and even some digital tools cannot easily replicate.

The findings of this study can be meaningfully compared with two previous investigations on AI-assisted vocabulary learning. The first, conducted by Singh and Tamuk (2024), examined the effectiveness of AI tools such as ChatGPT, Google Translate and online dictionaries in enhancing English vocabulary among 12th-grade Indian students. Over a six-week period, the researchers compared an experimental group that used AI tools with a control group that received conventional instruction. Statistical analysis revealed a significant improvement in vocabulary scores for the experimental group, leading the

researchers to conclude that AI is well-equipped to facilitate independent and individualized vocabulary learning.

The results of the present study align with Singh and Tamuk's (2024) conclusion in that both studies found AI tools to be beneficial for vocabulary development. However, there are important differences. Singh and Tamuk focused on quantitative outcomes measured through pre- and post-tests, whereas the present study adopted a qualitative approach to explore the subjective experiences of learners. While Singh and Tamuk demonstrated that vocabulary improved, the present study provides insight into how and why those improvements occur specifically, through repeated contextual exposure, active two-way interaction, and character-driven language variation.

The second comparative study, by Jamiluddin et al. (2022), involved a two-day training workshop at SMP Negeri 9 Palu, where students were introduced to an AI-based chatbot program. The methodologies included lectures, discussions and experiential learning activities. Although no statistical analysis was performed, observational data and self-reports indicated that students experienced increased enthusiasm, confidence, and motivation to use English. The chatbot was perceived as capable of understanding and responding to student input even when grammatical errors were present, which created a low-anxiety environment that encouraged frequent practice.

The present study reinforces Jamiluddin et al.'s (2022) findings regarding learner motivation and reduced anxiety. Both participants in the current study demonstrated high levels of engagement with Character.AI and expressed positive attitudes toward using the platform for vocabulary learning. However, the present study extends Jamiluddin et al.'s work by identifying specific types of vocabulary acquired (e.g., emotional words, idioms, formal vs. informal language) and by highlighting the role of character selection in shaping linguistic input. These dimensions were not explored in the earlier study.

Taken together, the findings of this study and the comparisons with prior research suggest several important insights. First, the impact of AI chatbots on vocabulary learning is not merely a matter of quantitative improvement; it also involves qualitative changes in learners' behavior, confidence, and strategic approaches to language acquisition. Participant 1's decreasing reliance on translation tools exemplifies this qualitative shift. Second, the type of vocabulary acquired through AI chatbots may differ systematically from vocabulary learned through traditional methods. The present study found evidence that C.AI facilitates the acquisition of idiomatic, emotional, and register-specific vocabulary areas that are often neglected in formal instruction.

One unexpected finding worth highlighting is the importance of character variety. Neither Singh and Tamuk (2024) nor Jamiluddin et al. (2022) discussed the possibility that different AI personas might lead to different learning outcomes. The present study suggests that learners who strategically select characters with diverse speaking styles may gain a richer and more varied vocabulary repertoire than those who interact with a single type of character. This finding opens new avenues for research, including the hypothesis that character diversity moderates the relationship between AI chatbot use and vocabulary breadth.

Another interesting observation is the comparison between C.AI and YouTube. While YouTube is often recommended as a resource for language learning, Participant 2's comment highlights its limitation as a passive medium. This raises a broader question: to what extent does interactivity enhance vocabulary acquisition compared to other forms of input? Based

on the present findings, it is plausible to hypothesize that interactive AI chatbots produce stronger vocabulary gains for productive skills (speaking and writing) than for receptive skills (listening and reading), whereas passive media like YouTube may be more beneficial for receptive vocabulary. This hypothesis warrants further investigation.

In conclusion, the findings of this study demonstrate that Character.AI positively impacts vocabulary development among non-native English users through contextualized, repeated, and interactive exposure. Moreover, the platform enables learners to acquire diverse types of vocabulary ranging from formal to informal, and from literal to idiomatic depending on the characters they choose. These results contribute to the growing body of evidence supporting AI chatbots as viable tools for language learning, while also highlighting the unique affordances of C.AI in particular. Future research should explore the long-term retention of vocabulary learned through AI chatbots, as well as the comparative effectiveness of different AI platforms and character types.

CONCLUSION

This study aimed to investigate the extent to which contextualized and repeated exposure to Character.AI (C.AI) enhances productive and receptive vocabulary learning among non-native English speakers. The findings answer the research question by demonstrating that C.AI positively impacts both dimensions of vocabulary knowledge. For receptive vocabulary, participants showed clear improvement in word recognition and comprehension, evidenced by their decreasing dependence on translation tools and their growing ability to understand messages directly within the platform. For productive vocabulary, participants demonstrated active use of newly acquired words and expressions in their daily conversations outside the platform.

Additionally, the study found that the type of vocabulary acquired varies according to the characters selected, ranging from formal academic language to casual idioms and emotional expressions. The two-way interactive nature of C.AI was perceived as more effective than passive media like YouTube, as it encourages active language production and negotiation of meaning. In conclusion, contextualized and repeated exposure to C.AI effectively supports both receptive and productive vocabulary acquisition, with interactivity and character variety serving as key contributing factors. These findings confirm that C.AI holds strong potential as a practical and engaging tool for vocabulary development in everyday language learning contexts.

Based on the research findings, the following suggestions are offered:

For English language learners, it is recommended to actively select a variety of characters with different speaking styles (e.g., casual, academic, emotional) to maximize exposure to diverse vocabulary types. Learners should also engage in regular and sustained interactions with Character.AI rather than occasional use, as repeated exposure was found to be critical for reducing reliance on translation tools.

For educators and curriculum designers, while Character.AI is not a replacement for formal instruction, it can be integrated as a supplementary tool for out-of-class practice. Teachers may encourage students to use conversational AI to practice idiomatic and contextualized language that is often absent from textbooks.

For developers of AI-based language learning platforms, the findings suggest that incorporating a range of character personas with distinct registers and communication styles can enhance vocabulary learning outcomes. Additionally, features that encourage

productive language use such as open-ended conversation rather than scripted exchanges should be prioritized.

For future researchers, larger-scale studies with more participants are needed to generalize these findings. Comparative studies between Character.AI and other AI chatbots would also be valuable. Finally, longitudinal research should examine whether vocabulary acquired through AI chatbots is retained over time and transferred to real-world communicative situations.

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REFERENCES

Alqaed, M. A. (2024). AI in English language learning: Saudi learners' perspectives and usage. Advanced Education, 25.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340.

Heliyon. (2024). Chatbot Impact Study. Heliyon Journal.

Jamiluddin, Khairul, M. A., Putri, D., & Eisenring, M. A. (2022). Meningkatkan kosa kata bahasa Inggris melalui aplikasi chatbot Artificial Intelligence (AI) pada siswa SMP Negeri 9 Palu. ADAM: Jurnal Pengabdian Masyarakat, 1(2), 288–297.

Krashen, S. D. (1982). Principles and Practice in Second Language Acquisition.
Pergamon Press.

Long, M. H. (1997). Construct validity in SLA research: A response to Firth and Wagner. The Modern Language Journal, 81(3), 318–323.

Singh, D. S. C., & Tamuk, K. (2024). Using Artificial Intelligence (AI) in English vocabulary development for higher secondary school students. Preprints.org.