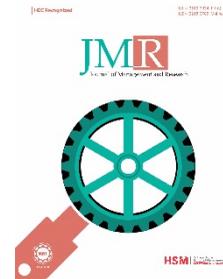


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- Author (s):** Maria Khalid, Anas Tariq, and Shabana Naveed
- Affiliation (s):** Lahore Garrison University, Lahore, Pakistan
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Navigating the Dual Impact of AI in Higher Education: A Phenomenological Inquiry from the Pakistani Context

Maria Khalid*^{ID}, Anas Tariq^{ID}, and Shabana Naveed^{ID}

Faculty of Management and Social Sciences, Lahore Garrison University, Lahore, Pakistan

Abstract

The rapid integration of Artificial Intelligence (AI) in higher education has transformed the administration methods as well as learning and teaching worldwide, same state prevails in Pakistan. This qualitative study aimed to explore two-sided impact (co-creation and co-destruction of educational value) of AI within Pakistani universities. Furthermore, the study employed a phenomenological approach and Service-dominant Logic (SDL) framework to explore experiences and perceptions of students and teachers about AI tools, such as ChatGPT, Grammarly, Gemini, Grok, Perplexity, Elicit, and other AI-Chatbots. The study highlighted how AI can help in cognitive development, tailor made learning, and new pedagogies. AI also presents considerable ethical challenges, such as academic deceit, data breaching concerns, as well as biasness of algorithmic and human interaction. In-depth interviews and thematic analysis were conducted to uncover refined understandings about how AI is restructuring educational relationships and outcomes in the context of infrastructural and cultural constraints. The results highlighted the requirement for contextually pertinent strategies, moral guidelines, and AI literacy to exploit benefits and diminish risks.

Keywords: artificial intelligence, faculty perspectives, higher education, Pakistan, phenomenological inquiry

Introduction

Globally, the process of teaching and learning has been reshaped due to the excessive use of AI in education. Administrative tasks are now automated, tailor made learning pathways are introduced, as well as techno-based assessment systems and virtual learning are enhanced. All these collectively shape up the ways in which AI has been utilized to intervene in our education system (Baidoo-Anu & Ansah, [2023](#)). Pakistan is a country where infrastructure and pedagogy are some of the constraints which cannot be

*Corresponding Author: gemcan.gc@gmail.com

avoided in education sector, and the paradoxes created on either side by AI could provide some answers.

As a result, although AI may construct co-educational worth by refining in-depth proficiency and adopting innovation, additionally it grasps the potential to co-destroy worth by defying features, such as social interaction, critical-thinking abilities, and ethical perceptions (Cabiddu et al., [2019](#)). On the contrary, unnecessary reliance on AI-generated content can lay foundation of students' disengagement from usual learning practices in a way that harms teacher-student relationships or boosts academic fraudulence as an alternative (Guilherme, 2019). Ethical issues related to AI including data privacy, biasness, intellectual property, and retaining academic integrity are also considered as points of attention nowadays (Ismail, [2023](#); Seo et al., [2024](#)).

In Pakistani context, the introduction of AI in the early stages of higher education institutions, with varying awareness levels, access, and application in multiple universities has increased the interest of students to use AI tools (Seo et al., [2024](#)) such as ChatGPT and Grammarly. Furthermore, teachers are also using the automated marking systems extensively. However, there is limited empirical research on the social awareness, educational results, and ethical debates around these technologies. So, this study aimed to fill the knowledge gap by investigating students' and faculty's views in certain universities in Pakistan. Additionally, the research also examined how AI contributes to the “co-creation” and “co-destruction” value in higher education, along with ethical implications that ascend from such implementation.

Research Questions

The current study aimed to address the following research questions:

- 1- How does the use of Artificial Intelligence (AI) as a source of knowledge influence students' cognitive development and teachers' perceptions?
- 2- How does AI impact students' academic performance and learning experiences?
- 3- What pedagogical and institutional strategies can be adopted to address the ethical challenges of AI use in education and to strengthen teacher–student relationships for effective AI integration in teaching and learning?

Research Objectives

The current study aimed to address the following research objectives:

1. to evaluate students' cognitive development when they use AI as a source of knowledge
2. to evaluate teachers' perceptions about AI use that enhances student growth and deteriorates their academic performance
3. to explore teaching methods which can be helpful in mitigating ethical challenges and strengthening the teacher-student relationship. A critical objective of the study was to propose actionable institutional approaches to manage AI integration in order to enhance educational efficacy and diminish its negative impacts.

Significance of the Study

The study aimed to determine the dichotomous impact of AI in higher education system of Pakistan, particularly emphasizing how it can enrich the learning process through competence and novelty. On the contrary, the study also ascertained how AI may reduce the educational depth and human interaction. Furthermore, the study also highlighted the ethical dilemmas, such as plagiarism, misinformation, overdependence on automated systems, and loss of interpersonal relations in academic settings created by AI (Robertson et al., [2014](#)). Likewise, it was highlighted that there is a need of contextually specific pedagogical framework that can propose AI acceptance in Pakistan by keeping in view the local certainties and educational beliefs. The lived experiences of teachers and students that actively use AI tools provide practical recommendations for institutions, universities, policymakers, and course designers while contributing to the global discourse on digital transformation in education with a focus on the understudied context of Pakistan's higher education (Katsamakos et al., [2024](#)).

Research Gap

The global research on AI in education has gained considerable importance and development, however, a major chunk of this research discussed technological potentials, user engagement, and systemic reform efforts in developed countries (Rangaswamy et al., [2020](#)). The pedagogical and ethical concerns of AI concerning education in developing countries, such as Pakistan have rarely been addressed through qualitative inquiry.

The current study filled this gap by collecting rich phenomenological insights from both teachers and students. The use of the phenomenological paradigm is justified in that it studies people with lived experiences, allowing the researcher to comprehend and isolate common themes and challenges arising from participant perspectives (Mutanga, Jugoo, & Adefemi, [2024](#)).

The inquiry grounds itself in the co-creation and co-destruction of value framework which, in turn, is grounded in Service-dominant Logic (SDL) (Cabiddu et al., [2019](#); Robayo-Pinzon et al., [2023](#)). This framework forms a basis for marking out how the interplay between educators, students, and AI technologies might yield positive or collaborative learning outcomes as well as on the contrary, negative or disruptive learning outcomes.

The moral theories of AI in education — including fairness, derived from ethical AI, accountability, transparency, and human agency preservation are also considered when interpreting the data and offering recommendations (Schlesinger et al., [2015](#)). These frameworks help institutions understand how to design AI-related policies that are both innovative and ethically responsible.

Literature Review

Universities are one of the most volatile expressions of human aspiration. However nowadays, there are various challenges at university level due to technological advancement (Burbules et al., [2000](#)). AI is one of the most common and critical challenge of the current era (Ahmed et al., [2025](#)). It is being used in almost every field of education either related to tailor made learning environment, automated grading systems, tutoring resources, feedback support system or predictive analytics (Ghosh, [2024](#)). These twofold changes potentially increase engagement, clarification, and student-centered learning; on the other hand, they pose substantial ethical, social, and intellectual risks.

This section explores understandings of AI within higher education in context of both co-creation and co-destruction. The framework grounds its theoretical foundation on extensive prior literature both local and global, with an emphasis on Pakistani universities, hence covering deep theoretical understandings into the relationships that establish the dynamics of AI-mediated educational change. Therefore, SDL is introduced to infer such changes and a phenomenological approach is used to explore lived

experiences of stakeholders. It would also investigate the AI implementation's ethical and pedagogical dimensions and reveal even if these technologies would act as enhancers or disruptors of teacher-student relationships and institutional trust.

Reframing Educational Value: From Service Delivery to Co-creation

Since long, higher education has remained as a dominant paradigm, whereby a higher education institution expresses education as a product that is delivered to students. This means students are considered as consumers instead of thinkers who engage and question to accept this attitude without realizing it (Zhang, [2017](#)). This model is all about content delivery, unvarying assessments, and teacher-centered pedagogy. This static and uni-directional implication of education is being criticized enormously in the age of digitalization (Allayarova, [2025](#)).

According to SDL, effective service is not delivered by the service organization as a one-way process; rather it is co-created in the interactions between varied stakeholders (Vargo & Lusch, [2008](#)). In higher education, students and educators use AI along with administrators and institutional policies. Hence, learning becomes a dynamic, social, and co-constructed process, not a transactional exchange.

In co-creative model, AI tools serve as mediators instead of determinants. Tailor made feedback, collaborative learning, and real time adaption are various infrastructures made by effective use of AI, while the real value comes from awareness, ethical, and engaged use of these tools by human beings (Chang, [2025](#)).

Are Students Customers? A Contested Paradigm

A deep-rooted debate in higher education, particularly in this 20th century, is surrounding the role of students in the educational ecosystem (Sterling, [2004](#)). Is a student a customer who buys a service in the same way as one buys a car, or is he or she a co-creator doing this learning activity with all the other people involved?

The "student-as-customer" model has been increasingly incorporated into the neoliberal educational policies concerning market-driven systems. This model states that universities are service providers and students are consumers who are satisfied by grades and employability. Proponents argue that considering students as customers ensures accountability and quality,

however, it turns education into a transaction, damaging its moral and developmental purpose. This may lead towards entitlement, decreased intrinsic motivation, and avoidance of critical engagement (Bunce et al., [2017](#)). A study was conducted in 2024 in which students used AI to write essays and received instant feedback without deeply engaging in learning. Here students acted as customers. This seems acceptable as a paid service but from a co-creator's view, it reflects disengagement and ethical concerns. So, the current study promoted the co-creator model, encouraging students to use AI tools actively rather than passively (Youn, [2024](#)).

Co-creation and Co-destruction: Two Sides of the Same Process

The use of AI empowers educational experience. However, on the contrary, this same power bears the co-destruction when interaction with AI amongst stakeholders erodes educational value. Co-creation in AI-enhanced education happens through: Personalized learning through adaptive platforms that adjust content to the individual learning needs (Hsu et al., [2025](#)). Collaborative problem-solving is assisted by intelligent assistants and discussion bots (Aslan et al., [2025](#)). Feedback loops that provide timely interventions for at-risk students (Hamid, [2024](#)).

Co-destruction would include: AI-generated content without comprehending it, often called as symbolic cheating (Uzun, [2023](#)). Feedback and guidance process is automated without human interference which erodes trust (Yan et al., [2024](#)). AI algorithms fail to take into account cultural or linguistic diversity so, it becomes bias sometimes (Lewis, [2025](#)).

Cabiddu et al. ([2019](#)) explained this dichotomy as an integral aspect of all technology interactions. The same platform may enable one student and act as an obstacle against another, depending on the context and use. Thus, this study examined these twofold dynamics, focusing on how AI integration has both enriched and diminished the experiences of Pakistani university students and teachers.

Global and Local Perspectives on AI in Higher Education

Worldwide, higher education is progressively implementing AI. In North America, Europe, and several Asian countries, institutes use AI for intellectual teaching methods, automatic assessment, analytical exploration, and adaptive content delivery. These novelties would purportedly enhance efficiency, customize learning pathways, and redefine administrative functions (Baidoo- Anu & Owusu, [2023](#)).

The above situation stands unambiguous as compared to ground realities of the context in which Pakistan exists. AI applications, such as Grammarly and ChatGPT, are attaining acceptance among students and teachers, however, the usage of these applications in educational institutions is still very occasional. Infrastructure and policy gap, inadequate faculty training, and cultural resistance are the factors that constrain the extensive use of these applications (Ilyas, [2022](#)).

Additionally, the educational system of Pakistan is pedagogically traditional based on routine learning, autocratic, and examination-based results. In this situation, AI can either help in the beginning of a change towards deeper learning or perpetuate the continuation of disassociation from learning. With no critical frameworks in place, students would use AI to shortcut assignments rather than enhance their understanding. Therefore, the current research intended to put the contextual realities into light. Furthermore, it had qualitative means to explore how teachers and students of different universities in Pakistan perceive, engage with, and are impacted by AI tools.

Ethical Dilemmas in AI Integration

The ethical questions arising out of AI applications in education remain fluid and have become increasingly complexed. Among the main areas of concern are:

- **Issues of Privacy and Surveillance:** AI systems aggregate and collect huge amounts of personal data, which may not always be with appropriate consent. Most of the time, students may not even know how their information is stored, analysed, or otherwise shared with third parties.
- **Algorithmic Bias:** AI tools trained on datasets from dominant cultures may eventually begin to marginalize underrepresented groups. As an example, a language model focused on Western academic styles may not take into account students who submit work in more localized forms of languages.
- **Ownership of Intellectual Content:** When students generate content through AI, questions about authorship arise. Was it the student's work, or was it the machine? and there is really nothing that the institutions have in terms of a policy on acceptable use.

- **Transparency and Accountability:** AI decisions are often made in "black boxes"- processes so obscure that even the developers do not understand them. So, errors occur, occasionally with critical consequences, such as incorrect grades or biased feedback.

These hurdles can only be overcome if institutions build AI literacy training, draw a domain- inspiring set of ethical guidelines, and provide guidelines for human intervention. Iqbal et al. (2025) took teachers as ethical role models who help to turn students to responsible AI usage.

AI and the Teacher-Student Relationship

Education becomes worthwhile due to the relationship maintained by both teachers and students. AI may aid in preserving this relationship by lightening the burden of paperwork, thus allowing the teacher to focus on being a mentor, counselor, and provider of customized assistance (Mutanga et al., 2024).

On the other side, AI could create one more risk to these relationships. When students rely on machines to provide them with feedback and clarification, or companionship, teachers may become more irrelevant and thus can never build the trust, empathy, and collaboration that are so critical to transformative learning.

Other reports showed how teachers talk about the feeling that they are not prepared to work in AI classrooms. In such situations, one after another, teachers might develop anxiety, resistance, or a sense of insignificance in their teaching authority, due to the lack of training and institutional support.

This study looked into how Pakistani educators manage the balancing tension by recognizing both the good things AI may bring and the disruptive things it may bring to relationships.

Emerging Pedagogical Models Enabled by AI

AI spews out revolutionary changes in pedagogical practices. Some of these innovations have been extended to include the following:

- **Flipped classrooms;** students access AI-generated content before the face-to-face class and apply that knowledge by discussing it with their fellow students.
- **Blended learning;** it is a combination of face-to-face delivery and online activity with AI-enabled digital tools.

- Gamified surroundings, where content difficulty is provided by AI in terms of gameplay and the user obtains rewards.
- Competency-based education capturing all learning behavior in which students are free to learn in their own time: learning mastery tracked, not time spent.

These kinds of learning environments offer flexibility, personalization, and inclusiveness; their success, long-term, is however dependent on the adaptation process in different areas. Conditions, such as bad internet connection, teacher preparedness, and cultural norms act as boundaries to the successful implementation of this reform in Pakistan. Blended models may be the most practical way forward, as institutions continue to innovate without throwing away their relational and cultural underpinnings by integrating traditional approaches into the place with AI tools.

Theoretical Framework

Service-Dominant Logic (SDL): Co-creation and Co-destruction

SDL offers a very lively view to explain how AI is impacting educational value. According to SDL, not an intrinsic value rather co-created in a relational process, value becomes embedded in a product and a service (Vargo & Lusch, [2008](#)). Processes, such as above co-creation would involve students, teachers, technologies, and institutional structures in education.

Co-creation emerges when interaction rises above engagement itself and results in insight or meaningful transformation. Co-destruction occurs when misalignment, misuse, or exclusion leads to disengagement or harm.

This study used SDL to describe the dual roles that AI is playing in Pakistani higher education. AI is considered neither independent nor outside human interactions nor institutional ecosystems rather it is embedded into the tool.

One of the primary driving forces in higher education transformation is AI. Pathways for personalization, collaboration, and innovation open up, while alienation, ethical compromise, and systemic bias can also be dangers of such developments. These threats become ever more highlighted in Pakistani context and further become complex due to infrastructural gaps, ambiguous policy, and culture-specific situations.

Research Methodology

The current study used a qualitative, phenomenological research design to explore student-teachers experiences related to AI use at university level within Pakistani context. Through a phenomenological approach, the study closely examined students' and teachers' perceptions, interpretations, and the development of meaningful working relationships with AI. Narratives were built as a result of in-depth interviews as well as complex dichotomous (co-creation and co-destruction) link was captured with AI, including ethical and cognitive dimensions that are mostly under-researched by quantitative methodologies. Research was conducted using a purposive sampling strategy and sampling continued until data saturation was reached. Target population comprised students and teachers of public and private universities of Lahore. Total number of participants were 20 with whom the interviews were conducted, 10 of them were teachers and 10 were students. The selection criteria for students included students using AI as a learning tool enrolled in the sixth or final semester of their respective degrees. For teachers, the selection criteria included using AI in academic tasks with at least 2 or more years of teaching experience. The respondents were from the following Institutes: University of the Punjab (PU), University of Central Punjab (UCP), University of Lahore (UOL), Lahore Garrison University (LGU), and Lahore University of Management Sciences (LUMS).

For data collection two interview guides were established around key thematic areas, including AI and student development, ethical challenges, and relational AI pedagogy. Interviews were conducted face-to-face and via digital platforms (Zoom/Google Meet), contingent upon participant preference and logistical feasibility. Thematic analysis was done under the light of Braun and Clarke ([2006](#)), within the phenomenological tradition. The process included:

- *Familiarization*: Multiple time readings of transcripts to get in-depth and detailed understanding.
- *Initial Coding*: Identification of significant statements and experiential accounts.
- *Axial Coding*: Categorizes them, based on the patterns.
- *Theme Development*: Themes were developed by keeping in view the objectives and research questions.

- *Interpretation*: Integration of emergent themes with theoretical frameworks, such as SDL and relevant ethical constructs.
- *Validation*: Member checking with participants to ensure interpretive accuracy.

The final themes were carefully constructed to align with the study's research questions and objectives, ensuring that the voices of participants are central to the analysis.

Ethical Considerations

Following ethical considerations were taken into account: Informed consents were obtained from all participants, Confidentiality and privacy were ensured while collecting the data, Data was securely stored, with access restricted to the research team, Potential ethical risks, such as discomfort in discussing AI misuse or academic fraudulence were mitigated by adopting a non-judgmental interview environment.

Results

Findings of the research were divided into four key themes that emerged from thematic analysis of interviews with students and teachers concerning inculcation of AI at university level.

Theme 1: Students' Uncertain Embrace of AI – Efficiency at the Cost of Depth

Students responded with a two-sided and mostly indecisive relationship with AI. Many students expressed that they took it as something which helps them overcome and streamline the difficult concepts, Furthermore, they stated it as polishing their competence in timely completion of academic tasks. One student participant said "I used ChatGPT recently how the concept applied to everyday decisions, which made it much clearer than just reading the textbook" (S1). Another participating student said "I think that AI tools like ChatGPT helps in efficiency because it helps you cut down on time that you use to spend in researching stuff. So that's one thing" (S5). Students mostly considered AI as a helpful companion, describing it as "It's like having a study partner who's always available to help explain things or offer a suggestion" (S1). However, this appreciation has also a negative aspect related to concerns about intellectual idleness and limited student engagement: "I do feel that I depend on it a lot. And I'm guilty of that fact. But a typical student behavior, I'm too lazy to get out of my comfort zone

and work on something.....” (S7). One participant summarized the issue bluntly: “you are relying on it too much that you have stopped challenging your own creativity and your own critical thinking” (S2). In spite of these concerns, some students highlighted their efforts to sustain self-sufficiency: “I still do the main thinking and writing myself..... the goal is to learn, not just to finish tasks” (S1).

Theme 2: Teachers’ Dilemma –Support for Learning Versus Risks to Critical Thinking

Teachers’ experiences showed alike dichotomy. They admitted AI’s utility in refining their assignments, presentations, and supporting learning processes: “AI tools have definitely improved their presentation of the work. The assignments are better in quality ...” (T1). Some acknowledged AI as inevitable in current academia:

They are using AI as much as possible. So, I think that, okay, you can't, you know; now the use of AI is inevitable. You can't say to the student that no, doesn't use AI and just thinking on your own. (T2)

Yet, most of the respondents stated concerns about diminished uniqueness and critical thought: “originality is definitely compromised because it is AI-driven. It is not their original idea.” And “they are totally dependent on ChatGPT to come up with better knowledge.” (T1). In response, teachers adapted assessments to reward understanding over polished output: “whatever you are producing, you have to present it in front of the class, you have to give viva” (T2). Some also confessed that technological competence of students often exceeded their own: “students are ahead of us and they know technology better than us. In some cases, they know the cheat tools as well...” (T1).

Theme 3: Ethical Uncertainty and Policy Gaps in AI Integration

Teachers and students both discussed increasing ethical concerns, mainly plagiarism and inadequate institutional guidance. Teachers noted, “Plagiarism, the most unethical, I'd say, has become a part of academic life. Everything is plagiarized” (T3), while students confessed to use paraphrasing tools to hide AI-generated text: “I use both ChatGPT and an AI tool to humanize those assignments.” (S5). Teachers described hindrance with detection systems:

we can easily detect and say that this is AI-generated. Although now students are trying to, you know, use different humanizing tools in which they convert AI writing in to the humanized form. So even after so much experience, sometimes we are not able to judge it. So, yeah, we can't say that we are 100% sure about it. (T9)

Participants agreed that formal rules or trainings were missing: “No, there is no such limit given by the HEC regarding AI use.” (T5); “many of the teachers still don't know what AI is with which they are working. Still, they are working on the conventional way of teaching...” (T1).

Theme 4: Innovative Pedagogical Responses to AI Challenges

Even with these problems, educators demonstrated creativity in retorting to AI's challenges. Many restructured assignments to ensure genuine participation: “whatever you are producing, you have to present it in front of the class, and you have to give viva.” (T2); “we can give them some assignments related to, for instance they have to go in the field. They have to give physical evidence that yes; they have collected the data themselves.” (T1). Others combined ethical instructions and curricular reforms: “AI should be integrated in curriculum design as well so that the academic integration can be done in a better way.” (T2);

our teacher actually gave us a whole lecture on the use of AI and how to ethically use AI in your course and for a subject like English where there is a lot of writing required, students often use AI to get the whole answers for their assignments etc... (S6)

These approaches show teachers' preemptive commitment to authenticity, integrity, and growing pedagogy.

Discussion

The findings provided a detailed picture of multifaceted and dynamic relationship of AI and university level teachers and students in Pakistan. Additionally, the study highlighted how students and teachers identify AI as a means to help them in timely task completion and improve their academic competence. However, the negative impacts of AI on originality, ethics, and deep learning (DL) were also examined.

Students described AI both as an enabler and as a risk to their cognitive growth. While AI improves knowledge and productivity, it also encourages surface learning and cognitive passivity when used without reflection. This

pattern relates to earlier research advising that without guided learning, AI-assisted tools can reduce metacognitive engagement (Abbas et al., [2025](#); Lin et al., [2024](#)). For self-regulated learning in digital environment, there is a need to beware regarding balancing AI assistance with independent reasoning (Khalil et al., [2024](#))

Teachers' responses showed a consistent pedagogical tension between maintaining integrity and adopting innovation. Their adaptive practices, such as field work, viva and presentations, as well as class participation through oral questioning, represent cautious approaches to re-center human judgment within AI-mediated learning. These approaches demonstrate SDL (Vargo & Lusch, [2008](#)), where value is co-created through collaboration among teachers, students, and technologies. Teachers themselves think that they lack digital literacy and trainings, which shifts this balance towards co-destruction, where AI deteriorates instead of enhancing authentic learning.

Both students and teachers face dilemmas around plagiarism, biasness, absence of clear policies or effective detection systems. This finding relates to AI governance that embeds transparency, accountability, and ethical awareness in educational policy (Schlesinger et al., [2015](#)). Unethical AI use and eroding academic trust cannot be avoided without structured guidance.

Other than challenges, educators' innovative responses depict resilience. By updating curricula, focusing on experiential learning, and teaching ethical AI use, teachers form a viable co-creative ecosystem. These practices show how human-led adaptation can alter destruction into opportunity. Supporting such practices with policy frameworks and teacher training programs could help systematize and scale liable AI incorporation across higher education.

Limitations

Every study is conducted within specific context and certain boundaries that shape its scope and generalizability. This study had no exception and it solely focused on teachers' and students' perspectives excluding other stakeholders, such as administrators and parents whose inputs could have enriched the understanding of broader AI-related challenges. Additionally, SDL was the primary theoretical lens; integrating additional frameworks, such as ethical theories could provide more multidimensional viewpoints. These limitations influenced the study' breadth and highlighted numerous opportunities for future research.

Future Directions

Firstly, longitudinal approach can be adopted to examine how teachers' and students' perceptions of AI evolve over time, such as across semesters or academic years. Secondly, sample size could be increased and participants can be involved from multiple universities. Thirdly, future studies could involve multicultural exploration to identify how cultural norms shape AI adoption and uncover challenges not previously identified. Lastly, other stakeholders (like policy makers and parents) can be incorporated which would provide a more comprehensive understanding of AI's impact on education.

Policy Recommendations

National and institutional guidelines should be established to cover acceptable AI use, plagiarism, and data privacy to guarantee impartiality, accountability, and transparency. AI literacy should be made an integral core part of curriculum and teachers should be provided pedagogical strategies to use AI conscientiously and efficiently. It is essential to shift from routine tasks to viva and project-based assessments in order to encourage AI-inclusive teaching that improves creativeness and critical thinking.

Conclusion

Integration of AI in education can be an opportunity and challenge side by side. This study revealed that students and teachers take AI as a learning support. They also face serious concerns associated with originality, ethical practice, and critical thinking. With the help of innovating teaching methodologies, teachers try to adapt in such a challenging environment which is more human-centric as an alternative of AI inclusion. They try to ensure that AI must be served as a tool for actual learning instead of a shortcut to the superficial outcome. In education sector, collective commitment of teachers, students, institutions, and government can help achieve this challenging milestone of AI use as a value co-creation instead of co-destruction.

Author Contribution

Maria Khalid: introduction, data analysis and discussion. **Anas Tariq:** literature review. **Shabana Naveed:** research questions and methodology.

Conflict of Interest

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

Data Availability Statement

Data supporting the findings of this study will be made available by the corresponding author upon request.

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