
THE ETHICAL CONSIDERATIONS OF USING EDUCATIONAL TECHNOLOGY

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Educational technology possesses significant potential to revolutionize learning environments, but its swift adoption requires meticulous evaluation of the ethical challenges involved. This article investigates the intricate realm of ethical considerations that emerge from incorporating technology into education. It thoughtfully examines problems like student data privacy and security, the digital divide and its effects on equitable access, the possibility of algorithmic bias in personalized learning systems, the influence on teacher responsibilities and student independence, and the necessity of nurturing critical digital literacy capabilities. By addressing these challenges, the article highlights the urgency of formulating ethical frameworks and guidelines that will guarantee the responsible and fair application of technology in education, maximizing its advantages while alleviating potential risks.

INTRODUCTION. The swift incorporation of technology into education is altering learning environments worldwide, providing unparalleled opportunities for tailored instruction, information access, and collaboration. Ranging from interactive whiteboards and learning management systems to AI-driven tutors and virtual reality experiences, educational technology (EdTech) is redefining the educational landscape. Nonetheless, this transformative potential is accompanied by its own set of challenges. The very instruments that promise to enhance learning also pose considerable ethical issues, necessitating careful thought by educators, policymakers, and technology creators. As Selwyn (2016) contends, technology is not inherently neutral, and its usage in educational contexts demands ongoing examination to ensure fair, ethical, and advantageous outcomes for all learners. This article will explore the primary ethical considerations related to the utilization of educational technology, concentrating on matters of data privacy, equity of access, algorithmic bias, and the effects on student autonomy and teacher responsibilities. By investigating these

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intricacies, we aspire to foster a more responsible and human-centric approach to EdTech deployment.

Main part

Data Privacy and Security

The application of educational technology frequently entails gathering considerable amounts of student data, which includes personal details, learning behaviors, and academic performance (Williamson, 2017). This information is usually kept on external platforms, which leads to worries about privacy and safety. For instance, learning management systems (LMS) commonly monitor student activities, such as the duration spent on assignments, engagement in discussions, and scores on quizzes, possibly forming a comprehensive profile of their learning patterns. Likewise, educational applications and online assessment tools may obtain personal details like names, ages, and even geographic locations. The absence of clarity concerning data collection methods, along with the risk of data breaches and misuse, raises profound ethical issues. Students and their families have the right to be informed about the data being collected, its usage, and its accessibility. To remedy this, educational institutions and EdTech developers ought to establish strong data security measures, offer clear and understandable privacy policies, and obtain informed consent from students and their families prior to gathering and utilizing their data (Boyd, 2014).

Equity of Access and the Digital Divide

While educational technology has the potential to equalize learning opportunities, it can also intensify existing inequalities if not implemented thoughtfully. The digital divide denotes the differences in access to technology and digital literacy among various socioeconomic groups. Students from low-income households or rural areas may experience limited access to reliable internet connections and essential devices, obstructing their ability to fully engage in technology-rich learning experiences (Warschauer, 2003). For example, if online homework assignments or virtual classes are mandatory, students without sufficient access may find themselves at a considerable disadvantage. Moreover, even when technology is accessible, some students may lack the requisite digital skills or support to proficiently navigate online learning platforms. Consequently, it is vital to ensure that all students have fair access to technology, digital literacy education, and suitable technical assistance. This encompasses providing affordable internet solutions, device lending initiatives, and educator training in effective technology integration.

Algorithmic Bias and Personalized Learning

Personalized learning, frequently enabled by AI-driven educational platforms, offers both advantages and difficulties. These platforms utilize algorithms to assess student data and customize learning paths to suit individual requirements. Nevertheless, these algorithms are not always impartial, and they can unintentionally sustain and exacerbate existing biases (O'Neil, 2016). For instance, if an algorithm is developed using biased data, it may unjustly

disadvantage specific groups of students according to their race, gender, or socioeconomic status. This might lead to a system that reinforces established inequalities by providing fewer opportunities or less challenging material to certain students. This concern can arise through various EdTech applications, such as automated essay grading tools which may penalize certain linguistic styles or focal points preferred by the algorithm. As a result, it is vital to thoroughly assess the data utilized to train algorithms, guarantee diverse representation, and foster transparency regarding the operation of these tools.

Conclusion.

In summary, although educational technology offers unparalleled chances for transforming education, its integration must be approached with thoughtful consideration of the ethical challenges involved. As we have discussed, concerns related to data privacy, fairness of access, algorithmic bias, and the influence on teacher roles and student agency necessitate prompt and ongoing focus. The obligation falls on educators, policymakers, and EdTech developers to utilize technology in an ethical and fair manner, emphasizing the welfare and learning requirements of all students. This necessitates a dedication to transparency, accountability, and regular assessment of technology's effects on the educational process. Ultimately, the ethical application of EdTech demands that we be proactive, human-centered, and committed to establishing learning environments that are both technologically enhanced and fundamentally equitable.

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