Chapter 1
Constructivist and Connectivist Foundation for Microlearning in Digital Language Learning Community

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ABSTRACT

This study examines microlearning's role in fostering learner autonomy and community engagement in technology-enhanced language learning. Rooted in constructivist and connectivist paradigms, microlearning delivers bite-sized, goal-oriented modules that promote active knowledge construction and collaboration in digital contexts. Teachers, designers, and platform developers play key roles by creating modular, relevant content, enabling peer feedback, and integrating mobile-first platforms with gamification and AI personalization. Technologies like AI, VR, and AR enhance microlearning through personalized, immersive experiences. However, challenges such as digital equity gaps, limited infrastructure, and sustaining motivation in asynchronous settings require attention. Future research should explore its long-term effects on motivation, collaboration, and knowledge building. Addressing these issues allows microlearning to create inclusive, flexible, and transformative ecosystems that empower diverse learners globally.

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INTRODUCTION

The use of technology in language learning has reshaped traditional teaching methods, creating learning experiences that are more flexible, interactive, and tailored to individual needs. Digital tools and platforms now make it possible for learners to study at their own pace and access materials anytime and anywhere. This not only encourages greater independence but also caters to different learning styles (Ibyatova et al., 2018; Rahman, 2022). By incorporating multimedia features like videos, quizzes, and gamified tasks, technology-enhanced language learning promotes active engagement and helps boost student motivation (Sadiq & Zamir, 2014; Schwaller, 2002). On top of that, adaptive technologies and artificial intelligence allow lessons to be customized to each learner's progress, offering instant feedback and supporting varied teaching approaches (McGovern et al., 2007; Zahorian et al., 2000) Altogether, these innovations are shifting language education away from rigid, teacher-centered models toward more dynamic, learner-focused environments that encourage participation and support deeper language mastery.

The rapid development of digital technologies such as mobile apps, virtual classrooms, and artificial intelligence (AI) has changed the face of language learning in the modern era. These innovations enable a more flexible, interactive and accessible learning process, allowing students to learn whenever and wherever they need (Ibyatova et al., 2018; Schwaller, 2002) . Through mobile apps, students can access a variety of materials ranging from vocabulary exercises to conversations with AI that provides immediate feedback. Meanwhile, virtual classroom platforms facilitate real-time collaborative interactions, allowing students and teachers to connect despite being in different locations (Zahorian et al., 2000; McGovern et al., 2007).

As technology advances, there is a paradigm shift from a teacher-centered approach to a learner-centered approach. Technology supports this change by providing space for students to set their own learning pace, choose media that suits their learning style, and utilize various digital resources independently (Barrera et al., 2024; Rahman, 2022). This shift also encourages teachers to play the role of facilitator rather than just a material deliverer, so that classroom interactions become more dynamic and focused on the needs of learners. In the context of 21st century learning, learner autonomy is an important skill that must be developed. The ability of students to manage their learning process not only increases their sense of responsibility but also equips them with lifelong learning skills that are relevant in the midst of rapid technological change (Sadiq & Zamir, 2014). Technologies such as AI and adaptive learning systems further strengthen this autonomy by providing personalized materials according to each individual's needs and abilities.

In addition, technology enriches the language learning experience by presenting multimodal content such as videos, infographics and interactive quizzes. This type