12 - 14 June 2026 Vienna , Austria

An AI-Supported Entrepreneurial Simulation Model for Experiential Learning

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Abstract

This research investigates the effectiveness of an Entrepreneurial Simulation Model in fostering experiential learning. It examines how business creation and operation, venture-based entrepreneurial tasks, and AI-assisted learning environments contribute to interdisciplinary learning. The study aims to provide evidence-based recommendations for the design and implementation of effective experiential learning initiatives.

A mixed-methods design was employed, integrating Fermatean Step-wise Weight Assessment, Monte Carlo Simulation, and sentiment analysis. Data were collected from entrepreneur-learners, content lecturers and language tutors, and external professionals through surveys and qualitative feedback. The findings reveal that entrepreneurial learning experiences, access to AI-supported tools, and lecturers' dual competence in language and disciplinary content are significantly predictors of programme success. Moreover, participant sentiment and perceived usefulness were found to mediate the relationship between training experiences and the development of inherent entrepreneurial competencies.

The research highlights the dynamic interplay between pedagogical design and AI-supported learning environments in fostering entrepreneurial competence and adaptive learning. Based on the findings, a comprehensive implementation framework for the Entrepreneurial Simulation Model is proposed to support scalable and sustainable experiential learning practices. The study offers practical implications for educators, institutions, and policymakers seeking to develop adaptive, AI-assisted learning ecosystems and professional development initiatives that enhance entrepreneurial competence and experiential learning outcomes.

Keywords: Entrepreneurial Simulation Model, Experiential Learning, AI-supported Learning

Environment