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The Future is Connection:

Collaboration, Creativity and Compassion in a Digital Society

A systematic review of how GenAI supports L2 oral proficiency development from the lens of Self-determination Theory (SDT)

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Despite a proliferation of research on GenAI for second/foreign language (L2) education since the official launch of ChatGPT in November 2022, current understanding of its role in L2 oral proficiency development remains limited. To address this research gap, this systematic review draws on Self-Determination Theory (SDT) to examine how GenAI may support L2 learners' three basic psychological needs and how such need satisfaction may be associated with their cognitive, behavioural, and emotional engagement in GenAI-mediated speaking. Adopting the PRISMA Statement (Preferred Reporting Items for Systematic Review and Meta-Analyses) approach, the review identified 30 empirical studies from ProQuest, Web of Science, and Scopus based on predefined inclusion and exclusion criteria. The selected studies were analysed using a hybrid deductive and inductive coding approach following a coding framework. The analysis suggests that GenAI can enhance L2 learners' sense of autonomy satisfaction by enabling learner-driven choices and interaction personalisation. It may also support competence satisfaction by affording accessible oral practice, immediate and personalised feedback, and scaffolded speaking development. Regarding relatedness satisfaction, GenAI appears to offer partial support by providing a non-judgemental and emotionally supportive practice environment. Furthermore, the degree of needs satisfaction may be associated with learners' behavioural, cognitive, and emotional engagement (or disengagement) in GenAI-supported L2 speaking development. Specifically, the findings suggest that emotional engagement in GenAI-mediated speaking appears most evident, followed by cognitive and behavioural engagement. These findings extend the SDT literature in GenAI-assisted language learning and offer practical insights for integrating emerging technologies into language education. For educators, given the review highlights the promising affordances of GenAI to address conventional barriers to L2 oral proficiency development, teachers should integrate GenAI into speaking classes to create an anxiety-free and feedback-rich speaking practice environment, while they need to consider learners' age and proficiency to provide necessary teacher guidance.

Keywords: SDT, GenAI-assisted language learning, L2 speaking, needs satisfaction, engagement

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