

"Integrating AI with Design Thinking: Transforming Entrepreneurship Education and Enhancing Creative Processes"

Abstract

Design Thinking (DT) has emerged as a key pedagogical approach for ideation and business model generation in Entrepreneurship Education. With the growing prominence of artificial intelligence (AI) as a technological tool, understanding its role in integrating with DT processes to foster innovation and influence learners' emotions is increasingly important. This study explores the impact of AI on DT in generating innovative solutions to real-world problems and examines its effects on learners' emotional experiences. The research is grounded in a case study of an AI-Assisted Design-Based Learning (DBL) Workshop conducted with 53 international master students from NUCB Business School, in collaboration with a Japanese AI startup. Data were collected through pre- and post-course surveys, AI usage records, learning journals, and post-course project reports.

The study contributes in two key areas: the creative process and emotional impact. Preliminary findings suggest that AI significantly enhances the "Empathy" and "Ideation" phases of DT, primarily due to its "divergent" effect and the complexity of the challenges addressed. Additionally, the research reveals an indirect relationship between learners' creativity and their intention to use AI in future work, mediated by their perceptions of AI's efficiency and the anxiety experienced during the DT process. These insights deepen our understanding of how AI integration in the early stages of DT can drive innovation and clarify the relationship between creativity and learners' emotions in the context of AI. This research offers valuable implications for improving DBL practices in Entrepreneurship Education by highlighting the effectiveness of AI in fostering creative problem-solving and its emotional impact on learners.

Keywords: Design Based Learning, Design Thinking, Artificial Intelligence, Entrepreneurship Education