Chapter 12
Generative AI for Learning English as a Foreign Language (EFL)

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ABSTRACT

The use of Artificial Intelligence (AI) to augment learning in open and distributed learning environments signifies a change in thinking on the application of educational technology, especially in language training. The development of digital platforms and AI technology has resulted in notable progress in mobile-assisted language learning where AI is incorporated to offer tailored, flexible, and captivating educational experiences. This study broadens the conversation on AI-assisted education by conducting a comprehensive analysis of its use in teaching English as a Foreign Language (EFL). It presents the theoretical underpinnings of AI-assisted learning, cites pertinent learning theories, and suggests a pedagogical framework that facilitates the integration of AI-assisted learning into language learning environments. It examines the existing research on AI-supported foreign language education, with a focus on the shift from traditional teaching methods to AI-based techniques. The current study also identifies certain areas that require additional investigation and can improve the design and application of these technologies.

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INTRODUCTION

Technology has rapidly shaped almost every aspect of our lives and opened additional spaces for the implementation of emerging technologies. While the field of education has experienced and discussed the impact of mobile- assisted learning for almost two decades, we have recently been introduced to Artificial Intelligence (AI) assisted innovations such as ChatGPT run on Large Language Models (LLMs). This introduction represents a quantum leap forward from conventional technologies, multimedia software, and mobile applications to an advanced level of knowledge formation by using algorithms working through large language models. AI platforms exploit deep learning and natural language processing by enabling machines to learn from experience. By adjusting to inputs from the dialogue partner (human or environmental) and responding accordingly these systems are performing logical tasks which have previously been exclusively human domains such as playing games, finding, and routing to locations, driving, and so on. This level of innovation and in some instances, intrusion has provoked concern over the unintended consequences of displacing human jobs and the offloading of ethical decisions to automated systems. Recently, many published works have appeared focused on the affective factors, interface designs, limitations, and learning outcomes for students in AI assisted language education (Law, 2024). AI-assisted platforms have enhanced the affordances of computer assisted language learning (CALL) and mobile-assisted language learning (MALL), by enabling more authentic and personalized learning experiences that are adaptable in real time. (Huang et al., 2023)

AI-assisted language learning (AIALL) can be defined as the use of artificial intelligence capacities such as large language models (LLM), adaptive learning algorithms, natural language processing (NLP), speech recognition, and similar technologies to enhance language learning processes and outcomes. This way of language learning can provide learners with real-time input and feedback, which can allow the language learning process to be more effective and interactive with personalized experiences enhanced by AI capacities such as intelligent tutoring systems and more interactive chatbots. These AI assisted programs could be considered an extension of CALL (Schulze, 2008) and of MALL as they provide users more context-aware learning affordances, thus creating more opportunities for novel input and interaction (Godwin-Jones, 2023) and differentiate themselves from earlier learning platforms in terms of the real-time input and feedback exchange between human and machine interlocutors (Weng & Chiu, 2023). A significant volume of research on AIALL has presented results that are correlated with improved language learning outcomes using AIALL tools (Kim et al., 2019; Kohnke, et al., 2023; Shadiev et al., 2023). Given that these AIALL tools are revolutionary, and that language input is created in a physical setting, with the potential beyond textual