

Generative Artificial Intelligence in Language Education: Opportunities, Challenges, and Pedagogical Directions

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ABSTRACT

Generative Artificial Intelligence (GenAI) marks a major advancement in the evolution of computer-assisted language learning (CALL), introducing possibilities for automating language tasks, fostering learner autonomy, and providing individualized feedback at an unprecedented scale. This article offers a critical examination of GenAI's pedagogical promise and ethical implications by focusing on four key areas: 1) test and task generation, 2) writing and feedback, 3) adaptive and personalized learning, and 4) challenges and ethical considerations. Drawing on current research in language education, the article argues that GenAI can meaningfully enhance teaching and learning when positioned as a pedagogical collaborator, not a replacement for human educators. Central to this integration are teacher mediation, AI literacy, and ongoing critical reflection to ensure equity and responsible use.

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1. INTRODUCTION

The recent rise of Generative Artificial Intelligence (GenAI) has played a critical role in the development of technology-enhanced language learning. As more and more educational institutions worldwide explore the potential of AI, language educators are facing unparalleled opportunities and complex pedagogical challenges. GenAI (e.g., ChatGPT, Bard, and Claude) is fundamentally different from earlier forms of computer-assisted language learning (CALL) tools in its ability to generate coherent, contextually appropriate, and human-like text (Chapelle, 2025). This has catalyzed renewed reflection on how such systems might transform key aspects of language education, from task design and feedback to assessment and learner autonomy (Moorhouse & Wong, 2025).

While earlier CALL research often focused on integrating discrete tools for vocabulary learning, grammar correction, or pronunciation practice (see Levy & Stockwell, 2006), GenAI represents a more general paradigm shift toward co-creative interaction between humans and machines. Learners no longer passively receive pre-programmed algorithm-driven feedback or content but collaborate with AI systems that can create new language data, dynamically revise input, and adjust output according to communicative intent (Lee et al., 2025). This reorientation from computer-assisted to computer-collaborative learning holds important implications for second language acquisition (SLA) theories and pedagogy. In particular, it problematizes traditional dichotomies between input and output, and between feedback and feedforward, as learners interact dialogically with GenAI systems capable of simulating human communication (Lee et al., 2025).

Within language education, GenAI has been noted for its potential for personalized instruction, formative feedback, and increased access to learning opportunities (Kohnke, 2025a). It simultaneously raises questions of authorship, creativity, and critical literacy. Language learners must increasingly consider the ethical and epistemic dimensions of AI-assisted communication, not just linguistic accuracy (Matthews, 2025). Educators are similarly called to reconsider what the teaching of writing, testing, and critical thinking means in an environment where learners can produce flawless text within seconds (Kohnke, 2025b). These changes invite CALL researchers to continue long-standing debates about autonomy, authenticity, and mediation into the realm of generative technologies.

The integration of GenAI into language education should therefore be considered not just a technological innovation but a pedagogical and epistemological turn. It builds on earlier traditions in CALL and computer-mediated communication (CMC), where the emphasis was placed on meaningful interaction and learner agency (Chapelle, 2001; Levy & Stockwell, 2006). However, GenAI introduces a new form of mediation: whereas technologies have simply provided access to authentic texts or communication partners, GenAI can *generate* novel discourse that is responsive to learner input. This functionally opens up new possibilities for task-based language teaching (TBLT) and formative assessment in providing adaptive tasks and dynamic scaffolding, hitherto impossible (Li et al., 2025). For example, a GenAI system could provide contextually apt prompts, simulate interlocutors in conversation practice, and supply reformulations or explanations in real time, customized for the learner's linguistic profile.

Yet these affordances coexist with significant risks and uncertainties. Researchers have raised several concerns regarding the non-transparency of GenAI tools, the biases in the training data, and the potential loss of learner agency when students over-rely on automated text generation (Nguyen, 2025). In language education, where meaning-making and identity construction are fundamental, uncritical engagements with AI could inadvertently reinforce dominant linguistic ideologies or diminish the agentive activity of reflection and negotiation in learning (Darvin, 2025).

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