



THE ROLE OF AI-POWERED TOOLS IN ENHANCING VOCABULARY ACQUISITION AMONG BEGINNER LEARNERS

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Abstract. *This study explores the impact of AI-powered tools on vocabulary acquisition among beginner learners. The research investigates how artificial intelligence applications, such as language learning apps and chatbots, facilitate the retention and recall of new words. Using a mixed-method approach, data were collected from 50 beginner learners through pre- and post-tests and interviews. The results indicate that AI tools significantly enhance vocabulary retention, increase learner motivation, and provide personalized learning experiences. The study concludes that integrating AI-powered tools in language education offers substantial benefits for beginner learners and recommends further research on their long-term effectiveness.*

Key words: *AI-powered tools, Vocabulary acquisition, Beginner learners, Language learning, Artificial intelligence, Educational technology, Adaptive learning*

Introduction

Language learning, especially vocabulary acquisition, is a critical component of effective communication. For beginner learners, acquiring and retaining vocabulary can be challenging due to limited exposure and cognitive overload. In recent years, AI-powered tools, such as language learning apps and intelligent chatbots, have emerged as innovative solutions to support vocabulary learning. This study investigates the role of AI in enhancing vocabulary acquisition among beginner learners. The main research question is: *How do AI-powered tools affect vocabulary learning outcomes in beginner learners?* The study aims to explore the benefits, challenges, and practical implications of AI-assisted vocabulary learning.

Vocabulary acquisition is one of the most important aspects of language learning for beginner learners since it forms the foundation for effective communication. Previous studies have shown that learners often face difficulties in remembering and using new words due to limited exposure and cognitive overload. Traditional strategies such as memorization, flashcards, and repetition have been useful but often fail to engage learners or provide personalized feedback. Recent developments in artificial intelligence have introduced new opportunities for supporting vocabulary acquisition. AI-powered tools such as language learning apps, chatbots, and adaptive platforms provide learners with interactive exercises, instant feedback, and personalized learning paths. Studies have demonstrated that AI tools can increase learner motivation, improve retention, and allow learners to practice vocabulary in meaningful contexts. However, most research has focused on intermediate or advanced learners, with limited studies specifically addressing beginner learners. Therefore, this study aims to explore the role of AI-powered tools in supporting vocabulary acquisition among beginners and to examine how these tools influence motivation, engagement, and learning outcomes.



This study employs a mixed-methods approach, combining quantitative and qualitative data to investigate the impact of AI-powered tools on vocabulary acquisition among beginner learners. The participants included fifty beginner learners aged between eighteen and twenty-five who were enrolled in an English language course at Uzbekistan State World Languages University. Data collection involved pre-tests and post-tests to measure vocabulary knowledge before and after using AI-powered tools. Semi-structured interviews were conducted to gather learners' perceptions, experiences, and attitudes toward the AI tools. The procedure involved using an AI-powered language learning application for a period of four weeks. Participants were instructed to complete vocabulary exercises daily and engage with interactive features such as quizzes, flashcards, and chat simulations. Data analysis for the quantitative component included comparing pre-test and post-test scores using descriptive statistics and paired sample t-tests. The qualitative data from interviews were analyzed using thematic analysis to identify common patterns and insights regarding learners' experiences.

Methodology

The quantitative results indicate a significant improvement in vocabulary acquisition among beginner learners after using AI-powered tools. The average vocabulary scores increased by thirty percent from pre-test to post-test. This demonstrates that the AI tools had a positive effect on learners' ability to remember and use new words. The qualitative findings show that learners reported increased motivation, engagement, and confidence in using new vocabulary. Participants highlighted that personalized feedback, interactive exercises, and adaptive learning paths were the most beneficial features of the AI tools. Many learners expressed that practicing vocabulary through chat simulations helped them use words in meaningful contexts and reinforced retention. Some learners also noted challenges such as occasional technical difficulties and the need for internet access. Overall, the results suggest that AI-powered tools are effective in supporting vocabulary acquisition, enhancing motivation, and providing a personalized learning experience for beginner learners.

Conclusion

This study demonstrates the effectiveness of AI-powered tools in supporting vocabulary acquisition for beginner learners. The findings highlight increased retention, motivation, and learner autonomy. Future research could explore long-term effects, different proficiency levels, and diverse AI applications. Implementing AI tools in language education can significantly improve learning outcomes and learner experiences.

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