


Chapter 2


Artificial Intelligence in Language Teaching: Exploring Translanguaging, Eco-Linguistics, and Community-Based Learning

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ABSTRACT

This chapter critically examines the role of Artificial Intelligence (AI) in second and foreign language teaching through the lens of eco-linguistics, with a particular focus on translanguaging. It explores three key dimensions of AI's impact: the theory of language, the theory of language learning, and the evolving role of the teacher. Using an argumentative and experimental methodology, the chapter integrates theoretical insights from eco-linguistics and translanguaging to evaluate AI-assisted tools. It highlights the opportunities these tools provide, such as personalized learning and adaptive feedback, while addressing their limitations, including challenges to emotional connection, language standardization, and the diminishing role of human interaction. The chapter proposes a hybrid model that combines AI with community-based language teaching to mitigate these issues, preserving the communication ecology and fostering more holistic language learning practices.

DOI: 10.4018/979-8-3373-0030-6.ch002

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INTRODUCTION

Language learning has undergone profound transformations with the rapid advancements in Artificial Intelligence (AI) technologies, which simulate human intelligence through computational processes (Liang et al., 2021). AI-driven tools, including intelligent chatbots, automated translation systems, and adaptive learning platforms, have expanded opportunities for learners to engage with language beyond traditional classroom environments (Kohnke, Moorhouse & Zou, 2023). These technologies facilitate personalised, adaptive, and scalable learning experiences, addressing the diverse needs of individual learners. Leveraging AI's capabilities, educators can deliver tailored lessons, provide real-time feedback, and create opportunities for learners to practice language skills at their own pace (Chen et al., 2021; Kuddus, 2022; Rusmiyanto et al., 2023). By personalising learning pathways and offering data-driven feedback, AI tools effectively cater to individual learning requirements (Kim et al., 2019; Porter & Grippa, 2020; Wei, 2023). Platforms like Duolingo and Babbel employ machine learning algorithms to customise lessons based on learner progress, presenting tailored exercises and language tasks (Fitria, 2021).

Furthermore, AI-powered systems, such as language models like ChatGPT (Chat Generative Pre-trained Transformer), offer interactive experiences that emulate natural conversations, enabling learners to practice speaking and writing in low-pressure environments (De la Vall & Araya, 2023; Rusmiyanto et al., 2023). Notably, AI applications like ChatGPT have demonstrated utility in vocabulary acquisition (Kohnke et al., 2023), while Li et al. (2020) and Yildiz (2023) highlight AI's effectiveness in enhancing pronunciation. The consensus across scholarly research acknowledges AI's significant and transformative role in the field of language education. Empirical, theoretical, and experimental research has explored AI-assisted chatbots like ChatGPT, a Generative Pre-trained Transformer (GPT) model (Xiao & Zhi, 2023; Shaikh et al., 2023). This advanced AI, trained on extensive datasets, demonstrates the ability to process natural language and generate responses that often mimic human-like interaction (Floridi & Chiriatti, 2020).

Scholars also tried to see the relevance of AI tools from a theoretical standpoint, such as the theory of language teaching, the theory of learning, and the theory of language itself (Hatmanto & Sari, 2023; Young & Shishido, 2023.) Kim et al. (2023), while discussing the possible place of ChatGPT in education, reflected on the question of 'learning'. Following Park et al. (2021, cited in Kim et al., 2023), they argued for a constructivist perspective of learning where the meaning, idea and perspective are constructed through personal experience. From a constructivist perspective, the individual actively engages with the varied discourses and applies their acquired skills to solve the existing problems. The focus remains on the individual's active participation in the learning process, where the teacher's role is

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