

Chapter 18

The Ethical Dimensions of AI Development in the Future of Higher Education: Balancing Innovation with Responsibility

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ABSTRACT

This review systematically examines the use of artificial intelligence (AI) in higher education (HE) from 2007 to 2023, providing novel insights and up-to-date information. By analyzing 102 articles retrieved from Scopus, the data were extracted, analyzed, and coded using R Studio. The results reveal a significant increase in publications in 2021 and 2022, compared to previous years, indicating emerging trends in HE. The study also shows that research on AI in HE has been conducted

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on six of the seven continents, with China surpassing the US as the leading country in the number of publications. Additionally, there is a shift in the researcher affiliation, with the education department now being the most dominant, compared to previous studies that showed a lack of researchers from this field.

1. INTRODUCTION

The progress of new technologies and intelligent machines is closely intertwined with the future of higher education. Artificial intelligence advancements in this field present opportunities and obstacles for teaching and learning in higher education. These developments can potentially bring about significant changes in the governance and internal structure of higher education institutions. There has been a lack of consensus in providing a definitive explanation of artificial intelligence, with varying philosophical perspectives since Aristotle influenced the answers (Altbach, P. G., & De Wit, H, 2019). The progress of new technologies and computing capabilities of intelligent machines is closely connected to the future of higher education. In this area, the advancements in artificial intelligence present novel opportunities (Siemens, G, 2012). The advancements in artificial intelligence can potentially bring about significant changes in the governance and internal structure of higher education institutions, presenting both opportunities and challenges for teaching and learning (Arul Kumaran, K., Deisenroth, M. P., Brundage, M., & Bharath, A, 2017). Despite various philosophical perspectives, there is a lack of consensus in providing a definitive explanation of artificial intelligence. Education undoubtedly holds a substantial and meaningful position for individuals living in developing nations. In the development of a nation, higher education institutions play a crucial role. The economic and social growth of individuals is dependent on knowledge and learning. Individuals with higher education are more likely to secure highly skilled jobs with better compensation, thereby increasing their standard of living. This makes higher education particularly significant for people in developing countries, as it equips them to lead a more creative and productive life of their choice. Additionally, good education and skilled students contribute to the growth and progress of a country, especially in developing nations. Therefore, in developing countries such as India, the importance of higher education is magnified, and thus the learning process should be optimized. The utilization of artificial intelligence (AI) applications in education has been increasing and has garnered significant attention in recent years. According to the 2018 Educause Horizon report, significant advancements in educational technology, particularly in AI and adaptive learning technologies, are expected to be adopted within the next 2-3 years. The report further predicts a substantial growth rate of 43% in AI implementation in education from 2018 to

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