


Chapter 7

Artificial Intelligence (AI) Integration and Higher Education Faculty: Tools, Ethics, Challenges, and Pedagogical Insights

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ABSTRACT

This chapter examines the increasing role of Artificial Intelligence (AI) in higher education, focusing on its integration, implementation strategies, and the ethical challenges that arise. It provides insights into how generative AI (GenAI) tools and large language models (LLMs) can be used effectively in classrooms, offering educators and administrators practical guidance for navigating this evolving landscape. The chapter also highlights potential future developments of AI in higher education

DOI: 10.4018/979-8-3373-0396-3.ch007

and explores professional development opportunities to help institutions adapt. By addressing both the benefits and challenges of AI, the chapter aims to empower higher education professionals with the knowledge and tools needed to use AI to enhance teaching, learning, and overall educational experiences. Ultimately, it provides a guide for effectively incorporating AI to support and transform educational practices.

INTRODUCTION

Do not surrender to the robot overlords just yet. Keep in mind that for all the hype and buzz, these AI tools are just computer systems. They can go wrong. They are created by humans. Their values are shaped by companies and institutions. Their data is not neutral but is defined by the historical patterns. Be cautious and thoughtful about what you are doing with artificial intelligence, and remember: it's not magic (Zeide, 2019, p. 39).

Recently, the use of Artificial Intelligence (AI) tools and applications has become more prevalent in higher education. This chapter focuses on the background of artificial intelligence (AI), emphasizing implementation strategies while addressing the ethical considerations and current challenges associated with its integration in the higher education classroom. GenAI creates unique outputs through algorithms that frequently resemble human interaction. Large Language Models (LLMs), such as ChatGPT, which are intended to comprehend and produce human language, are also covered in this chapter.

The use of computer systems that can execute tasks that typically require human intelligence is referred to as artificial intelligence (AI). Users can produce personalized content with GenAI tools such as Gemini (Google), Copilot (Microsoft), and ChatGPT (OpenAI). Large Language Models (LLMs), which produce logical text and carry out intricate language-based tasks, power many of these tools. ChatGPT, Bard (Google), Llama (Meta), and Copilot are a few examples that provide educators with effective tools to improve instruction and learning.

In this chapter, there is a discussion of the possible future directions of AI tools in higher education settings. Professional development options for higher education institutions are introduced. Furthermore, the chapter aims to provide information that helps higher education instructors and administrators navigate the landscape of AI in their courses. The discussion includes how project-based and experiential learning, rooted in constructivism, can enable students to actively build knowledge through real-world problem-solving and application. The mission of this chapter is to provide an overview of AI in higher education by presenting background information, ethical considerations, and current challenges, while emphasizing practical strategies for its classroom implementation.

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