

Chapter 15

Designing Language Learning Experiences With Generative AI Tools

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ABSTRACT

Artificial intelligence (AI), particularly generative AI, can present many opportunities for language learners to practice and improve their language skills, receive timely feedback on their performance, and customize their learning based on their needs and language proficiency. AI's benefits are not limited to second language (L2) learners. Instructors can also benefit from the novel generative AI technologies by using them in curriculum and lesson design, developing new teaching and assessment materials, or addressing diverse learner skills and needs. Despite AI's advantages, the main issue is how to design L2 environments effectively so learners can receive the best benefits from AI while reducing some associated drawbacks. This chapter argues that learning experience design (LXD) presents a road map for L2 instructors as they incorporate generative AI into their instruction. If the learning design is random and left to good intentions, achieving meaningful learning outcomes will also be left to chance. Following proven LXD guidelines may help alleviate the confusion around AI.

Artificial intelligence (AI) can be defined as a computer or a robot performing specific tasks that humans usually perform, such as finding solutions to problems, synthesizing information, analyzing data, or identifying patterns. The idea of AI that can analyze information is not new. Traditionally, AI uses discriminative modeling, making AI efficient and cost-effective. As a specific form of AI, generative AI, on the other hand, goes further than traditional AI. Relying on transformer-based machine-learning algorithms, generative AI can produce new and high-quality content using multiple modalities, such as text, images, audio, and videos. Compared to the traditional option, generative AI is less cost-effective but more efficient in producing new content that is coherent and conceptually appropriate (Hsu & Ching, 2023). The much-talked-about ChatGPT from Open AI, Bard from Google, Claude from Anthropic, and Bing from Microsoft are examples of generative AI.

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Designing Language Learning Experiences With Generative AI Tools

Many fields, from medicine to security systems to businesses, have used AI in recent years. In the beginning, what started with simple text suggestions, grammar checks, and email prompts turned into a completely new direction with the automation of writing whole essays and even books. In education, the adoption of AI tools has been relatively slow. According to a national survey in the U.S. (Sebesta & David, 2023), 60% of higher education personnel reported scattered conversations around AI, while 75% stated a lack of incentives for using AI technologies. However, this situation is quickly changing as higher education institutions try to adapt to rapid developments.

In second language (L2) studies, AI has increasingly been used. For instance, voice-based AI tools such as Amazon Alexa and Apple Siri can increase communication skills (Underwood, 2017), while chatbots can provide unlimited and real-time practice options (Jeon, 2022), coach students as they study a language and improve their language skills (Wang et al., 2022), help with conducting critical research and evaluation (Hsu & Ching, 2023), and assist in translating, editing, paraphrasing, revising, researching and generating text (Warschauer et al., 2023). Researchers also reported some limitations with AI that learners and instructors need to be aware of. For example, the current AI tools may not offer “a broad enough view of language and culture, limiting students’ exposure to diverse perspectives” or work well with students with accents (Wang et al., 2023, p. 2). In addition, generative AI tools can produce non-existent sources in writing prompts or hallucinate while presenting template rigidity (Barrot, 2023). As with any new emerging technology, the novelty effect of AI technologies may also subside over time (Fryer et al., 2017). Finally, Zhao (2023) argues that most-AI based digital writing tools for L2 focus on revisions and editing, while tools for completing higher-order tasks such as formulating ideas are still lacking. An effective and careful learning design may guide to mitigate the adverse impact of generative AI for L2.

This chapter aims to present a learning experience design (LXD) approach for the effective integration of generative AI so this new technology can lead to meaningful learning experiences in L2 instruction. According to a recent report, all uses of AI in education “must be grounded in established, modern learning principles” (U.S. Department of Education, 2023, p. 60), prioritizing learning design. Other scholars also argued that “it takes careful planning and learning to optimally leverage GenAI’s capabilities” (Hsu & Ching, 2023, p. 606). The chapter, therefore, will start with presenting LXD models and practices applicable to L2 and discussing the contemporary design frameworks commonly used for emerging technologies. From there, design implications specific to generative AI in the context of L2 will be presented after synthesizing contemporary learning experience design (LXD) models.

LEARNING EXPERIENCE DESIGN (LXD) FOR L2

In a report published in 2007 by the Modern Languages Association, the authors call for new structures in teaching languages. While they never mention instructional design (ID) or LXD in this report, they call for a curriculum reform that includes “explicit, principled educational goals and expected outcomes” (MLA, 2007, para.14). The report focuses on the new type of content that needs to be included in the curriculum with little attention to the methodology of doing it. Unfortunately, most language teacher training curricula rarely include teaching subjects such as instructional design or learning experience design. Hence, a comprehensive and holistic approach to learning design can provide much-needed intentionality to deliver successful language instruction.

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