

# Chapter 8

## Influence of Integrating AI on Engagement of College Students

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### ABSTRACT

*With the rapid and global revolution of immersive technology in teaching and learning processes, significant and innovative technological advancements, along with their tools and applications, have transformed the modern education system. This chapter discusses immersive learning in teacher education by using simulated environments, tools, and practices. This concept centers on the role of AI applications on learning engagement, and the chapter also identifies how immersive technology like AI can be used to increase the learners' engagement in the course. This is a qualitative study with 35 participants who are college instructors. Semi structured interviews were conducted. Results revealed that cognitive, behavioral, social, and emotional states were influenced by AI tools.*

### INTRODUCTION

Artificial intelligence (AI) is significantly increasing worldwide, integrating into many aspects of human life, including teaching and learning processes (Anawalye et al., 2024). The rising significance of AI has created a need for its inclusion in educational systems. Although researchers, practitioners, and education policymakers acknowledge the need to teach AI in higher educational institutions (Ma et al., 2023; Touretzky et al., 2019), there have been limited efforts to incorporate it into

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teacher education (Sanusi et al., 2022). Education stakeholders agree on the importance of AI education, which is evident from the development of tools, curricular activities, and frameworks for effective AI implementation as a standalone subject or integrated throughout the curriculum (Casal-Otero et al., 2023; Mahipal et al., 2023; Sanusi, 2023). While these initiatives are crucial for advancing AI education in schools, focusing on teacher education is essential (Sanusi et al., 2023). Current studies emphasize the demand for further development in teacher education programs for AI. Although some initiatives exist, they are mostly in the form of professional development programs. To ensure AI integration in the higher education systems, future teachers must be prepared to teach AI, as it is now considered a crucial future skill (Park et al., 2023).

With the rapid and global revolution of technology in teaching and learning processes, significant and innovative technological advancements, along with their tools and applications, have transformed the modern education system. AI is revolutionizing teacher education by enhancing training programs, personalizing professional development, and improving instructional strategies. Hence, AI's influence on engaging college students should be investigated. As college students will be future teachers.

This research makes a significant contribution by assessing the current role of AI in studying engagement and identifying the specific AI techniques employed so far, highlighting their advantages over traditional methods like self-reporting. Addressing this issue is crucial, as it remains uncertain whether these AI techniques effectively overcome the limitations of self-reporting tools, the extent of their effectiveness, or whether they offer additional benefits in understanding engagement.

By evaluating the effectiveness and limitations of AI-based methods in influencing engagement, this research paves the way for improving AI tools in the future, fostering the development of more precise and up-to-date instruments. These advancements could revolutionize how engagement is studied, offering companies innovative techniques and tools that bypass the constraints of traditional self-reporting methods.

The main objective of this article is to examine the influence of AI on engagement of college students. While there has been considerable research conducted on AI such as ChatGPT, investigations have not specifically addressed engagement. This gap in the literature sparked the interest of the author, leading to examine this phenomenon. This study delves into the perspectives of college students regarding the use of AI tools aiming to address the following questions:

What is influence of integrating AI on overall engagement and its dimensions: behavioral, cognitive, and emotional?

How does integrating AI influence engagement for college students.

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