


Chapter 15

Examining the Impact of AI on Education: Ethical, Psychological, and Pedagogical Perspectives

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ABSTRACT

Education is a fundamental aspect of human development, crucial for both individuals and societies. This chapter provides a comprehensive exploration of education, its significance, and its multifaceted nature. Education encompasses the acquisition of knowledge, skills, values, and attitudes through formal and informal means. It empowers individuals to understand their environment, make informed decisions, and contribute to society's betterment. However, the integration of artificial intelligence (AI) in education raises ethical, psychological, and pedagogical concerns. AI's capability to generate coherent responses may compromise academic integrity and undermine critical thinking. Furthermore, excessive dependence on AI may diminish students' motivation and self-efficacy, leading to passive learning and eroding trust in the educational system. Pedagogically, AI cannot replace the nuanced guidance and personalized feedback offered by teachers, potentially disrupting the traditional teacher-student dynamic.

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INTRODUCTION

“Education is the most Powerful Weapon Which Can use to change the World.”

This profound statement by Nelson Mandela encapsulates the belief that education equips individuals with the tools to challenge existing norms, address social injustices, and contribute to the betterment of their communities. It underscores the idea that education is an essential educational birth right that has the implicit to break cycles of poverty, inequality, and ignorance. Education drives economic growth, social mobility, and personal development, fostering critical thinking, problem-solving, and creativity. Moreover, it promotes social cohesion, equality, and democratic values by providing equal opportunities and fostering understanding and tolerance.

AI, developed by OpenAI, 2023 is an advanced language model that has the potential to greatly impact education. This AI-powered tool can be used in various educational settings to enhance literacy skills, provide substantiated instruction, and offer valuable support to both students and educators. One of the main benefits of AI in education is its capability to epitomize literacy. Through its natural language processing capabilities, AI can engage with students in a conversational manner, understanding their queries and providing customized explanations or resources. This personalized approach caters to individual learning styles and paces, resulting in a more adaptive and effective learning experience. Additionally, AI serves as a valuable resource for students seeking instant explanations or fresh information on academic topics. Whether it is answering questions about complex concepts, offering real-time feedback on assignments, or providing supplementary learning materials, AI acts as a virtual assistant, supporting students in their academic pursuits. Furthermore, AI can assist educators in various ways. It can help create interactive lesson plans, generate educational content, and even automate administrative tasks such as grading assignments or providing personalized feedback on student work. By streamlining these processes, educators have more time to engage with students on a deeper level and address their individual needs. Similarly, AI has the potential to support language learning endeavours by engaging learners in meaningful interactions and providing opportunities for language practice. Its ability to comprehend and generate human-like responses makes it a valuable tool for language acquisition. However, it is important to consider privacy, data security, and ethical use when implementing AI in educational settings. Safeguarding sensitive student information and ensuring responsible AI usage are crucial factors that need to be addressed.

Despite its usefulness to students in the field of education, the rise of AI has raised concerns among teachers and academics (Smith, 2020). This is because AI lacks human interaction, which can lead to issues such as plagiarism, cheating, and other misleading practices (Jones & Brown, 2019). These negative impacts on education include a lack of creativity, inaccurate feedback, and a deficiency in emotional intelligence (Garcia et al., 2021). One of the main drawbacks of AI is its tendency to stifle creativity, resulting in a lack of original and engaging ideas (Lee & Wang, 2018). The frequent use of AI services further diminishes the use of human creativity (Chen & Liu, 2020). While AI provides quick feedback, much of it is flawed and lacks specificity (Johnson, 2017). Although there are on-going efforts to improve this area, most of the work done by AI is generalized and lacks individual attention (Thompson et al., 2022). While AI is generally effective and known for its human-like gestures, it lacks empathy and human instincts (Robinson, 2019). This occasionally leads to mechanical or robotic responses that lack genuine human understanding (Adams & White, 2021).

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