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The Role of AI in the Education Sector: Focusing on AI's Adaptation, Drawbacks, Implications, Trust, and Ethical Considerations

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ABSTRACT

Artificial Intelligence (AI) integration within educators' practices in Higher education introduced adaptive platforms with intelligent tutoring systems and automated assessments for transforming traditional educational approaches. This study investigates AI's role in the education sector as a driver of innovation and ethical concerns for the students who will lead the nation tomorrow. The research focuses on challenges posed by the research including monitoring student data and operational biases and weakening human and social connections between teachers and students especially under supervision. Moreover, the study examines ethical issues alongside digital inequalities, and the consequences AI technology creates regarding creativity and critical thinking for the educational environment in Pakistan. The study utilized a qualitative methodology by conducting focus group interviews to explore student's perspectives on AI adoption. The results of the study reveal that artificial intelligence reduces time-consuming repetition by optimizing tasks and is helpful for teachers to concentrate on more important tasks such as

personalized student mentoring. Furthermore, the findings concluded that an over-reliance on AI technologies may damage the long-term learning and cognitive abilities of students and also reduce self-confidence, and trust in peers, and limit social connections. To preserve fairness, research highlights the importance of implementing ethical AI systems alongside strict instruction for educators and open access to information. AI has the potential to support standard educational principles by promoting inclusive accessibility to innovative methods along with the direction and interactions with teachers. Furthermore, the research findings provide practical solutions for policymakers' educators, and developers to implement AI with responsibility across worldwide educational frameworks while considering the challenges that come along with it.

Keywords: AI in Education; Ethical AI; Digital Inequality; Student Engagement; Cognitive Impact

INTRODUCTION

The use of AI in education has changed traditional learning models by providing new instruments for student motivation including individually customized approaches, Intelligent tutoring systems, adaptive learning platforms, automated assessment tools, and other AI-related solutions that are emerging as transformative tools to fill traditional learning gaps (Chiu, 2024). However, with this advancement comes key ethical issues (Klimova, 2023) such as privacy in data, issues related to the Erosion of Trust, Ethical Quandaries, and Supervisor Oversight Challenges in learning situations. On its part, the use of AI has the potential to enhance the availability and efficiency of education. However, there are some drawback that revolves around AI integration with education it is important to avoid its negative impact on the the integrity of education system. Similarly, research by (Pham, 2023) highlighted the potential benefits of using AI in education prevail over the corresponding ethical and practical issues including lack of transparency and inclusiveness.

There are several AI tools like ChatGPT, ChatPDF, Turnitin, Quilbot, Smartbot, and Quizlet are utilized by students to enhance their performance and grades. These tools aid in content creation and explanation, but also encourage laziness and reduce deep thinking and analysis, balancing gains and losses (Fitria, 2021). Similarly, there are some other tools such as Khanmigo is a one-on-one tutoring service with no live interaction, Grammarly enhances writing but may overcorrect mistakes, and Google's Socratic offers an assistant for homework, but may not aid in critical thinking (Zhan et al., 2024). Moreover, Supervisors use applications like Turnitin and Google Classroom to check papers for plagiarism, but these can cause intricacies due to false alerts and hinder academic honor, relying on the internet for access. Furthermore, Edmodo and Quizlet websites help to collaborate and learn, however, their usage may cause distraction or emphasize rote memorization instead of problem-solving skills (Renacido, 2024).

The development of artificial intelligence has become very fast and has influenced the different areas in which is applied, education is one of the promising

but problematic fields (Capuano, 2020). Intelligent testing and other forms of assessment tools became greatly influenced by artificial intelligence; the conventional strategies of providing instructions have been transformed to embrace facets of individual identity, organizational structures, and interdisciplinary studies (Shah & Saba, 2024). These have allowed teachers to give personal learning to the students, redesign learning patterns, and reduce earlier complexity and time taking. Nevertheless, new achievements in AI applications lead to serious ethical and operative questions regarding its usage in education (Köbis, 2021). Issues like privacy of personal data, inherent prejudices of algorithms, and decreased interpersonal communication in the learning process have been the points of concern in adopting Intelligent Tutoring Systems. Similarly, there are some potential impacts of Artificial Intelligence on the fairness, inclusion, and openness of AI-driven systems, especially in a heterogeneous society and economy (Varsik & Vosberg, 2024).

AI in education is significantly capable of improving the overall productivity of the classroom as well as teaching effectiveness. It can be implemented to take feedback from students and provide a customized response. While much of the prior research associates the use of intelligent technologies to achieve enhanced learning outcomes, (Suntharalingam, 2024) little attention is paid to the worrying ethical implications of applying those factors primarily Erosion of Trust, Ethical Quandaries, and Supervisor Oversight Challenges minimization of human interaction in the learning process such as relationship with the supervisors in the Higher Education. This paper aims to fill this gap by providing a systematic review of the literature, drawing from both the AI opportunity and challenge streams of discussion (Varsik, 2024). Thus, this study will focus on identifying how organizations and educators can adopt AI solutions with much consideration for ethical principles, equity as well as the inclusion of vulnerable individuals. The growing integration of AI in education highlights its potential benefits but also addresses ethical and trust issues (Nebieridze, 2024).

AI technologies can personalize learning, enhance accessibility, and aid policymakers, and technology developers on how blended learning environments with AI integration can benefit education while considering the potential Erosion of Trust, Ethical Quandaries, teacher-student relationship, and Supervisor Oversight Challenges (Marouf, 2024). However, the integration of AI in a learning environment has numerous prospects and benefits, Converly on the other hand, there are numerous ethical and practical problems (Wójcik, 2021). The current rapid adoption of AI technology solutions into the learning practice that has limited to no protection measures is highly threatening, as it may increase learning inequalities while diminishing trust in technology-enhanced learning systems (Adli, 2024). This study examines the dual role of AI in education as a tool for innovation and as a risk for ethical issues. This research seeks to conduct a literature review on the impacts of artificial intelligence in education to present the proactive strategies of integrating AI in education and its positive and negative impacts in terms of Erosion of Trust, Ethical Quandaries, and Supervisor Oversight Challenges and interactions between humans (Corrêa, 2024). The changes in both teachers' and students' lives when AI is entered

into the education system have many positive and also negative impacts on both (Felix, 2020) because after this the duties and responsibilities of the teacher are changed when the teacher is focused on studying but now a teacher's focused on detecting the AI tools that are used by students. And same as on the side the students should be focused on learning but now they just the AI tools and do their work but they don't know about the logic of the backend they also don't know about the work specification and knowledge (Janjua, et al., 2025).

Therefore, the purpose of this particular study is to present a more or less comprehensive outlook on the use of AI in education by presenting the pros and cons. They will contribute to an ongoing debate as to the most appropriate usage of AI in such a way that will foster innovation, and fairness and most critically put the credit where it is due by making society gain equity within the education systems all over the world (Zhao, 2022). Shaukat, Rehman, and ul Haq (2021) research highlights the potential benefits and risks of AI in education presented by Hashakimana, (2020), this study will provide educators, policymakers, and technology developers concrete and practical suggestions elaborated in the literature and built around positive experiences that can help to create responsible, fair, and sustainable paradigm for using AI (Shah, et al., 2025; Azhar, Iqbal & Imran, 2025). This rationale is the reason why it is pertinent to couple technology with ethical purposes to guarantee that AI enhances the educational processes on all fronts to be equitable and innovative in the long run.

LITERATURE REVIEW

AI is emerging as the disrupting technology in education due to the defragmentation that happens in the traditional arrogant system and paves the way for modern educational systems (Zhang, et al., 2023). Internationally, AI applications present the positive agenda of individualizing learning, enhancing bureaucratic efficiencies, and providing greater equity of learning provision (Kunacheva, Niyomves, & Kenaphoom, 2024). The AI revolutionization in education is quite unpredictable for Pakistan where several barriers including inadequate teachers, unequal distribution and access to resources, and learning inequities continue to persist (Sain, 2023). The adoption of AI in education has been the focus of many studies pointed out that AI technology will change learning systems around the globe (Al Marsi, 2024). This paper aims to provide a literature review of the growing body of research on the use of AI in education with a Specific reference to beneficiaries, challenges, ethical issues, and changes in the relationships in learning processes particularly in the Pakistani context (Kousar, Khan & Alam, 2024). The topic of discussion can be broken down into important issues such as how AI complements higher education outcomes, manages scarcity, and concerns the relations between students and supervisors. At the same time, AI has the potential to transform learning while it also offers notable difficulties in a learning context (Shoaib, et al., 2024). In their turn, the key ethical issues, which include the degradation of the humanistic teaching positions, and the problems related to personal data, are still issues of crucial discussion (Ali, et al., 2024). Moreover, there remains a potentiality regarding the increase in the digital divide, in countries like Pakistan where AI can potentially

increase it. This research critically analyses the following two sides of AI in education; the effects it has the teaching roles, trust, and ethical considerations covering its benefits as well as drawbacks in both international and local educational contexts.

AI is widely recognized for its potential to revolutionize education by addressing longstanding challenges such as access, personalization, and resource optimization. The study outlined by Gligorea et al. (2023) that Learning with AI is made possible by adaptive learning, intelligent tutoring, and learning analytics. Machine learning technologies that are integrated in education help deliver personalized content under the student requirements for learning. The study is a reminder that such systems enhance the learners' performance and enhance knowledge of the subject area (Idroes et al., 2023). Furthermore, the use of informative learning analytics that incorporate the application of AI revolves around providing educators with insights as regards learner progress and challenges. The AI system can determine the performance of the students and suggest appropriate actions for the improvement of the learning process (Gedrimiene et al., 2024).

Abbas et al. (2024) highlight that enhancing consumer engagement within brand communities is a key marketing objective for strengthening the brand-consumer relationship. Similarly, Kumar et al. (2024) investigate the relative influence of different genders of social media fitness influences (SMFIs) on consumers' decisions regarding supplement purchases. Additionally, Mansoor et al. (2018) examine the impact of different types of location-based advertisement messages on consumer attitudes. Since AI technologies are oriented on usage in large organizations and institutions, the opportunities of AI-driven coaching tools are more effective and affordable for students and teachers. The research by Terblanche et al. (2023) showed that AI coaches enhance goal-setting and self-regulation competencies, especially where resources are limited, and this is very applicable in Pakistan. Furthermore, AI In higher education is being utilized to streamline administrative tasks such as admissions, course scheduling, and resource allocation. These innovations free up faculty time for more strategic activities, thereby enhancing institutional efficiency (Katsamakas et al., 2024).

AI is redefining the roles of educators by automating routine tasks like grading and attendance tracking enabling the teachers to perform important tasks that are demanding in this AI trend such as coaching and tutoring (Chen et al., 2019). Adaptive learning is a form of artificial intelligence that provides tutorial support where the system provides content delivery that is customized to the needs of the learner (Strielkowski et al., 2024). However, in Pakistan, where the teaching profession is seen more as an act of mentoring, the transformation from known roles to more negotiated ones involves both cultural and structural complexities (Kiran et al., 2024). There is also a fact that many teachers have no AI literacy, so they fail to incorporate these technologies adaptively (Cheng, 2023). Additionally, a scarcity of professional development programs only widens this chasm, placing educators in a precarious position to deal with this shifting trend (Khoso, et al., 2024).

The incorporation of AI in education entails the uptake of large amounts of students' data implying important questions about data ownership, privacy, and

security. This is an even more important factor given the weak regulatory structures in countries like Pakistan (Khan, Ibrahim, & Hussain, 2021). Furthermore, AI integration in higher education has primarily two significant challenges marked as bias in AI algorithms and the influence of the AI-generated recommendation system. The system trained on samples that do not represent the population level may help to enhance inequality (Pappalardo et al., 2024). For instance, Arinushkina. (2023) also pointed out that AI tools and resources that are used for education systems in Western countries do not address linguistic and cultural diversity in students in Pakistan and are thus less useful for underprivileged students. Moreover, the opacity of AI decision-making processes complicates accountability. Educators and policymakers in Pakistan must grapple with questions of responsibility for decisions made by AI systems, such as student assessments and admissions (Ahmad et al., 2022). Teachers have stated that the use of AI can create an unintentional negative impact on their relationship with students. Feedback tools are time-saving and effective as they require no input from tutors, however, rely on an aspect that artificial intelligence can never possess: empathy. Research conducted in Pakistan demonstrated that students perceived these systems as inhuman, and thus they preferred human feedback because of affective and cultural appropriateness (Qutab, 2016).

The fundamental characteristic some call the 'black box' problem: AI decision-making is not transparent. Whereas students and educators require insights into how decisions are made by an AI system, trust in such technologies declines (Oyelere, 2024). This is even worse in assessments where objectivity and fairness are of paramount importance. To overcome this problem, the authors recommend that researchers integrate the use of AI with human guidance (Azhar, 2024; Azhar, et al., 2022). For example, when coming to assignment correction, teachers can incorporate AI to free more time for defining their approach to students (Fitria, 2021). AI applications can be very beneficial in the context of distance education, as well as in offering education services appropriate for individual learning preferences. However, gaps in essential requirements such as infrastructure, internet connection, and popular digital literacy reduce their usability (Wang, and Li-Si, 2024).

In Pakistan, the digital divide is more or less seen, as a large section of the population still lacks access to the internet (Azhar, 2024; Azhar, et al., 2022). Developed countries such as the urban regions of the world benefit from enhanced learning platforms through Artificial Intelligence while developing countries such as the rural areas of the world face challenges such as inadequate power supply, internet connection, and even devices (Jamil, & Muschert 2024). This has increased existing education disparities disadvantaging other minority groups. It should therefore be noted that any attempt to eventually close the digital divide must necessarily focus on infrastructure and distributed solutions that better address the needs of the rural population (Meng et al., 2023). Thus, using AI in learning the culture of rote knowledge and application, and mathematical trickery is a very valuable part there are important reservations about the negative impact of deep learning on such values dear to us as creativity, empathy, and common sense. The research by Grassini. (2023) also noted that students who use AI platforms frequently become more dependent on

those applications and solutions, and the frequency thus minimizes the chances of critical thinking among learners. Whereas, in Pakistan, inadequate monitoring can in an integrated learning system contribute to the perpetuated practice of rote learning, in education that already has shortcomings in this regard. The best approach that remains unknown to policymakers is how AI can enhance and sustain teaching strategies that foster the wholeness of a learner (Khosravi et al., 2022).

It is imperative to overcome the educators' AI illiteracy. It is thus important for training programs to ensure that teachers acquire both technical content knowledge in the use of the technology as well as an understanding of relational aspects of education to be incorporated in using the AI technology. Therefore, localized AI tools can be highly beneficial and effective in their utilization since they better describe cultural and language differences (Sun, 2012). Several scholars stress that the development of these targeted solutions can be achieved through a joint effort of policymakers, tech companies, and educators. Several problems require a well-established ethics policy for AI-mediated applications in educational settings. These frameworks should identify problems, such as data protection, algorithms, and no transparent decision-making procedures that need solutions; and ones that should be used to improve them globally while applying these to countries that may have their problems like Pakistan (Nawaz, 2024).

METHODOLOGY

The research uses the research onion methodology model which was developed by Saunders et al; 2009 as a means of formulating and structuring the methodological approach of this study. From philosophical presumptions to the choice of data collection techniques, Six S's form a convenient model for outlining a sound research methodology. The given approach methodically secures the study philosophy, strategy, and techniques ensuring that all the aspects remain in harmony, all of which create a sound foundation to investigate the use of artificial intelligence (AI) in education alongside ethical considerations. The study assumes a pragmatic epistemological stance. To examine technological integration and ethical issues in the application of AI in teaching and learning, this philosophy supports the interactionism of quantitative methods. The pragmatic point of view allows flexibility regarding practical problems and the search for the middle ground between several attitudes. The study adopts an abductive technique, focusing on qualitative insights and iterative engagement with theory. This approach enables the development of practical solutions and theoretical frameworks to support the implementation of ethical AI in education. The research employed qualitative views by conducting interviews on the effectiveness and or ethically sound use of AI. Furthermore, focus group interviews will be employed to build a rich understanding of how institutions work and how institutional actors feel. This pairing ensures intense consideration of the ethical considerations that accrue to AI and its impact on education. The research adopts a cross-sectional design, gathering data at a specific point in time (Tae et al. 2024). This method offers a quick overview of the opinions, methods, and difficulties surrounding AI in education today.

Data Collection Techniques and Analysis

The research involves collecting data through focus Group interviews by exploring the student ethicists and their perspectives on ethical AI adoption. Qualitative data analysis was performed to determine topics and concerns that emerged correspondingly (Saunder et al., 2009) By bringing the research concept, tools, and techniques are aligned to ensure a systematic and harmonized approach is adopted in the research onion methodology. In this fashion, the work approaches the multi-faceted and often paradoxical interconnection between AI's radical capacity to transform education, on the one hand, and the ethics required to respond to the increased potential of both positive and negative impacts that such an AI technology could bring on the education sector.

Analysis Approach

In this research, NVivo Software to conduct thematic analysis for the qualitative data will utilize focus groups and interviews, ensuring systematic coding and identification of key themes such as personal Experience of Users using AI, Ai driven Grading solutions to teachers such as Turinitin AI, and Plagiarism detection, challenges of using AI tools, and Supervisor-Student relations overview and Challenges. NVivo's advanced features for qualitative data analysis will enable efficient organization and interpretation, aligning with the study's objectives to explore ethical implications and dynamics in AI-integrated education systems (Braun & Clarke, 2006).

DATA ANALYSIS

Personal Experience of Students Using Artificial Intelligence

Accessible, Easy, and Helpful

Many participants highlighted how AI tools provide quick and easy access to learning resources, making education more efficient and inclusive.

"AI tools have made learning fast and efficient. Now students have access to unlimited resources, which was unimaginable before." (Focus Group 2, Participant 1).

"Educational opportunities have improved due to AI accessibility. Now it is possible to learn new concepts through AI tools while sitting anywhere!" (Focus Group 2, Participant 2).

Improved Personal Experience

Students emphasized how AI enhances their understanding and experience in learning by simplifying complex topics.

"AI has improved my personal experience a lot. These tools help me understand complicated topics in a very easy and step-by-step way." (Focus Group 1, Participant 1).

Encourages Laziness & High Reliance on AI Tools

Several participants admitted that while AI is helpful, it makes them overly reliant, which might harm their long-term learning habits.

"I feel it has made my learning somewhat passive. I have started relying on tools instead of thinking about things on my own, which may be harmful in the long term." (Focus Group 1, Participant 1).

"Overusing these tools can make us lazy. We should remember that the real purpose of learning is curiosity and self-exploration, which is somewhere getting lost through these tools." (Focus Group 1, Participant 6).

Negatively Impacts Cognitive and Creative Abilities

Some participants expressed concern over how AI tools weaken their critical thinking and creativity due to their ready-made solutions.

"AI often gives ready-made solutions, which can weaken critical thinking. After a while, it seems that one starts depending on AI, which might not be good." (Focus Group 1, Participant 1).

"AI makes research super easy, which is amazing! But when it comes to creative work, I feel it's kind of restricting my imagination." (Focus Group 1, Participant 2).

Saves Time for Hard Work and Encourages Creativity

Conversely, others noted how AI frees up time for creative work and boosts innovation.

"AI has boosted creativity! When I am working on a new idea, AI gives me such suggestions which I would never have thought of!" (Focus Group 1, Participant 6).

"It has helped me brainstorm better ideas quickly." (Focus Group 2, Participant 3).

Loss of Human and Social Touch

The interaction between students and educators has changed due to AI, with many highlighting a reduction in personal connection.

"After AI tools came in, my interaction with teachers has decreased. Earlier, whenever I had a confusion, I would immediately ask my teacher, but now I often get answers from AI." (Focus Group 1, Participant 1).

"AI tools have weakened the connection with educators. Before, we asked more, talked more, and they understood us better." (Focus Group 1, Participant 6).

Innovative Tool

Participants viewed AI as an innovative means to enhance education by offering unique tools and methods.

"AI should create innovative tools that make learning more interactive and engaging!" (Focus Group 2, Participant 2).

AI Provides Misleading and Biased Information

Several participants raised concerns about AI tools providing biased or inaccurate information, which can lead to misunderstandings.

"One concern is that AI tools sometimes provide incorrect or biased information, which can mislead students." (Focus Group 2, Participant 2).

AI Should Be Used as a Tool

Many participants believe that AI should act as an assistant or a supportive tool, rather than replacing human educators.

"AI should be developed as a system that gives guidance, but the final decision should always be up to the teacher or the student." (Focus Group 2, Participant 1).

Personalized Experience

AI's ability to personalize learning experiences was widely appreciated.

"AI tools have not only personalized my learning but also saved my time." (Focus Group 1, Participant 2).

Unaware of AI-Driven Systems

Some students admitted they lacked knowledge or experience with AI-driven systems, which impacts trust and adaptability.

"Honestly, I don't know much about how AI-driven systems work." (Focus Group 1, Participant 1).

"I have never personally experienced AI-driven grading, so I don't know how accurate it is." (Focus Group 1, Participant 4).

Help Educators

Participants acknowledged that AI can support teachers by handling repetitive tasks, allowing them to focus on mentorship.

"AI should work as an assistant. It can help simplify repetitive tasks like grading and attendance so teachers and students can focus more on the important stuff." (Focus Group 2, Participant 1).

Resistance to Adapting AI

Some participants highlighted resistance or challenges in adapting to AI due to a lack of training or familiarity.

"Proper training is needed to understand these tools. Many times I gave a wrong command or searched an irrelevant query, and time was wasted because of it." (Focus Group 1, Participant 7).

Challenges Faced by AI Integration into the Education Sector

Inclusivity and Fairness

Participants noted that AI systems must address inclusivity and fairness to ensure equitable access for all students, regardless of their background.

"AI systems can be biased! They make unfair decisions. For example, if a specific demographic is being given preference, then yes… it is not ethical!" (Focus Group 1, Participant 4).

"Equity and inclusivity mean that every student, whether rural or urban, can enjoy the benefits of AI equally." (Focus Group 2, Participant 5).

Digital Divide

Several participants highlighted how the digital divide continues to limit the accessibility of AI tools for students in remote or underprivileged areas.

"Educational opportunities have improved due to AI accessibility, but this is limited to those who do not face the impact of the digital divide." (Focus Group 2, Participant 2).

"AI tools are easily accessible for people in urban areas, but for students who do not have internet or devices, this seems like a dream." (Focus Group 2, Participant 1).

Privacy, Ethical, and Data Security Issues

Concerns about data privacy and ethical misuse of AI systems were common, with participants emphasizing the need for safeguards.

"Privacy is a big issue for students. If a company or university does not put in

place proper safeguards, student data can be insecure." (Focus Group 1, Participant 6).

"Transparency with AI is problematic! We don't know on what basis AI systems are making decisions. Accountability is equally important—if AI makes a mistake, who will be responsible?" (Focus Group 1, Participant 2).

Negatively Impacts Cognitive and Creative Abilities

Participants expressed how AI tools, while useful, can hinder creativity and critical thinking by providing ready-made solutions.

"Whenever AI gives a suggestion, I don't think much about it! AI is a great tool for creativity, but if its dependency becomes too much, our original thinking can get damaged." (Focus Group 2, Participant 2).

"AI often gives ready-made solutions, which can weaken critical thinking. After a while, it seems one starts depending on AI, which might not be good." (Focus Group 1, Participant 1).

Loss of Human and Social Touch

The introduction of AI tools has led to reduced interactions between students and educators, impacting the personal connection that is crucial for learning.

"My interaction with teachers has decreased. Earlier, I would immediately ask my teacher whenever I had confusion, but now I often get answers from AI." (Focus Group 1, Participant 1).

"AI tools have weakened the connection with educators. Before, we asked more, talked more, and they understood us better. Now, the interaction feels more robotic." (Focus Group 1, Participant 6).

Lack of Accountability

Concerns were raised about the absence of accountability in AI systems, especially when errors occur in academic evaluations.

"If AI tools conduct incorrect academic evaluations, who is responsible? Accountability is a big issue!" (Focus Group 1, Participant 3).

"If there is a mistake, we don't know who is responsible for it!" (Focus Group 2, Participant 5).

Lack of Transparency

Participants stressed the importance of transparency in AI systems to build trust and ensure fair decision-making.

"Users should understand how and where their data is being used. If there is no transparency, trust is impacted!" (Focus Group 2, Participant 4).

"Transparency and accountability protocols are important. If AI makes a mistake, there should be a clear resource to address it." (Focus Group 1, Participant 2).

AI Provides Misleading and Biased Information

AI's potential to generate inaccurate or biased outputs was a recurring concern, as it could mislead students.

"AI tools sometimes provide incorrect or biased information, which can mislead students." (Focus Group 2, Participant 2).

"Biases in AI systems are the biggest issue. Algorithms must be trained on diverse data to make fair decisions for everyone!" (Focus Group 1, Participant 7).

AI Should Be Used as a Tool

Many participants believed that AI should function as a supportive tool, rather than replacing human educators or decision-makers.

"AI should be developed as a system that gives guidance, but the final decision should always be up to the teacher or the student." (Focus Group 2, Participant 1).

"AI should work as an assistant. It can handle repetitive tasks, giving teachers more time to interact with students." (Focus Group 2, Participant 1).

AI Should Be Used as a Tool with Careful Approach

Participants advised a cautious approach to using AI in education, emphasizing the need for balance and proper training.

"AI should be considered just a tool. If a person pushes, AI can improve both creativity and critical thinking." (Focus Group 1, Participant 6).

"Proper training is needed to understand these tools. Many times, I gave a wrong command or searched an irrelevant query, and time was wasted because of it." (Focus Group 1, Participant 7).

Not Capable of Evaluating Human-Generated Content

Participants expressed skepticism about AI's ability to evaluate subjective, creative, or nuanced content accurately.

"AI might be fair, but sometimes it misses context. Like, it might not understand my unique approach to things." (Focus Group 1, Participant 2).

"I think it's good for checking facts or basic stuff, but I'm not sure it understands creativity or effort." (Focus Group 2, Participant 4).

Unaware of AI-Driven Systems

Some students admitted they lacked understanding or experience with AI-driven systems, which impacts trust and adoption.

"I don't know much about how AI-driven systems work. But I heard that the grading is fair and unbiased, which sounds good!" (Focus Group 1, Participant 1).

"I have never seen how AI-based grading works! But if it is fair, it could be good. I think human teachers appreciate our hard work more." (Focus Group 1, Participant 7).

Student and Supervisor Relationship After AI Integration into Education

Teachers (Humans) are more reliable and trustable.

Some participants emphasized the importance of human teachers in fostering trust and reliability. They felt that while AI can assist, human educators provide essential empathy and deeper understanding:

"I think teachers can better understand how much hard work we have done." (Participant 4, Focus Group 1)

"Human teachers appreciate our hard work more, which AI probably can't do." (Participant 7, Focus Group 1)

"Teachers can evaluate better as they are more empathetic and can assess individual efforts." (Participant 5, Focus Group 1)

Negatively impacts the relationship with teachers

AI tools have reduced interactions with teachers, making relationships less personal and less engaging:

"After AI tools came in, my interaction with teachers has decreased. Earlier,

whenever I had confusion, I would immediately ask my teacher, but now I often get answers from AI." (Participant 1, Focus Group 1)

"AI tools have reduced my direct interaction with supervisors. Now I don't have to disturb them for small doubts, but sometimes that personal connection does feel a little lost." (Participant 5, Focus Group 2)

AI made stronger supervisor-student relations by saving time

Some participants noted that AI tools have streamlined interactions with supervisors, allowing more productive discussions:

"AI has improved my relationship with my supervisors! Now I come better prepared because I first solve my questions with AI and then discuss only the complex ones." (Participant 4, Focus Group 1)

"Now, I solve basic queries with AI and take the bigger problems to my teachers, making our discussions more productive." (Participant 3, Focus Group 2)

AI made supervisor-student relations more formal.

Participants observed that the integration of AI has shifted their relationships with educators to a more formal tone:

"AI has made my relationship with teachers more formal. Now, I mostly talk to them about necessary things like feedback or career advice." (Participant 3, Focus Group 1)

"Earlier, we used to chat more casually, but now, the interaction feels a bit less frequent." (Participant 3, Focus Group 2).

Loss of human and social touch

Several participants felt that AI tools have contributed to a decline in the human and social aspects of their relationships with educators:

"The personal connection is fading as AI tools have replaced many of the small interactions I used to have with teachers." (Participant 1, Focus Group 1)

"AI tools have made things easier but have weakened the connection with educators. Before, we asked more, talked more, and they understood us better. Now, the interaction feels robotic at times." (Participant 6, Focus Group 1)

Does not affect the relationship with educators

Some participants indicated that AI had not significantly impacted their relationships with teachers:

"I don't feel AI has changed much in my relationship with teachers. Yes, I've become more self-reliant and use AI for small queries. But when it comes to deeper understanding or motivation, only teachers can provide that!" (Participant 5, Focus Group 1)

"Honestly, my relationship with my teachers is pretty much the same. AI does answer a lot of questions quickly, but it can't provide that deeper problem-solving guidance like teachers do. For me, both have their place." (Participant 4, Focus Group 2)

Human teachers are empathetic and understanding.

The empathy and understanding provided by human teachers were highlighted as irreplaceable qualities:

"Teachers can see more of my effort and understand my struggles better than

AI ever could." (Participant 3, Focus Group 1)

"AI can't provide the motivation and deeper understanding that teachers do. Their guidance is still unique and irreplaceable." (Participant 2, Focus Group 1)

Humans should be in command.

Participants expressed a preference for maintaining human oversight in education and AI integration:

"AI should be developed as a system that gives guidance, but the final decision should always be up to the teacher or the student." (Participant 1, Focus Group 2)

"AI should work as an assistant, but humans should always be in command because education is about values and empathy, which only teachers can provide." (Participant 7, Focus Group 1)

AI-Driven System as Evaluator of Student's Academic Performance

AI-driven evaluation systems are not accurate and reliable

Many participants expressed concerns about the reliability of AI-driven evaluation systems, particularly their ability to assess students' efforts and creativity:

"AI might be fair, but sometimes it misses context. It might not understand my unique approach to things." (Participant 2, Focus Group 1)

"AI might not catch all the nuances that a teacher would." (Participant 3, Focus Group 1)

"If AI judges everything in the same way, it may fail to understand our ideas." (Participant 6, Focus Group 1)

An AI-driven evaluating system could be fair and time-saving

Some participants acknowledged the potential benefits of AI systems in ensuring fairness and saving time:

"The grading is fair and unbiased, which sounds good!" (Participant 1, Focus Group 1)

"AI might be good for basic tasks like checking facts or grammar. It is efficient and saves time." (Participant 4, Focus Group 2)

Not capable of evaluating human-generated content

Several participants felt that AI struggles to evaluate the depth of human-generated content, particularly in creative or nuanced tasks:

"I think it's good for checking facts or basic stuff, but I'm not sure it understands creativity or effort." (Participant 4, Focus Group 2)

"AI tools might evaluate words and structures, but they cannot recognize real knowledge or the effort put into the work." (Participant 5, Focus Group 1)

AI provides misleading and biased information.

Participants raised concerns about the biases and potential misinformation generated by AI systems:

"If an algorithm is trained without inclusive data, it can make unfair decisions." (Participant 1, Focus Group 2)

"AI systems can be biased, and that is not ethical. For example, if a specific demographic is given preference, it creates unfair outcomes." (Participant 4, Focus Group 1)

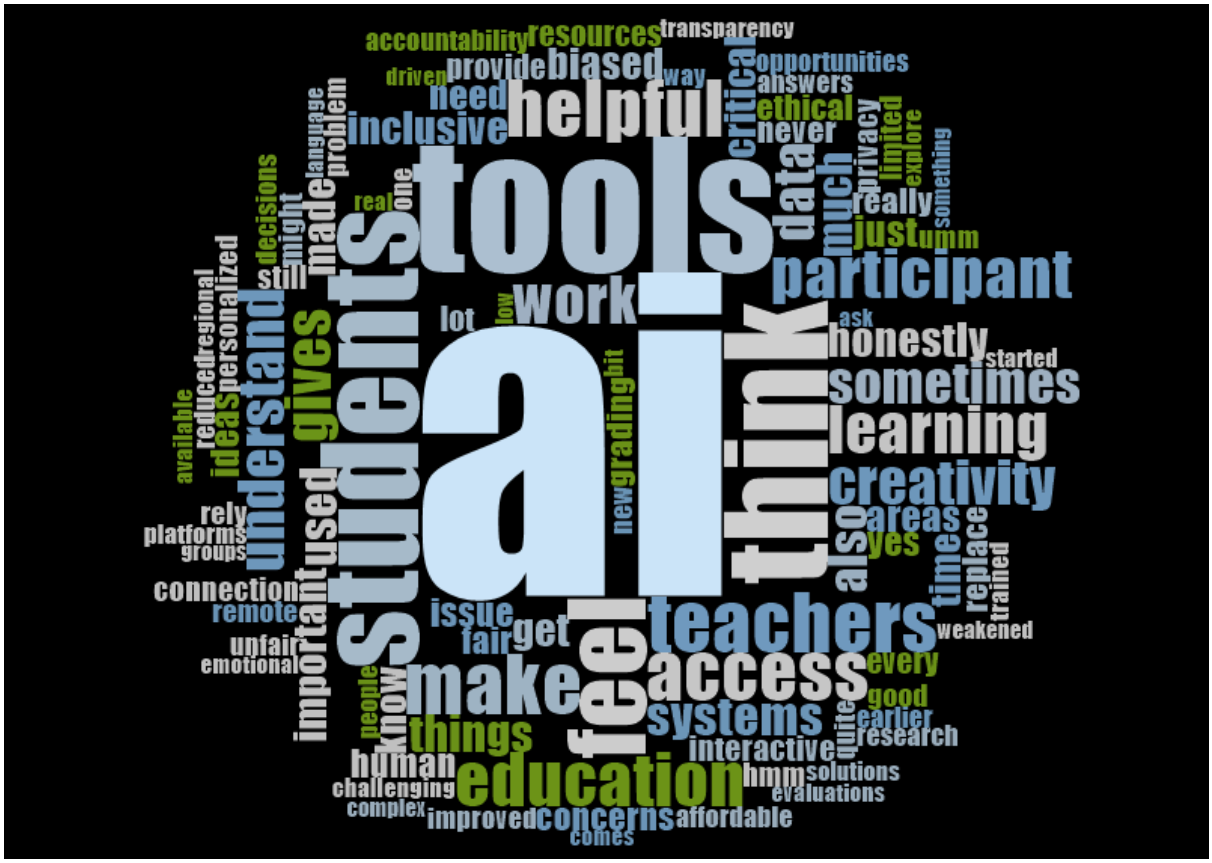
Helps educators in evaluating students' performance

Despite its limitations, participants highlighted the usefulness of AI in assisting educators with evaluations:

"AI should help with assessments and evaluations, bringing more accuracy into the process. Teachers can get overwhelmed, and AI could solve that!" (Participant 5, Focus Group 1)

"AI-driven tools can help teachers by handling repetitive tasks, like grading, so they can focus on mentoring and interacting with students." (Participant 1, Focus Group 2).

Figure-1 Word Cloud by Nvivo



CONCLUSION

The research outcomes that students recognize AI as an effective educational tool to perform their routine tasks while offering both convenient access to resources and simpler explanations of complex topics. However, the research also highlighted ha its som major impact on long-term learning, and over-reliance on AI tools risks passive learning, weakened problem-solving abilities, and reduced student-teacher interaction. These contrasting outcomes reveal the need for a balanced approach to AI adoption. The findings of the research reflect that artificial intelligence (AI) possesses several contradictory roles within educational institutions that need to be improved to enhance educational effectiveness by enhancing both student access and organization with personalized learning solutions that encourage inclusivity. The

analysis reveals important obstacles including reduced critical thinking competency and creativity in the students by using AI for a long time along with the weakening of interpersonal student relationships with teachers and supervisors. The findings reveal that artificial intelligence works as a prime driver for transforming traditional teaching roles into educational mentoring across different academic levels. This facilitates the automation of routine tasks and allows educators to focus on high-value tasks increasing the overall creativity and productivity in the learning process.

Furthermore, the research findings also highlight that the increasing usage of AI tools has made the relations more formal. However, the analysis also highlights the major role of teachers in the education sector by providing emotional and empathetic support and mentorship that AI cannot provide. The study also highlighted the increasing digital divide which is a major barrier to AI accessibility to underprivileged groups and also on remote areas. This is one of the major challenges that AI inclusivity should be promoted to provide equal access to all students. Furthermore, biases in AI algorithms and the lack of transparency in artificial intelligence decision-making processes impact equality and trust among AI-powered educational systems.

Moreover, The study's findings show contrasting perspectives of artificial intelligence-driven evaluation systems have existed among students. According to the student's experiences, study participants perceived the benefits of AI assessment in terms of efficiency and impartiality, but considered it not a reliable tool for assessing the human-generated content. The findings suggest that it is important to integrate AI-based assessment systems with human reviewers to ensure fair evaluations while also acknowledging authentic human-made content. The study emphasizes the need to incorporate AI into education, ensuring that it is consistent with traditional approaches and promotes inclusivity, equality, and creativity. Furthermore, it is revealed that AI can improve learning results and interpersonal interactions if governments, educators, and technology developers address operational and ethical issues. The incorporation of AI into education improves teaching practices while maintaining creative capacities and promotes social justice and empathetic human interactions.

Managerial Implications

These findings provide essential information that could help educational institutions, educators, policymakers, and technology developers as a tool for educational support rather than a technology to replace teachers, there are basic managerial requirements. AI technology ought to perform schedule-based assignments like grading and attendance tracking which would release education professionals to provide meaningful educational support. Student evaluations along with academic guidance must have human oversight in order to achieve fair decisions while preserving both trust and empathy. To maintain students' creative and analytical abilities while integrating AI solutions, educational institutions must create comprehensive teacher development programs. Insufficient training and lack of familiarity with AI-based technology lead to resistance to its implementation. The elimination of AI adoption disparities among diverse groups of students depends on

investments toward expanding internet capabilities and bringing affordable digital access to underdeveloped locations. When developing AI systems developers must prioritize inclusivity in design to build interfaces that address a range of cultural choices alongside varying socioeconomic groups and multiple linguistic demographics.

AI software development requires managers to collaborate with technology developers to produce software solutions matching the specialized needs of marginalized communities. The implementation of AI systems must be based on the fundamental principles of data privacy and transparency, institutions must implement robust protocols to protect student information. While adhering to ethical operational norms, the developers and policymakers must collaborate to create algorithms that make the systems' decision-making processes transparent to users, and targeted accountability mechanisms are necessary to identify platform errors and user bias while building end-user trust through enhancing transparency and accountability in the System. Students need AI literacy training making it vital for managers to develop methods that teach AI capabilities and limitations. Through awareness programs, students can learn about what AI does and doesn't do which leads them to practice responsible and ethical AI usage. By implementing this practice managers can limit AI tool dependency while supporting autonomous learning processes through critical thinking.

In addition, Managers should use AI's revolutionary potential alongside problem solutions to improve student learning experiences. Managers can leverage AI's skills to customize training materials and provide flexible assessment techniques to increase students' commitment to success and learning. Teaching administrators should explore innovative AI technologies for implementing games-based virtual classrooms with engaging teaching tools to enhance the accessibility of educational resources. The research findings require education practitioners and developers to collaborate with policymakers to achieve AI solutions that support educational growth rather than disrupt it. Marketplace implementation of responsible AI requires managers to address questions of ethics alongside operational constraints and accessibility difficulties to create educational systems that support fairness and innovation while remaining accessible to all students.

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