



# Ethics of Artificial Intelligence (AI) in Education: Challenges and Recommendations for Teachers

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## Abstract

*The invasion of AI into classroom has reshaped the teaching, learning and assessment process. Even though integration of AI offer meaningful support to both teachers and students, they also raise important ethical concerns. This paper explores the impact of AI in the education system in teaching, learning and assessment process. Further this paper discusses the key challenges related to academic integrity, data privacy, bias and dishonesty. This paper draws attention to the potential effects of an excessive dependence on AI technologies on originality, critical thinking, and real-world learning opportunities. Additionally, the study highlights how unequal access to cutting-edge AI technology could exacerbate already-existing educational inequities. Based on the recent literature this study proposed some practical recommendations to promote ethical, transparent and responsible use of AI in the field of education. The paper concludes that thoughtful and ethically guided integration of AI will positively transform the education system.*

**Keywords:** artificial intelligence, ethical issues in AI, data privacy, academic integrity, equity in education

## Introduction

Artificial intelligence (AI) has grown to be a powerful force influencing many industries, including education (Al-Huwail et al., 2025). As technology develops, there is an increasing interest in learning how AI can be used in education (Fahimirad & Kotamjani, 2018). Artificial Intelligence will help both teachers and students in Teaching and learning process, teachers can prepare personalised lessons for students with the help of AI, based on the pace of learning and knowledge gaps and learning preferences it helps the students with customized learning routes, thus allowing them to get individualized assistance and learn at their own speed (Catherine Nithya, 2023). The perception, self-learning and decision making skills of an

individual person was highly influenced by Artificial Intelligence at present, where as in future it is anticipated that AI will prominent role in our daily affairs (Mehmet Uymaz,2024).

The lack of support from institution, lack of resources and training limits the implication of AI as a tool enhancing critical thinking, student engagement and problem solving. In spite of these obstacles still teachers are showing confidence in preparing A-integrated curricula though this has been undermined by insufficient infrastructure and technical assistance, underscoring the necessity of ongoing professional development (Arranz Garcia et al., 2025). The impact of AI on student learning has become a growing area of research, but still the perspectives of the key agents in implementing AI in



classroom the teachers, where less explored, and for a successful integration of AI the teachers' understanding, confidence in using AI and acceptance are more essential (Kashif et al., 2025). The rapid rise in artificial intelligence (AI) has created many opportunities globally, however, these rapid changes also raise profound ethical concerns (*Ethics of Artificial Intelligence The Recommendation*, n.d.).

### **Impact of AI on Education**

The Inclusive and equitable education along with access for life-long learning for every one across the world was facilitated by the Artificial Intelligence (Hasan & Raza, 2022). Data-driven algorithms are used by AI-powered learning platforms to evaluate student performance and modify content to suit each learner's unique requirements (Zawacki-Richter et al., 2019). According to Makhambetova et al., (2021) letting students advance at their own speed and providing focused assistance, this individualized learning strategy lowers stress and enhances both academic achievement and mental health. The usage of AI like ChatGPT, Gemini, etc., enhanced collaboration and communication effectiveness in academic contexts, particularly in digital settings. As a result, AI improved students' ability to express themselves in writing, fostering clarity in scholarly discussions (Klimova & Pikhart, 2025). These resources lessen the fear and loneliness that kids with particular learning difficulties frequently feel by fostering a more welcoming classroom (Abbasi et al., 2024).

**Challenges and Ethical Dilemmas in The Use of AI** Artificial Intelligence irrespective of their benefits in the field of education, they have social and moral disadvantages. Weighing these hazards is crucial for humanity's future, as noted by renowned physicist Stephen Hawking. Therefore it is very important to address them (Akgun & Greenhow, 2021).

The use of AI tools in education, such as ChatGPT, Gemini, and others, has raised a number of serious issues, foremost among them were academic integrity, student learning quality, and

wider ethical ramifications (Spruijt, 2024). Academic dishonesty, academic plagiarism, and authenticity (Al-kfairy et al., 2024)

### **Academic Integrity**

The major concern in using AI is that it will erode the academic integrity, since the AI tools with minimal input from the human can generate assignments, lesson plans and reflective narratives easily. Sullivan, Kelly, and Mclaughlan (2023) report that although there has been a visible rise in students turning in work created using ChatGPT, Gemini etc., these students still have difficulty with critical analyses or spoken discussions on the same subjects. Such kind of things raises the fundamental questions about authorship and originality of the work

### **Academic Plagiarism**

Academic plagiarism is another pertinent issue, Confusion in the difference between original work and AI-generated work leads to academic dishonesty, Academic plagiarism is another pertinent issue, as AI-generated content can encourage dishonest behavior by confusing the distinction between automated production and original work (Williams, 2024).Gajjar (2024) stresses that the absence of ethical accountability in utilizing these tools heightens the risk of spreading disinformation, particularly in educational settings where content accuracy is more important.

### **Equity and Accessibility Issues**

It is not possible for every students having access to advanced AI tools, which exaggerate the inequality already existing in the education system. This will create the digital dividends, where one set of students can access the latest AI tools to enhance their academic performance whereas the other half were left behind.

### **Data Privacy**

While integrating Artificial Intelligence in educational teaching and learning process, data privacy becomes the major issue, educational institutions with the help of technology while



collecting and processing huge amounts of students data raises the concern about data security and privacy (A. Dzhorobaeva et al., 2025). AI tools often require access to enormous data, while there is a risk in mishandling or exposing the data.

### **Academic Dishonesty**

Having both opportunities and ethical dilemmas, integration of AI tools in educational system has been considered as a double-edged sword. The ease in use and abilities of AI could lead to over dependence on those tools which might be harmful for the educational process by shrinking and fogging the critical thinking and problem solving abilities of the students by providing ready available AI-generated solutions and reduces the deeper engagement with learning materials (Al-kfairy et al., 2024).

### **Inadequate Assessment of Learning Outcomes**

Teachers find it challenging to effectively assess the pupils' actual comprehension and abilities when dealing with AI-generated content. Assessing a student's genuine learning advancement is challenging, since conventional evaluation techniques, such as essays and take-home assignments, can be readily completed with the assistance of Artificial Intelligence by the students. In order to successfully quantify outcomes of learning in an AI-enhanced educational setting, this issue requires a reevaluation of assessment methodologies

### **Biases in Algorithm**

Another major barrier to incorporate AI in education is the potential for biases in AI algorithms, which could perpetuate inequality and compromise the effectiveness and equity of AI-driven educational systems. Biased training data, societal preconceptions encoded data used to train the AI model may lead to biases in AI algorithms (Chima Abimbola Eden et al., 2024).

### **Recommendations**

To address the above ethical issues, the following steps can be considered

- The educational institutions should take proper measures to ensure the safety of the collected data. To protect the data from unauthorized access the institution should implement some technical measures such as data encryption, anonymization, and access control (Sidiropoulos & Anagnostopoulos, 2024).
- To reduce the biases in AI algorithms educators and technology developers should follow principle of fairness and accountability like critically examining the data used for training the AI model for any presence of biases and if found it should be reduce, and regular audit should be conducted to ensure that no underserved group has been harmed (Bogina, et al., 2021; Xivuri, and Twinomurinzi, 2023).
- Ensuring the transparency and accountability of AI in education facilitates its ethical use and gain users' trust (Diaz-Asper et al., 2024 as cited in Eyüp Yurt, 2024)
- To uphold the accuracy and credibility of AI generated content provided to students and educators should be validated, by doing a rigorous content evaluation by the subject experts ( Savage TR, 2021, as cited in Franco D'Souza et al., 2024)
- To address the digital divide because of in equal access to AI tools can be overcome with the help of educational institutions by giving equal access to all students.

### **Conclusion**

In the future application of Artificial Intelligence will become more advanced and widespread. The educational system will become more personalized and effective with the continuous progress of AI (Eyüp Yurt, 2024). Artificial Intelligence is not a replacement for teachers in the classroom, instead it will facilitate the teaching and learning process by providing solution to the crucial problems faced by both teachers as well as students. AI is like a sword with double edges, therefore handling it with care, considering and overcoming the ethical issues will bring positive changes in educational process.



Every field including education has been potentially revolutionized by Artificial Intelligence. Finding ways to reduce the potential risk and determine the effective way to indulge in to the technology's were in the hands of educators and ed-tech solution providers (*AI in Education: Benefits, Challenges, and Ethical Considerations*, 2024). Using AI with responsibility will enhance the teaching learning process.

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