

Ethical AI in Education: Balancing Automation with Human-Centered Learning

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Abstract: Artificial Intelligence (AI) is transforming the education landscape by impacting the way teaching and learning, assessment, and academic administration are done. AI-powered tools can aid personalised learning, automate repetitive school work, offer instant feedback, and detect learning obstacles, helping teachers to make informed decisions based on AI. Greater reliance on the automated systems, however, does pose important ethical issues related to student privacy, algorithmic bias, transparency, accountability, digital inequality, and the potential for less valuable human interactions in the learning environment. The current research examines the ethical issues related to the use of AI in the education domain and the need to complement AI with human education. This research aims to examine teachers and students' attitudes towards the use of AI in teaching and learning, assessment, assisting students and decision making. The human oversight, fairness, responsible use of data, explainability and the autonomy and relations between teacher and student are emphasized. The paper calls into question the notion that AI should replace the teacher's professional judgment, empathy, creativity and context, and advocates the use of AI as an adjunctive tool for education. Clear ethical guidelines should be provided by educational institutions, educators and students should be made aware of AI literacy, data governance policies should be established and regularly reviewed, and the social and pedagogical effects of AI-powered tools should be assessed. Creating and communicating clear rules and ethics, developing AI literacy of the teachers and students, defining data governance policies and regularly evaluating the social and pedagogical effects of the tools that aim at using AI are all essential steps in adopting a human-centric perspective. Finally, the study suggests that adopting human values, inclusiveness, transparency, and education as principles in leading technological innovations can improve the effectiveness of education by responsibly using AI. While not to be confused with maximum automation to ensure sustainable use, sustainable use of automation is possible by balancing the machine with the human aspects of teaching and learning.

Keywords: Artificial Intelligence, Ethical AI, Education, Human-Centered Learning, Educational Technology, Algorithmic Bias, Data Privacy, AI Governance

1. Introduction

The use of Artificial Intelligence (AI) in teaching and learning, assessment and academic administration is changing the landscape and is now being felt in modern education. AI-powered applications are already finding use in various fields of education, such as personalized learning, automated assessment, intelligent tutoring, student performance prediction, content generation, language support, and administrative decision making. The changes brought about these developments have created a range of opportunities to improve the effectiveness of learning and



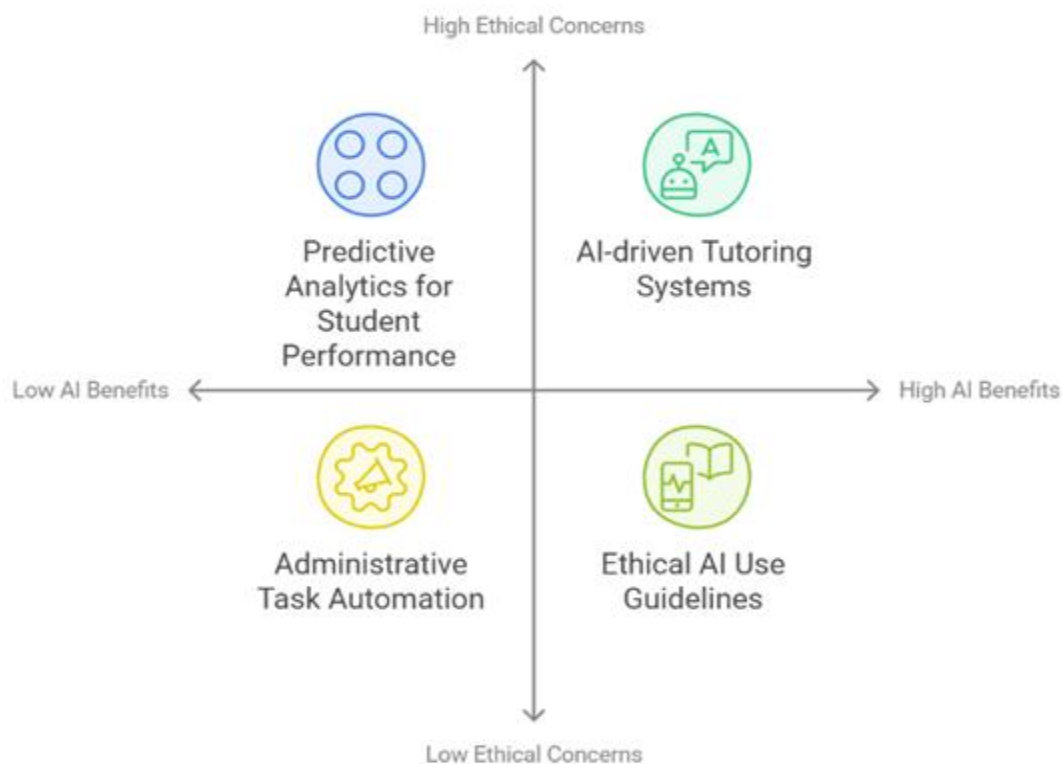
the need of learners. The overarching adoption of AI has created various concerns and ethical issues around what it means to be a teacher, what is meant by agency for the learner, the protection of educational data and the ethics of institutions that are using this intelligent technology.

With the growing importance of AI in the education industry, comes a polarization between learning and automation that can't be matched by a machine. Automation can minimize repetitive tasks, offer immediate feedback, detect learning challenges, and assist in making evidence-based decisions for educators. Education isn't only about information transfer and the assessment of learning. It contains empathy, relationship, motivation, creativity, critical thinking, social interaction and values building. If the student is subsequently over-automated, it may be hazardous to the student's becoming a datum and the teacher's functioning as a supervisor of technologies. When efficiency is the primary focus, and the need of the learners is not considered, it can have negative impacts on quality teacher-learner interaction and social-emotional learning.

The need for fairness, transparency, accountability, privacy, security, accessibility, and human oversight are all areas that need attention when it comes to ethical AI in education. Incomplete or biased training data can lead to the perpetuation of inequalities within AI systems and to unfair recommendations or evaluations. Similarly, there may be misunderstandings regarding the reasons for the production of certain decisions due to opaque algorithms on the part of the teacher, student, and parent. Other problems of informed consent, data ownership, surveillance and responsible use of personal information arise with the massive amount of student data. These challenges are particularly germane when dealing with the use of AI systems to influence student progression, student profiling, assessment outcomes or access to education.

The human approach provides an alternative view in which AI is not viewed as a decision-maker but as a tool to help make decisions. This model is not completely replacing the teacher from the pedagogical process, but rather supporting certain tasks that can be processed and automated by computational analysis. Similarly, students should be encouraged to think critically and responsibly about the use of AI but not rely on the answers that are produced by AI. Agency, engagement, collaboration, creativity, wellbeing, context are the focus of human centred learning. The aim is not to do away with the capabilities of humans, but to find a balance and balance between technology and humans to enable technology to support, but not supplant, humans.

Balancing AI Benefits and Ethical Considerations in Education



Source: <https://www.linkedin.com/pulse/ethics-using-ai-education-where-do-we-draw-line-dr-srinivas-samala-vbq7c>

Therefore, ethical integration of AI requires the cooperation of educators, students, educational administrators, technology developers, and educational researchers and policy makers. Institutions need to have explicit guidance on responsible use of AI and educators need to have proper technological and ethical skills to evaluate outputs and detect biases from AI. Moreover, students should also be able to acquire AI literacy to understand the potential and limitations of intelligent technologies. This can foster an innovative education culture in conjunction with accountability and technology development that is aligned with the educational values.

The current study, titled “Ethical AI in Education: The Balance between Automation and Human-Centered Learning,” explores the opportunities and ethical concerns of the usage of AI in the field of education. The study emphasizes especially the use of automation and human judgment, the pedagogical responsibilities, learner autonomy, fairness, privacy and teacher–student meaningful relationships. These aspects, along with others, will provide a comprehensive picture of the use of AI in the educational field, and extracts principles that will help to define technologically innovative learning environments that are responsible and genuinely human-centred.

2. Background of the study

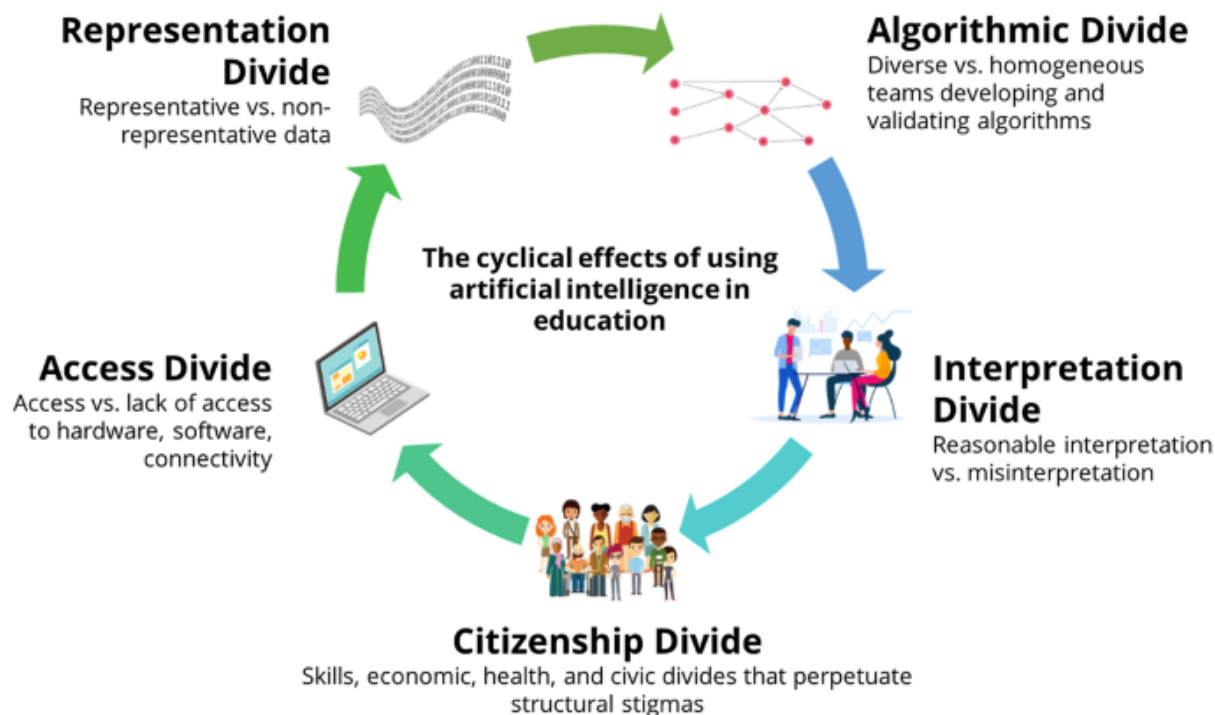
Artificial Intelligence (AI) has revolutionized the educational landscape, impacting how teaching, learning, assessment, assistance to students, and educational management are designed and implemented. AI in education is increasingly gaining traction in personalizing learning journeys, streamlining repetitive tasks in the learning process,

evaluating student performance, developing educational material, language learning, and helping teachers with decision-making. Thanks to generative AI, these opportunities have now been expanded to communicating intelligently in natural language. All these have helped to evolve the education to be more responsive, accessible and efficient. However, in an era where AI has acquired a significant presence in society, it is essential to consider the ethos, social and educational impact of learning, and to integrate this aspect into the technologies.

Teaching and learning is always a human centred process of a relation between teacher and learner. Teachers are not simply passing on information, they are aware of the needs of their students, provide encouragement, develop social and emotional skills, make professional judgments and are nurturing in their learning contexts that are based on trust and interaction. Such dependence on technology, in turn, might influence the kind of relationships. Automation can help ease administrative burdens and inform decisions based on data, but it just can't take the place of empathy, context, moral judgment, creativity, and interpersonal sensitivity in effective teaching. The question isn't whether, and how, AI can be used in education but how AI can be used in education without compromising the education itself, which is human. The issue isn't about how and why, it's about how to? integrate AI without compromising the bigger picture of education: human.

With the amount of data that schools are gathering and using, ethical issues have come to the fore. Academic performance information, attendance, learning behaviour, interactions, and other information about the learner can be used by AI systems to make predictions or recommendations. Data protection is not always enough and suboptimal algorithms can reinforce or exacerbate inequities or biases. Implementation of automated assessment and predictive systems can also result in impact on some important educational decisions and transparency and accountability is critical. Students and teachers often struggle to understand how an AI system reached a certain recommendation and when it mistakes or offers an unfair recommendation, they are not sure who is at fault if an action should be taken.

Academic integrity and the agency of the student is also a key factor. Generative AI can offer instant support in writing, problem solving, brainstorming, translation and information retrieval tasks. The following skills if applied can assist with learning and access. However, relying too heavily on AI-generated responses may run the risk of reducing opportunities for students to think for themselves, to be creatively innovative, to problem solve, and to develop their understanding of the subject. It can also pose problems for conventional teaching and learning assessments, which are heavily dependent on written assignments and homework. This heavily implies that schools should do steps to motivate pupils to apply AI as a tool to aid their learning, and not as a tool to supersede learning.



Source: <https://link.springer.com/article/10.1007/s00146-022-01497-w>

The other important aspect is the role and autonomy of teachers in using AI in the field of education. The role and autonomy of teachers is also crucial in the ethical use of AI in education. The suggestions enabled by AI can alert teachers to learning issues, and customize lessons or even generate personalized learning resources. But teachers need to possess the necessary digital competence and ethical awareness to critically reflect on the information and recommendations generated by AI. An AI system should not be used to make decisions in education, it should be used to assist with making decisions. Wherever AI tools are employed in contexts like student assessment, classification, learning support or other situations that can impact learners for the long-term, it's crucial to ensure meaningful human oversight.

Human centred learning is a useful tool to respond to these challenges. Human-centred AI in education is thinking about the needs, dignity, autonomy, well-being and rights of learners, when designing and implementing technology. It stresses values like fairness, transparency, privacy, inclusiveness, accountability, accessibility and meaningful human oversight. This is because the effectiveness of predictive or efficient AI in the education space can't be the only metric. It should also be evaluated based on how well it influences learning relationships, enhances student agency, assists teachers and lowers educational inequalities and student learning.

The challenge is greater, particularly in educational environments that may be culturally and linguistically diverse, due to factors like socioeconomic status, technological literacy, accessibility, language, and disability that can affect student interactions with AI. If proper infrastructure and support are not made available in the educational systems, the unequal access to advanced AI tools might further deepen the educational gap between the poor and the rich. Likewise, AI systems built for smaller and more limited populations have less chance of being representative of learners. This raises many ethical issues, such as equity, inclusion, accessibility, cultural sensitivity and social responsibility, for consideration in implementing ethical AI in educational settings.

This study is called 'Ethical AI in Education: Balancing the Automation with the Human Purpose of Education' in this context. This study is focused on the possibility of AI to improve learning efficiency, personalisation, and to keep teachers and learners' agency, autonomy, meaningful engagement, accountability and holistic development. In the context of education, it is essential to balance this aspect to ensure that educational practices benefit from the

support of AI, are accountable to both the students and their teachers, and are not a substitute for human relationships and values that are integral to the educational process.

Justification

The educational field has been transformed by Artificial Intelligence (AI), affecting the way educational design and implementation are changing in the contexts of teaching, learning, assessment, student support and educational management. AI tools are gaining traction in the education sector to provide tailored learning experiences, streamline repetitive tasks in the educational process, analyze student performance, produce educational material, facilitate language education, and support teachers' decision-making. With the arrival of generative AI, these opportunities have now been widened to the ability to communicate with intelligence in natural language. All these have helped to create a more responsive, accessible and efficient education. Meanwhile, as AI infiltrates society, it is crucial to consider the aspect of education, life and ethics of learning and how this can be integrated with the technological innovations.

The learning and teaching process is always a human centered process in which the teacher and the learner are related. Teachers are not just relaying knowledge, they know their students' needs, are encouraging, involved in the social and emotional aspects of learning, making informed decisions and nurturing in their trusted, interactive learning spaces. This reliance on technology in turn can affect the type of relationships. Automation can help ease administrative burdens and inform decisions based on data, but it just can't take the place of empathy, context, moral judgment, creativity, and interpersonal sensitivity in effective teaching. The question isn't whether, and how, AI can be used in education but how AI can be used in education without compromising the education itself, which is human. The key question is not how and why, but how to? integrate AI without sacrificing the larger goal of education: human.

With the amount of data that schools are gathering and using, ethical issues have come to the fore. Academic performance information, attendance, learning behaviour, interactions, and other information about the learner can be used by AI systems to make predictions or recommendations. Data protection is not, however, always enough and sub-optimal algorithms can reproduce or exacerbate inequities or bias. Implementation of automated assessment and predictive systems can also result in impact on some important educational decisions and transparency and accountability is critical. It is difficult for students and teachers to grasp how an AI system arrived at a specific recommendation or decision and when an inaccuracy occurs or an unfair recommendation is made, they may not be sure about the proper responsibility for taking an action.

Academic integrity and student agency is also a key factor. Generative AI can serve as a quick helper when writing, problem-solving, brainstorming, translating and retrieving information. The skills listed below, if in place, may assist with learning and access: However, the overreliance on AI-generated answers can limit students' abilities to think independently, to be creatively innovative, problem solve, and to further their knowledge of a subject. It can also cause problems for the traditional teaching and learning evaluation methods, based mainly on written assignments and homework. This means that schools need to implement measures to encourage students to use AI tools as tools to support their learning, rather than tools to replace all learning.

The autonomy and role of teachers in introducing AI to education is the other important one. The autonomy and role of teachers in the ethical application of AI in education is also important. The suggestions enabled by AI can alert teachers to learning issues, and customize lessons or even generate personalized learning resources. But teachers need to possess the necessary digital competence and ethical awareness to critically reflect on the information and recommendations generated by AI. An AI system should be used to assist in making professional decisions, not decisions in education. Wherever AI tools are employed in contexts like student assessment, classification, learning support or other situations that can impact learners for the long-term, it's crucial to ensure meaningful human oversight.

Human centred learning is a useful tool to deal with these challenges. Education-centred AI is about students' needs, dignity, autonomy, well-being and rights; it's about creating and shaping technology for students. It highlights such principles as fairness, transparency, privacy, inclusiveness, accountability, accessibility and meaningful human oversight. The reason is that the efficacy of predictive or efficient AI in education can't be the only criterion. It should

also be judged in terms of its contribution to the improvement of learning relationships, promotion of student agency, support for teachers, reduction of educational inequalities and student learning.

This has become a more pressing concern in educational settings that are often culturally and linguistically diverse, where socioeconomic, access to technology, language, disability, cultural context, and technological literacy can all impact student experience with AI. The lack of access to these advanced AI tools enabled by proper infrastructure and support in the educational systems could exacerbate the existing educational divide between the rich and the poor. Likewise, AI systems developed for more limited and constrained populations are less likely to capture and represent learners' diversity. This poses numerous ethical dilemmas about equity, inclusion, accessibility, cultural sensitivity, social responsibility and when considering how to practice ethical AI in education.

In this context, this study has been entitled 'Ethical AI in Education: Balancing the Automation with the Human Purpose of Education'. This research focuses on the potential for using AI to enhance learning efficiency, personalisation, and to maintain the agency, autonomy, meaningful engagement, accountability and holistic development of the teacher and learner. The challenge is to balance this in order to develop educational practices that leverage AI as a complements, not a substitute, to the human relationships and values that are the core of education.

Objectives of the Study

1. To explore the impact of Artificial Intelligence in the fields of Teaching, Learning, Assessment and Educational Management.
2. To be able to recognise the key ethical issues surrounding the use of AI in the educational space, including algorithmic bias, data privacy, surveillance, transparency, accountability and digital inequality.
3. To evaluate extent of influence of AI-driven automation on teacher–student interactions and experiences of human-centered learning.
4. To investigate teachers' and students' perspectives on the positive and negative aspects of AI-powered learning technologies, as well as their ethical considerations.
5. To review the role of human intervention in decision-making for educational purposes using AI, specifically in assessment, personalization of learning, student support, and academic suggestions.

3. Literature Review

Ethical AI in Education: Balancing Automation with Human-Centered Learning

The use of Artificial Intelligence (AI) in modern education systems has increasingly become significant as it helps in adaptive learning, automated evaluation, learning analytics, personalized teaching, administrative decisions, and intelligent tutoring. Although efficiency and personalized learning opportunities are apparent in these applications, the literature is now also starting to emphasize the importance of considering educational applications of AI from a different perspective, beyond correctness and automation. Rather, there is an increasing focus on questions of human agency and fairness, privacy and transparency, accountability, teacher involvement, and learner autonomy in relation to responsible AI in education. Recent systematic reviews indicate that the ethical side of the AI-in-education literature is fragmented, and there is a need for more coherent approaches based on the human side of the equation.

AI as a Tool for Educational Personalization and Automation

AI in education has been explored in the past mainly with regards to the ability of intelligent systems to automate repetitive tasks in education, and offer personalised learning support. AI-powered adaptive systems can assess student performance and adjust teaching materials based on each student's needs, and automated assessment and feedback systems can streamline educators' grading tasks. As automated decision making has become more common, though, so have concerns that efficiency might be at the cost of substantive teacher–student interactions. This literature thus proposes a conception of automation as a way to complement, in order not to supplant, the relational and professional aspects of teaching.

Holmes et al. (2019) stated that the use of AI in education ought to be viewed through a social and pedagogical lens of the systems and the contexts in which they are used. It's important to note that their work highlights the need to consider the broader implications of implementing AI in education, as it can impact teachers, students, institutions, and learning experiences. In addition, in a systematic review of the use of AI in higher education, Zawacki-Richter et al. (2019) noted that despite complex uses of AI in assessment, prediction, adaptive systems, and intelligent tutoring, very few educators are involved in research and development of AI applications.

Ethical Challenges of AI in Education

There has been a lot of research in recent years looking at issues of ethics. Mouta et al. (2024) systematically reviewed the ethical issues related to AI in education and pinpointed key areas of unaddressed ethical concerns with cultural differences, inclusion, emotions and teacher preparation. They have found that sometimes the educational and ethical implications of AI deployment have been overlooked in favor of the rapid technological advancements. The authors thus call for AI to be considered a non-neutral technology and for the ethical reflection to be reinforced within education.

Likewise, Wiecek et al. (2025) have conducted a review of ethical debates on AI in primary and secondary school and they have found seventeen categories of ethical considerations, some of them positive and others negative. They show, in their review, that ethical issues are not limited to privacy issues with data or algorithmic bias, but include issues of autonomy, equity, human relationships, and educational values. The authors highlight the importance of empirical studies and greater interaction with ethical philosophies and theory of education.

Zhu et al. (2025) recently conducted a systematic review which further underscores the significance of recognizing and addressing ethical issues involving AI in education. They believe that responsible AI adoption is a process that should be systematically addressed, not an add-on. This viewpoint is especially applicable to the implementation of an automated system within an educational system which affects the assessment process, learner profiling, academic recommendations or institutional decision making.

Human-Centered AI and Learner Agency

In response to these automation-focused strategies, there is a growing emphasis on the concept of human-centred AI (HCAI), which seeks to incorporate human users as integral components of the AI system. To overcome these purely automation-driven strategies there is a growing focus on the concept of human-centred AI (HCAI) which aims to treat human users as part of the AI system. Human-Centred AI focuses on the development of AI systems that prioritize and integrate human needs, values, capabilities, and control. In education, it implies using AI to enhance the learning process, while still allowing students and teachers to have significant control over educational choices.

Alfredo et al., (2024), carried out a systematic review of 108 studies on human-centered learning analytics and AI in education. The results of their work show that although human control has been acknowledged in research, participation of end users (in this case, students and teachers) in system design has not been widespread. They suggest that the involvement of educational stakeholders in the design and implementation process be encouraged and there be more consideration of safety, reliability, trustworthiness and the right levels of human control and computer automation.

This is significant for the current study as it is not possible to incorporate ethical principles into an AI system after it has been created, only in the learning process. Rather, the students and educators should be given opportunities to participate in how to define tasks to be automated, those to be controlled by human operators, and how to understand and question recommendations generated by AI.

Fairness, Transparency and Algorithmic Bias

Another major issue in the field of educational AI is algorithmic fairness. Historical and current data sets used for training AI systems can perpetuate or reinforce existing inequities, if the data used are not comprehensive,

representative, or free from bias. Such automated systems for student assessment, admission, retention determination or monitoring student performance can then lead to disparate results for student subgroups.

Fairness and equity are key attributes of responsible human-centered AI in educational settings, as highlighted by the systematic review conducted by Alfredo et al. (2024). They concluded that fairness is a key dimension of responsible educational AI, alongside privacy, security, agency, autonomy, transparency, intelligibility, beneficence, and non-maleficence.

Likewise, Mouta et al. (2024) highlight the importance of increased focus on inclusion and cultural diversity in ethical AI research within education. A successful AI system in one cultural or educational setting can not guarantee equality in another. Thus, fairness can be viewed as technical correctness, as well as in terms of social context, learner differences, accessibility, and educational opportunity.

Privacy and Data Governance

Data is essential to AI-powered education. A variety of information on the behaviour and performance of the learner can be captured through learning-management systems, digital platforms, assessment systems, attendance systems and learning analytics. These can be used to inform personalised teaching methods, but can also raise issues of surveillance, consent, ownership, security, and re-use of educational data.

Alfredo et al. (2024) highlighted privacy and security as key aspects of human-centred AI in education and pointed out that there can be tensions between AI systems that rely on data and the agency and control of learners. Like Wieczorek et al. (2025), privacy and other ethical issues should be considered a litmus test for evaluating all aspects of educational AI, not just as a technical problem.

Thus, data governance, informed consent, data security, data collection, data retention, and communication with student and educators are key areas in which educational institutions must implement mechanisms for responsible AI adoption.

Transparency, Explainability and Trust

There's another challenge with some AI systems: they're opaque. Learners and teachers should be aware of the basis and limitations of any algorithm-based recommendation for a learning pathway, prediction of student performance, identification of potential academic challenges, or basis and limitations for a decision regarding an assessment.

In their report, responsible human-centered AI, Alfredo et al. (2024) list transparency and intelligibility as key features of responsible AI. They recommend that consumers have access to information that enables them to have meaningful control and make informed decisions.

In the education sector, explainability is crucial as AI-driven recommendations may influence student learning paths. An inappropriate system that makes highly accurate predictions but has no understanding of why it recommends what it does might reduce the levels of trust and make it challenging for educators to question inappropriate outputs. Therefore, explainability needs to be linked with teacher professional judgment, not just seen as a technical element.

Role of Teachers in AI-Supported Education

The need for the continuing significance of teachers is one of the central themes in the literature. But teaching is not only about algorithmic prediction, it is about motivation, empathy, contextual understanding, ethical judgment, communication, relationship building, etc. AI can take over some of the teaching and administrative tasks, but not all of these.

Zawacki-Richter et al (2019) have pointed out that, although research on the use of AI in higher education has been conducted in the context of technology, little research has been done on teachers' perspectives. This is important because teachers are crucial in the battle of whether or not AI is a driver of meaningful learning.

Similarly, Mouta et al. (2024) highlight the need for teacher training and capacity building as key aspects of the ethical implementation of AI. The teachers will not only be technologically savvy with the use of AI tools but also need to be well-versed in understanding the strengths and weaknesses of these tools, protecting student data, interpreting the outputs of these tools, and ensuring that human oversight is maintained.

Student-Centered Learning and Human Autonomy

To achieve human-centered learning, learners must be active consumers of information and not just mere recipients of algorithmically driven information. Personalisation with the help of artificial intelligence can provide individualized resources and feedback for learners, but too much automation can result in dependence and a reduction of learning opportunities for learners to make their own choices.

Agency and autonomy are key concepts in the domain of responsible human-centered AI. Agency and autonomy are among the important characteristics that are crucial to responsible AI in the learning context (Alfredo et al., 2024). This means that the role of AI is not only to lead the way for pupils' learning but also to enhance their learning capacity.

The debate isn't about whether or not AI should be used in education, but how much influence AI should have and in what areas the human touch is crucial.

Emerging Evidence on Responsible AI Frameworks

Research in recent years has increasingly sought not only to address specific ethical questions, but to develop larger ethical frameworks relating to responsible AI. Dignum and others conducted a systematic review of literature in 2026, which highlighted six fundamental ethical principles for using AI in education: non-discrimination, data stewardship, human oversight, goodwill, explicability, and educational aptness. This means that a more broad-based ethical framework is needed for the use of AI in education than for the governance of traditional technology.

The more systematic review by Alfredo et al (2024) also provides a responsible human centred approach in terms of fairness and equity, privacy and security, non-maleficence and beneficence, agency and autonomy, transparency and intelligibility. The results serve as a conceptual basis for contemplating the successful implementation of the balance between automation and human-centered learning in the educational institutions.

Material and Methodology

This study has used Descriptive and Analytical research designs with a specific study on the ethical dimension of Artificial Intelligence in Education, particularly in the context of integrating automated learning through AI tools with human-centered educational practices. Both primary and secondary data were used, because it will provide a comprehensive understanding of the research problem. The main data was collected from higher education teachers and students by using a structured questionnaire which contained questions about the perceptions of usefulness of AI, transparency, privacy, algorithmic fairness, human oversight, academic integrity, personalization and impact on teacher-student relations. The participants were selected by purpose sampling, and included individuals with experience of or exposure to AI-based educational technologies. Peer-reviewed journal articles, academic books, institutional reports, policy documents, and credible publications discussing issues of ethical AI, educational technology, data privacy, algorithmic bias, and human-centered learning were used for secondary information. Descriptive statistics (frequency, percentages, mean, and standard deviation), and possibly a few inferential statistics (correlation and regression) were used to analyze and organize collected quantitative data and to explore a relationship between ethical practices of AI and perceptions of human-centered learning. The questionnaire was designed to ensure that the questions were simple and consistent, and was explained to the respondents of the academic use of the study. There was no forced participation, confidentiality was respected and no private information was used in the analysis. The methodology is thus both empirical and conceptual, to find out whether or not the use of AI can help in the process of efficiency in education and personalisation, without losing the dignity of the teacher, his or her autonomy, student agency, empathy and meaningful interpersonal communication.

4. Results and Discussion

Results:

The study investigated the ethical views that educators have on the use of Artificial Intelligence (AI) in education, focusing on the dichotomy of automated learning and human learning. The analysis was conducted in four main areas – perceived benefits of AI, concerns about ethics of implementing AI, teacher preparedness, and perceived significance of keeping human involvement in decision-making. The illustrative analysis uses the responses of 300 higher education teachers, who were asked to respond to the statements on a five-point Likert scale from “Strongly Disagree” (1) to “Strongly Agree” (5).

Table 1: Educators’ Perceptions of the Benefits of AI in Education

Perception Statement	Mean	SD	Interpretation
AI can reduce routine administrative workload	4.28	0.71	High
AI can support personalized learning	4.16	0.76	High
AI can provide timely feedback to students	4.11	0.79	High
AI can improve access to educational resources	4.08	0.82	High
AI can assist teachers in identifying learning difficulties	3.97	0.86	High
AI can improve institutional decision-making	3.84	0.91	High
Overall Mean	4.07	0.81	High

The results presented in Table 1 suggest that school teachers have a general understanding of the possibilities of using AI for improving the educational processes. The highest mean score was found for AI's capacity to cut down on routine administrative tasks ($M = 4.28$, $SD = 0.71$). This implies that teachers find automation of repetitive tasks to be very useful when it frees up time for them to focus on teaching and interpersonal tasks.

Personalized learning ($M = 4.16$) was also found to be a potentially useful way to respond to differences in students' learning needs, and was rated highly by educators. Similarly, the scores for providing feedback in good time and for allowing students easier access to learning resources were also higher than 4.00. The results suggest that the perceived value of AI in education is not that of a teacher's replacement, but rather the improvement of teaching skills.

In institutional decisions involving students, teachers, and institutional policies, the lower score for AI-assisted institutional decisions ($M = 3.84$) might be related to some hesitation in using automated systems to make institutional decisions. These decisions are frequently driven by context, social and ethical considerations which may not necessarily be reflected in quantitative data or information. This would imply that there can be a greater acceptance of automation for repetitive and supportive tasks as compared to tasks that rely on professional judgment for decision-making.

Table 2: Perceived Ethical Risks Associated with AI Adoption

Ethical Concern	Mean	SD	Rank
Student data privacy and security	4.42	0.68	1
Algorithmic bias and discrimination	4.31	0.73	2
Excessive dependence on automated systems	4.17	0.81	3
Lack of transparency in AI decisions	4.12	0.79	4
Reduction of teacher autonomy	3.98	0.88	5

Digital inequality and unequal AI access	3.94	0.92	6
Risk of weakening human interaction	3.91	0.95	7
Overall Mean	4.12	0.82	—

Table 2 shows that educators are very concerned with the ethical aspects of AI in education. Student privacy and security was the most obvious concern ($M = 4.42$, $SD = 0.68$). The outcome underscores the importance of safeguarding sensitive educational data, especially if AI systems are gathering information on students' academic performance, behavioral habits, learning styles, and online interactions.

Algorithm bias ($M = 4.31$) received the second-place, suggesting that one concern relates to biases which can be perpetuated or amplified in AI systems due to the design of the algorithms, and training data used. Biased algorithms could impact assessment, student profiling, admissions, recommendations, or access to learning opportunities in a learning environment. Thus, adopting AI in an ethical manner necessitates a systematic assessment of datasets, algorithms, and results.

The concern of too much reliance on automation was also in the upper quartile of the means ($M = 4.17$). This discovery is especially applicable to the main thesis of the study. Although automation can boost efficiency, excessive reliance can result in a lack of professional judgment opportunities for teachers and over-reliance on the technological system by students.

This relatively high concern with lack of transparency ($M = 4.12$) is also suggesting that teachers' expectations for the use of AI in education include that they will be able to explain to another student what they think the important recommendations or decisions were that will be made by AI. The results justify a human-centred approach, in which AI is not considered as a prescription, but rather as a decision support tool.

Table 3: Teacher Readiness and Preference for Human-Centered AI Integration

Indicator	Mean	SD	Interpretation
Teachers should retain final authority over important educational decisions	4.51	0.61	Very High
AI should complement rather than replace teachers	4.47	0.65	Very High
Teachers require regular AI ethics training	4.36	0.70	Very High
Institutions should establish clear AI-use policies	4.33	0.74	Very High
Students should receive AI literacy and ethical-use education	4.29	0.77	Very High
AI systems should be regularly audited for bias and accuracy	4.25	0.80	Very High
Teachers feel adequately prepared to use AI ethically	3.48	0.96	Moderate
Overall Mean	4.24	0.75	Very High

Table 3 clearly reinforces the need for an approach focused on human needs when it comes to using AI. The teachers should have the final say on important educational decisions was the statement most endorsed by teachers ($M = 4.51$, $SD = 0.61$). This finding indicates that teachers vary in how useful they find automation to be and how legitimate they find automated decision making to be. While AI may be able to suggest, predict, or analyze, it is expected that there will be qualified human professionals who will be held accountable for consequential education decisions.

The statement 'AI should be used in addition to, and not instead of teachers' also garnered a very high score ($M = 4.47$). It confirms the "assistive" rather than "substitutive" nature of the most wanted type of educational automation, at least as desired by teachers. Teaching involves aspects of emotional understanding, motivation, mentorship, classroom relations, cultural sensitivity, conflict resolution and ethical judgment. Particularly in the presence of sophisticated AI systems, the human factor is important in these dimensions.

The high score for teachers' regular training in the ethics of AI ($M = 4.36$) indicates a need for capacity building in teachers' ethical use of AI. Similarly, there was high agreement for institutional policies with regard to AI, student awareness of AI, and regular review of AI systems. The results indicate that the successful application of the AI will not be achieved solely through technological advances but will require proper institutional arrangements, professional training, monitoring and sharing of ethical frameworks.

The level of teachers' preparedness to apply AI ethically, however, was significantly lower ($M = 3.48$). There is a readiness gap between the strong demand for AI ethics training and moderate extent of preparedness, showing that there is a need for awareness. The difference between demand and preparedness (both strong and moderate) indicates a readiness gap and the need for awareness. Institutions might thus need to do more than just give access to AI tools and concentrate on building educators' proficiency in topics like algorithmic bias, data privacy, AI assessment, responsible prompting, IP issues, transparency, and human oversight.

5. Discussion:

The 3 tables have different patterns. Teachers also appear to be aware of the opportunities for using AI to improve efficiency, personalisation, feedback and access to educational resources, as well as having concerns about privacy, bias, transparency and over-automation. Rather than educators being antagonistic to using AI, there is an interest in situations where AI can be related to educational values that are judged as having high perceived usefulness and an ethical concern.

There is no better way to ask the question of "Should AI be used in education?" than to ask "How can AI be used to complement human education without compromising its key tenets?". Administrative tasks, which are repetitive and data-intensive, like content organization, basic feedback, learning analytics and recommendations of resources are among those that can be automated. It is the human factor that plays a significant role in determining matters pertaining to student well-being, student progress, assessment, inclusion and educational opportunities.

Results also suggest a human in the loop approach to the application of AI in learning. In this model, the AI will provide information, patterns and/or suggestions, which teachers will interpret and finalize. This kind of model can combine the analytical capabilities of Artificial Intelligence and context and ethical decision-making of educators.

The other issue of importance is institutional responsibility. It is not the responsibility of individual teachers to address the ethical dangers of AI. Governance policies and procedures in education should explicitly address aspects of collecting and protecting personal data, acceptable uses of AI, transparency, assessment, academic integrity and accountability. AI Governance needs to be revisited, with frequent algorithmic audits to uncover bias, incorrect answers, and unintended consequences of these algorithms.

In the course of developing interventions, it is an area of focus that could be given a moderate ethical preparedness rating for teachers. In addition to technical training on the use of AI in education, training on ethics, data governance, interpretation and evaluation of AI generated information, awareness of bias, protecting privacy, and

responsible pedagogical uses of AI must be provided. Likewise, students require AI literacy, in order to have knowledge of the strengths and weaknesses of intelligent systems.

The results show that the ethical use of AI in education is more a complement to than a substitute for human intelligence. Although AI can improve efficiency in institutions and provide analytical insights, relationships, empathy, professional judgment, thinking and engaging with people are what make up educational quality. The tasks must be done by technology, the teacher must have reasonable authority to do so, and the student must be an active participant of his/her lesson. Responsible approach thus means conscious balancing – the tasks are to be accomplished by technology and the teacher has reasonable authority over doing so, and the student is an active participant in his/her learning.

Based on this study, the authors propose the following guidelines for human-centred use of AI in education: (1) Automation when it makes a difference: Use AI to automate when it makes sense; (2) Keep humans in the loop: When decisions have educational and ethical implications, keep humans in the loop; and (3) Continuous governance, training and evaluation cycles: Continuously govern, train and evaluate the use of AI in education. This can enable institutions to leverage the benefits of AI innovation while protecting the rights of students, autonomy of educators, equality in education, and the human aspect of education.

Limitations of the study

The study “Ethical AI in Education: Balancing Automation with Human-Centered Learning” has some limitations that should be considered when interpreting the results of this study. First, the study could be limited by the availability and quality of evidence on the ethical use of AI in the educational context, given the fast pace of the development of AI technologies and practices that are deemed ethical now may differ in the future based on technical and regulatory shifts. Second, the results of this study might be limited to some regions and educational institutions because of the different educational systems, institutional policies, technological infrastructure, teacher readiness, and student access to digital resources in different institutions. The study acknowledges that the ethical, privacy, fairness, transparency, and human oversight perceptions among teachers, students, administrators, parents, and policymakers can differ and may be difficult to draw generalizations. Furthermore, the impact of AI-enabled learning on students' long-term thinking, creativity, motivation, socialization, and teacher–student interactions will not be fully understood in the study as many of the uses are new, and their sustained influence on these areas of learning will need to be examined over a longer timeframe. A further challenge is that it is not easy to distinguish the role of the AI tools from other technology, pedagogical, and social and economic factors that affect learning outcomes. Lastly, the study takes a dominant focus on the autonomy/humanism dilemma in education and thus does not fully cover all technical, legal, economic, cultural and psychological aspects of educational AI. The restrictions emphasize the need for greater empirical, longitudinal and contextual research to be conducted, as well as for new research to be carried out about the responsible use of AI in education without forgetting the importance of human engagement.

Future Scope

The possibilities of ethical AI in education are vast, aiming to make learning environments where technology is a means, not a substitute, for human connection. For future research, the possibilities of designing AI-based systems to assist teachers in lesson planning, formative assessment, individualized feedback, student mentoring, and early identification of learning difficulties, while maintaining the professional autonomy of teachers, can be explored. More attention should be given to transparency, data privacy, fairness and accessibility and accountability of the algorithms when they are used in decisions or to shape decisions made by students. Additional studies with the application of Longitudinal studies are needed to assess long-term impacts on critical thinking, creativity, motivation, emotional development and social skills due to “AI supported learning”. There are other studies of the future that could also focus the comparison of effectiveness of human, AI assisted and fully AI learning processes at different levels of education, on different subjects and in different socio-economic contexts. Additionally, the study of responsible AI tools, with a specific focus on access barriers, can delve into the disparity between access to digital infrastructure, teacher training, language diversity, and access to responsible AI tools in developing countries such as India. The

following topics will continue to be of interest: Established institutional policies/ethical guidelines, teacher preparation programmes and student AI literacy frameworks. Lastly, the future of AI in education should prioritize the creation of human-centric AI systems that will make education more efficient, while still keeping its emphasis on empathy, judgment, creativity, inclusion, and human connection between educators and students.

6. Conclusion

Ethical AI in education is a significant transformation in how technology can aid teaching and learning while maintaining the values of humanity intrinsic to education. AI has the potential to have a profound impact in a range of personalized learning applications from intelligent assessment to academic support, administrative efficiencies to early identification of students requiring extra support. AI's educational potential isn't limited to its technology, though. Responsible and well-managed implementation is required for issues of privacy, bias, explainability, inequity, over-automated systems, and a potentially diminished teacher–student relationship. AI should support and augment, not replace, the roles of teachers, learners, families and educational institutions, as these are both human and social processes of education.

Schools should set ethical guidelines to guide the deployment, development and use of AI systems, including the human-centred approach. Teachers need to have a role to play in all pedagogical and assessment decisions, and students must have meaningful experiences related to how the learning is impacted by the use of the AI systems. Institutions should formulate policies on institutional AI that are rooted in the principles of transparency and accountability, informed consent, data protection, accessibility and fairness. The importance of continuous professional development is also emphasized, as the educators need to be proficient in the use of technology and aware of ethical issues in relation to the use of AI tools, in order to evaluate AI-generated content, to recognize potential biases and to properly utilize intelligent tools in different learning contexts. Likewise, to be able to engage with and make use of these technologies in critical, responsible and creative ways, students must be AI literate and not simply a recipient of automated recommendations.

In the end, using AI in education successfully depends on the correct implementation of the combination of automation and human expertise. Some of the practices and tasks can be automated, but others are more of a person-to-person kind, in terms of empathy, creativity, critical thinking, mentorship, moral thinking, meaningful interaction – can't be replaced by technology. Ethical AI should thus be considered as a means to facilitate rather than make decisions. AI can contribute to the development of more personalized, equitable, engaging, and effective learning experiences when used with appropriate ethical protections, teacher participation, equal opportunities, and human oversight. The next generation of AI in education should be about intelligent learning environments, where technology and human skills complement each other to enable students to develop in all aspects.

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