

## The Impact of ChatGPT on Vocabulary Development in Written Proficiency Among Sri Lankan Tertiary-Level ESL Learners

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In an era where technology is rapidly transforming education, the potential of Artificial Intelligence (AI) to revolutionize English language learning is becoming increasingly evident. Thus, the primary aim of this study is to explore the impact of ChatGPT, a machine-learning system, on vocabulary development in written proficiency among Sri Lankan tertiary-level ESL learners. Conducted with 50 first-year undergraduates pursuing degrees in Commerce and Management Studies from the University of Kelaniya and the Australian College of Business and Technology, the research employed pre-test and post-test assessments to evaluate students' progress. Participants underwent a 20-hour intervention using ChatGPT during their English Language lectures, with significant findings highlighting enhanced vocabulary development and improved written proficiency. The research employed a mixed-method approach, utilizing pre-test and post-test assessments analyzed with the CEFR marking rubric and content analysis to explore themes and understand changes in vocabulary. Moreover, descriptive statistics was used to explore the changes in the pre-test and post-test scores. The study also emphasized a balanced approach, combining AI assistance with traditional teaching methods to ensure independent skill development. Ethical considerations and academic integrity were addressed, educating students about responsible AI use to mitigate potential issues of plagiarism. The results underscore the potential of integrating AI tools like ChatGPT into ESL curricula, offering valuable insights for educators and policymakers aiming to optimize language education. Henceforth, this research contributes to the growing body of knowledge on AI's role in language learning, particularly in contexts where English is learned as a second language, such as Sri Lanka.

**Keywords:** *ChatGPT, English as a Second Language, vocabulary development*