

# Unethical use of AI tools in education and its consequences

## Outline

### 1- Introduction

Thesis statement: Unethical use of AI tools in education can cause huge pitfalls and serious concerns of privacy, equity and human touch in teaching. A careful approach with ethical guideline is critical to ensure ethical and responsible use of AI tools and to harness AI's potential in education.

### 2- AI tools: integration in education

i- Generative Artificial Intelligence (AI)

ii- AI: A transformative force in education

iii- Challenge of using AI tools responsibly

### 3- Unethical use of AI tools in education

i- Bias in AI algorithms

ii- AI-powered surveillance tools

iii- Plagiarism

iv- Dehumanization of learning experience

v- Perpetuated digital divide

#### 4- Consequences of unethical use of AI tools in education

- i- Discrimination against marginalized groups
- ii- Violation of data and privacy right
- iii- Failing grades and stifling creativity
- iv- Overreliance on technology
- v- Amplifying injustice and societal inequalities

#### 5. Way forward: Leverage AI's capabilities ethically to improve teaching and learning

- i- Develop ethical guidelines:  
Scrutinize the data sets
- ii- Strengthen data protection measures
- iii- Educate students and educators
- iv- Use AI as a complement, not a substitute

#### 6- Conclusion

AI is not a substitute for human intelligence; it is a tool to amplify human creativity and ingenuity

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## Unethical use of AI tools in education and its consequences

Human beings may not think of about artificial intelligence (AI) but it is all around human beings and they have been using it for years. The advancement of AI has transformed the way humans live, learn and work. AI-powered technologies have enabled humans to automate various tasks and streamline complex process. In the realm of education, this technology have been influencing learning of students, teaching ways of educators and ultimately it is structuring education system. While AI offers immense potential for progress, the deployment of AI in education comes with its own set of challenges and drawbacks. Unethical use of AI tools in education poses huge pitfalls and serious concerns of privacy.

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equity, transparency, dependency and human touch in teaching. A cautious approach is critical to ensure the ethical and responsible use of AI tools and to harness AI's potential in education.

Artificial intelligence (AI), a branch of computer science, focuses on creating software capable of mimicking behaviors and processes considered as "intelligent", including reasoning, learning, problem-solving and exercising creativity. Generative AI systems to an extensive range of tasks, is capable of producing content and knowledge rather than simply searching for and retrieving it.

Foundation models in generative AI such as Large Language Models (LLMs) which include OpenAI's GPT-4, Google's PaLM and Meta's LLMs - have been on a large dataset with self-supervised principle, meaning the model learns by finding patterns in the data it is

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trained on. Such models and their applications develop a statistical understanding of language. It allows to generate human-like text and perform a wide range of tasks such as writing articles, answering questions or analyzing unstructured data.

AI has become a transformative force in numerous sectors including education. Its sophisticated algorithms and self-learning capabilities promise to transform education & learning experiences. It provides personalized educational content, automating administrative tasks and even predicts future learning trajectories. Many educators and leaders look forward to these changes with great enthusiasm. Sal Khan, founder of Khan Academy in a TED talk pointed that AI has the potential to effect "probably the biggest positive transformation that education has ever seen."

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Although AI has the potential to improve the quality of education, there are some of the serious risks associated with AI in learning. Challenge of using AI tools responsibly and ethically is very crucial to mitigate its negative consequences. Many scholars warn that AI will enable the spread of misinformation, facilitate cheating in school and college, kill whatever traces of individual privacy remain, and cause societal inequalities. The challenge is to harness the positive potential by making responsible and ethical use of AI tools in education, while avoiding the harm.

The integration of AI in education has brought numerous benefits, but its unethical use can lead to serious consequences. One of the most significant risks is the potential for bias in AI

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algorithms which can perpetuate discrimination among groups and different segments of learners. AI algorithms learn from data they are fed and if the data contains biases, the AI systems will replicate those biases in its output. This is particularly concerning in the context of education, as AI algorithms can reinforce existing biases. Gender bias is one of the most apparent forms of this problem. Similarly, a number of problematic cases of racial bias are associated with AI's facial recognition systems. Research shows that this software improperly misidentified African-American people and favoured white people in case of drop-outs. When students use biased AI systems, they reinforce these in their own knowledge.

Another ethical concern surrounding the use of AI in education

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is surveillance or tracking systems, which gather detailed information about the actions and preferences of students and teachers. For example, research suggests that teachers who use social networking sites for pedagogical purposes encounter a number of problems, such as concerns in relation to boundaries of privacy, friendship and authority, as well as availability and responsibility. While patrolling and monitoring students' actions might be considered as pedagogical tool, such actions as surveillance systems are problematic in terms of threatening students' privacy. Students can not feel secure and safe if they know about surveilling and policing of their thoughts and actions.

Besides, most prevalent educational concern around AI tools is their use for plagia-

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rism. AI-assisted writing software can be misused in several ways such as ChatGPT. Plagiarism in this context would mean students using the system to do their work, assignments and project. This means producing entire essays, or using the system along the way for tasks like outline generation or editing.

It is unethical use of AI tool in education because it is a form of theft. By taking the ideas and words of others and presenting as own, students steal someone's else intellectual property. Plagiarism is a growing concern in education as more and more students are turning to the AI tools for research and information.

Additionally, the fear is that the potential for AI to replace human educators and dehumanize learning experience. The role of

teachers is very crucial in shaping the minds and lives of students, that can not be a job of AI tools. With AI algorithms generating content and deciding the pace of lessons, students may miss out on the nuanced approach that a human teacher can offer. It may lead to dehumanization and undermine the human touch, social interaction and quality of services provided. There is a risk of less student interaction with both educators and classmates. The U.S based Surgeon General has identified that AI may intensify and worsen the public health crisis of isolation and loneliness.

Furthermore, a significant challenge of AI tools in education is the digital divide. Not all the students have access to technology, internet and understanding of AI tools such as

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Google Bard, ChatGPT, Anthropic Claude 2, and Microsoft Bing Chat. These tools are capable of generating text, summarizing content and perform other educational tasks. For instance, Claude 2 can analyze text of roughly 75,000 words - about the length of Great Gatsby novel. Unaccessibility of a number of students to such tools limits their ability to benefit from AI tools. It may lead to perpetuated digital divide by favoring students with access to technology.

Despite the benefits of AI applications for education, they pose societal and ethical drawbacks, along with severe consequences. Unethical use of AI tools in education poses certain dangers. One of the serious issues is the potential for bias in AI algorithms which can perpetuate discrimination against marginalized groups. AI systems learn from the data they are trained on.

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If this data contains biases, those biases can be learned and perpetuated by the AI systems. If the data include student-performance information that's biased toward one ethnicity, gender or socioeconomic segment, the AI systems could learn to favor students from that groups. Many examples show that AI generated responses favor white-people of America and male-students in many cases. These are potential biases around pedagogical philosophy that may generate responses not aligned to a community's values and norms; and reflect biases and prejudices.

When students and educators interact with generative-AI tools, their conversations and personal information might be stored and analyzed, posing a risk to their privacy. For instance, in 2020, a database containing the personal information of more than one million students was exposed due to a data breach in the edtech platform Chegg.

That information included students' personal details. Problems of privacy and security emerge when surveillance systems trigger issues related to autonomy. Predictive systems which are powered by algorithms jeopardize students and teachers' autonomy and their ability to govern their own life. Personal data and sensitive information of students and teachers are at risk of being misused or falling into the wrong hands via AI systems as a fundamental threat to privacy.

Another triggering consequence of using AI tools unethically in education is academic dishonesty due to AI-plagiarism tools. These tools can provide an easy and convenient way for cheating. Both teachers and students are facing risks of manipulation and becoming overly reliant on AI-driven technology. For students, this could stifle learning, creativity and skill flourishing, especially the development of critical thinking. This challenge extends

to educators as well who use AI tools for lesson-plans which do not equate to equality. Such practices undermine the integrity of education and occur at all levels; and can cause a student to be suspended or expelled. Aside from the ethical issues involved in such cheating, students who use AI to do their academic tasks, may not learn the content and skills they need. Hence, students can not develop the skills of creative thinking and critical analysis.

As AI is being integrated in education, an emerging concern is the potential overreliance on technology.

AI tools, including BARD, and OpenAI's GPT detectors and other sophisticated chatbots offer immense benefits in personalized learning, they also <sup>are</sup> making students, educators and institutions excessively reliant on those tools. Such dependence can lead to challenges if technologies experience failures or disruptions. It may

diminish critical human skills such as problem-solving, analytical thinking and interpersonal communication.

Students may turn to these AI conversational systems in place of their friends & educators. Teachers may be tempted to accept AI-generated content rather than devote time to reviewing and refining it for optimal educational value and quality. This overdependence can cause several unintended consequences which may damage learning.

Another challenge of AI tools in education is the digital divide which may amplify social injustices and inequalities. Not all students have equal access to computer devices and the internet. In such unavailability of internet and AI tools for deprived number of students will further exacerbate social inequalities.

Students in remote areas or those from low-income families may not have the necessary resources, such as reliable

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internet connections and compatible devices to fully benefit from AI-enhanced learning. Another risk is of AI's inadequate service to address the different needs of students with disabilities who require special education services. That imbalance can accelerate a widening of the achievement gap between students, educators and institutions from different socioeconomic backgrounds and magnify societal inequalities and injustices.

These ethical concerns and their severe consequences suggest an urgent need to learn about these challenges surrounding AI applications in education and ways to navigate them. Addressing the ethical issues of AI in education requires a multistakeholder approach that involves collaboration among educators, policymakers, researchers, developers and other actors in the AI system. To mitigate the risks, ethical



frameworks and guidelines should be developed. These guidelines can provide a common vision and a set of principles and values to guide to ethical design and deployment, use and impact of AI in education.

For example, UNESCO has published the first-ever global standard on AI ethics "The Recommendations on the Ethics of AI" in November, 2021. So, the stakeholders and policymaker should consider these guidelines for safe and ethical deployment of AI tools in education. Under these guidelines, the data sets can also be scrutinized. The data sets should be diverse and representative of the student population. It is also important to monitor the algorithms' output to ensure that they are not perpetuating existing biases.

To address privacy concerns technology platforms should strengthen their data protection measures. They

should use encryption and secure servers to protect student data from unauthorized access. Institutions should implement policies and protocols to ensure students' data safety and ethical handling. European Parliament has taken a significant step towards protecting individual privacy in the age of AI and proposed a ban on the use of AI surveillance in public spaces. The implementation of strict regulations and oversight mechanism is a vital step towards creating a future where technologies will be used to benefit societies without compromising individual rights and freedoms.

To ensure safe and effective use of AI tools in education, students and educators must be educated about the risks and benefits of AI. Students and educators should be taught digital literacy skills. There are severe conditions of poor digital

literacy rates. For example, Pakistan's digital literacy rate is 26% with only 41% of population having access to 4G internet. Policymakers should focus on enhancing digital skills by arranging training programs with assistance of digital expertises. Educators should be trained to use AI tools and understand their limitations and potential risks. To achieve this goal, collaboration with experts in the field is mandatory. This includes data scientists, researchers and experts who can provide valuable insights into the potential risks and benefits of AI in education, and help to develop effective strategies to mitigate these risks.

Technologies do not revolutionize education, humans do. These are humans who create the systems and institutions that educate children. These are the leaders of these systems who decide which tools to use and how to use them.

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Therefore, educational institutions must strike a balance, ensuring that AI tools enhance human capabilities, not replace them. Cynthia Breazeal, in her conversation with TimeTech emphasized the importance of viewing "AI as complement to human capabilities rather than a replacement." AI cannot replace the irreplaceable human touch in education. It is essential to use AI in conjunction with teachers to enhance their teaching capabilities. The goal should be symbiotic relationship where technology and human intellect work together to drive educational advancement.

In conclusion, AI tools have the potential to transform education significantly with their responsible and safe deployment. However, unethical use of AI tools will cause huge pitfalls and serious concerns of privacy, equity, dependence and human touch in education. To mitigate these

risks educational institutions should follow ethical frameworks and guidelines, scrutinize the data sets used to train AI systems, strengthen data protection measures and collaborate with experts in the field. The responsibility rests with human interventions - with educators, policymakers and parents to incorporate this technology thoughtfully in a manner that optimally benefits teachers and learners. By these efforts AI tools can be used safely and effectively in education and improve the quality of learning for students around the world. The focus should be on articulating a vision of the role AI should play in teaching and learning to leverage the best of these technologies while preserving the best human relationships.

"The consequences of AI going wrong are severe so, we have to be proactive rather than reactive."