Impacts of AI Usage Ethically on Students

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ABSTRACT

This study explores the impact of ethical artificial intelligence (AI) usage on university students' academic experiences, performance, and knowledge acquisition. Conducted at Zayed University in the UAE, this cross-sectional study assesses student perceptions of ethical AI practices, including fairness, transparency, and responsibility, using a conceptual framework adapted from prior research. Findings reveal that ethical AI practices, such as the responsible use of adaptive learning systems and AI-driven feedback mechanisms, significantly enhance students' academic outcomes while addressing issues like plagiarism and over-reliance on AI. However, challenges such as biases, reliability, and context understanding in AI tools highlight the need for enhanced development and guidelines. By integrating ethical considerations and reflecting on these challenges, this study underscores the importance of balancing AI's transformative potential with responsible implementation to foster equitable and effective learning environments. Recommendations for educators, students, and developers include promoting ethical AI usage, developing reliable systems, and enhancing awareness of privacy concerns to maximize AI's benefits in education.

Keywords: Ethical AI, academic performance, personalized learning, AI in education, academic integrity.

1. INTRODUCTION

Artificial Intelligence (AI) is reshaping numerous fields, consisting of training, where it's miles remodeling how students learn and engage with academic content material. AI equipment provides quite a number of possibilities, inclusive of personalized knowledge of experiences, automated remarks, and the capability to deal with personal student desires [1, 2]. However, this developing reliance on AI has raised massive moral worries, in particular concerning its responsible and honest use in educational settings. When used ethically, AI can serve as a precious device that helps college students get to know and academic performance. In contrast, misuse or over-reliance on those technologies can also result in harmful effects, which include plagiarism, lack of vital wandering abilities, and educational dishonesty.

The significance of moral AI use in schooling cannot be overstated. Ethical suggestions ensure that AI acts as a supportive device instead of a substitute for human effort, retaining fairness, duty, and integrity in academic paintings. For students, this is vital for both academic and personal success [3, 4]. Understanding the ethical dimensions of AI use is critical for creating a balanced and responsible technique for integrating generations into schooling.

This takes a look at what is vital for numerous motives. First, it addresses the growing reliance on AI equipment amongst university college students within the UAE, a trend that mirrors worldwide traits. Misuse of this equipment can compromise academic integrity, which can have lengthy-term effects on the quality of schooling and the credibility of instructional establishments. Second, ethical AI utilization aligns with the UAE's National Agenda, which emphasizes fostering innovation while retaining the values of equity, responsibility, and transparency. This study additionally helps the Sustainable Development Goal (SDG) four, Quality Education, by exploring how AI may be used to enhance getting to know results ethically and equitably [5]. By focusing on university students in the UAE, they have a look at contributing to local and international discussions on the function of ethics in AI and schooling.

The following question is developed to guide this study is:

> *What is the impact of the usage of AI ethically on college students?*

This question seeks to discover the impact of ethical AI usage on students' academic reviews, performance, and average understanding acquisition. To deal with this question, the look hypothesizes:

> **H:** *If college students use AI ethically in their academic work (which include tasks, essays, and*

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checks), then their average experience, overall performance, and expertise will considerably enhance.

This speculation is both potential and testable, because it builds on existing studies that propose a link among ethical practices and high quality academic consequences.

Through this look, we aim to contribute significant insights into how ethical concerns in AI usage can form the instructional landscape. By specializing in college students' experiences and perceptions, this study highlights the significance of balancing technological improvements with ethical attention to enhance each educational best and integrity.

Theoretical Framework

The study topic has no relevant theories regarding the relationship between AI ethical use and undergraduate students' overall experience. However, we have a conceptual framework that we can discuss and explain that is relevant to our topic. The conceptual framework is a research paper that has a similar purpose as our study; it was published by Jang et al. [3]. This research paper's purpose was to apply an instrument to assess undergraduate attitudes toward AI ethics. The instrument used was a survey that contained five dimensions: *Fairness*, *Transparency*, *Non-maleficence*, *Responsibility*, and *Privacy* (See Figure 1). They received 1076 undergraduate responses. While analyzing the data, they checked the differences between their attitudes towards AI. They found that female undergraduate students showed more sensitivity toward AI ethics compared to male undergraduate students in many dimensions like Fairness,, Non-maleficence, and Privacy [3]. They also found the students who had prior knowledge about AI education were more sensitive regarding the fairness dimension [3].

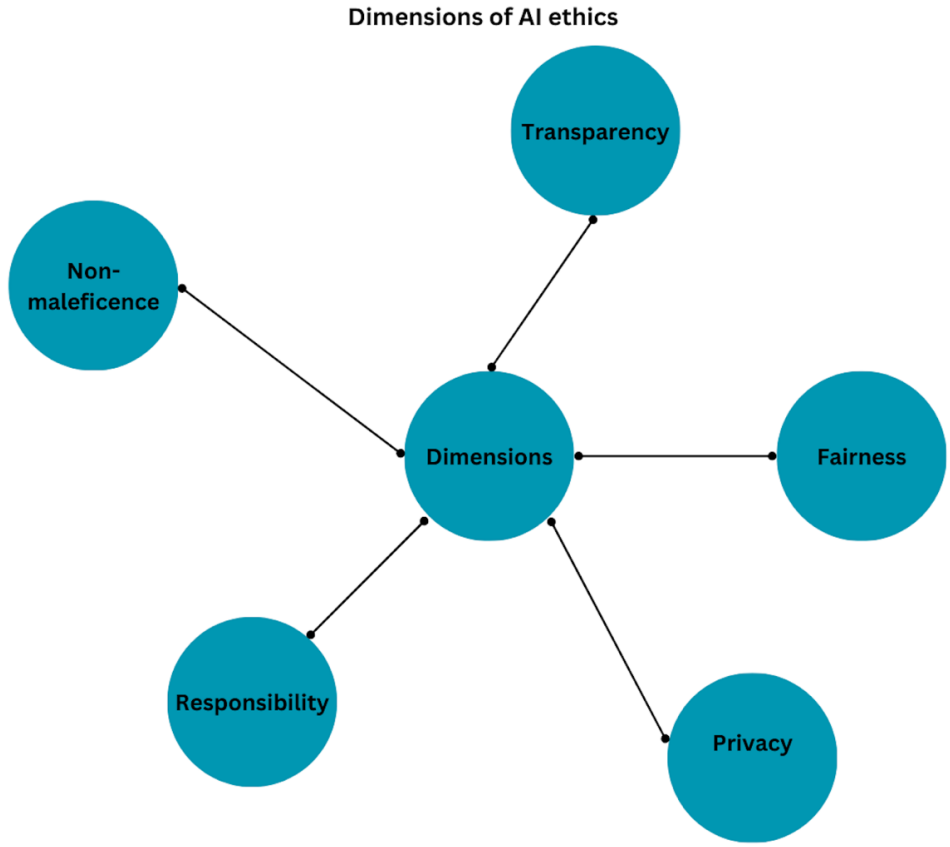

Figure 1. The conceptual framework that guided this study was adapted from Jang et al. [3].

Context of the study

A few gaps regarding AI and education are: Increases in plagiarism in education, students' over-reliance on AI, and Increased academic dishonesty. The rapid development of AI made undergraduate students realize how powerful it is to a point they realized that they can use AI unethically to increase their academic grades. This led to an increase of plagiarism, over reliance on AI, and an increase of academic dishonesty. These gaps increase the unethical use of AI in education which makes it important to discover students' perception on AI ethical use to be able to improve the educational environment. This research took place in the UAE in Zayed university, a federal university in the country that has two campuses one is in Abu Dhabi and the second one is in Dubai. Zayed university undergraduate students were the main focus of this study.

2. LITERATURE REVIEW

A recent article by Wang et al. [6] has explored the integration of AI in educational settings, highlighting its ability to improve learning outcomes and tailor educational experiences. AI-enabled personalized learning by adapting content to individual student's needs and paces. Tools like chatbots and adaptive systems facilitate engagement, while predictive analytics identify students at risk of underperformance. Additionally, these applications boost retention rates and enhance academic achievement, making AI a transformative force in education. Furthermore, another recent article by Singh & Hiran [7] showed how students feel about using AI ethically in academic work, especially in publishing and assessment. It shows that most students care about transparency and accountability and are educated on using AI responsibly. Many are worried that relying too much on AI might lower the quality of academic work. They believe AI should be a helpful tool, not a replacement for human effort. Moreover, the article mentions that students from different fields view AI ethics differently. For example, those studying social sciences are more concerned about these issues than engineering students. Lastly, the article highlights the need for more education and clear guidelines to ensure AI is used responsibly and in a way that supports academic integrity. Moreover, a recent study about ethics and privacy in Irish higher education was conducted by Wenhui et al. [8]. In this research, the purpose was to investigate the perception of ethical considerations of students regarding the use of AI tools in academia. The researchers conducted a quantitative research methodology, and their instrument was a structured survey questionnaire that had three dimensions, which are concerns about data privacy, accuracy of AI tools, and ethical considerations. This survey was sent to 120 students, and 93 students responded. The researchers found that students from technology and science-based schools were more concerned about privacy. However, arts, public administration, humanities, and social science students were less concerned about AI than technology and science-based school students. In addition, research about chatbots in education and research conducted by Kooli [9]. In this paper, the researchers discussed a critical examination of ethical implications and solutions regarding AI. The study's purpose was to discover the potential use of AI systems and chatbots in academia and their impact on research from an ethical point of view. They conducted a qualitative methodology by performing exploratory research and data collection expertise analysis and interpretation. Regarding the potential ethical challenges associated with the use of AI, they found that AI fails to understand the context as humans do, data AI provides is biased to contain errors, results by AI needs human interpretation and evaluation to be meaningful and helpful, and it lacks transparency.

While many studies explore the role of AI in education, there is still limited research on how ethical AI usage affects students' academic experiences and outcomes. Much of the existing literature focuses on the technological capabilities of AI, like personalization, while overlooking critical ethical issues such as responsibility and transparency in its use. Furthermore, most current research focuses on theory or technical details without showing how these relate to a student's academic outcomes. This gap in research highlights the need for more studies to explore how ethical AI practices can influence students' learning processes and overall academic performance. Finally, a study exploring the impact of AI on higher education was conducted by Al-Zahrani & Alasmari [2]. In this research paper, the main goal was to investigate the effect of AI on higher education in Saudi Arabia. They conducted a quantitative approach using a survey questionnaire as their study instrument. Their survey consisted of two sections: the first one was the demographic section, and the second one had 32 items to explore dimensions like perspective on AI in higher education, surrounded attitudes, perceptions, the role of AI in teaching and learning, future role of AI, and ethical implications. They found positive attitudes towards AI in higher education since the results conveyed potential enhancement in teaching and learning and increasing innovation.

3. METHODOLOGY

Study Design

This study aims to find a relationship between the ethical use of AI and the overall experience of students. An observational study will allow us to conduct a survey that would ask students about their own experience regarding the impact of using AI ethically and their overall academic experience. This study design is cross-sectional because we focus on observing university students at a single point.

Participants

Our sample population is located in the United Arab Emirates, and the key characteristic of our sample is that they are university students. Our study sample size is intended to be more than 50 participants. However, only 38 university students were selected randomly and completed the survey.

Instruments

The students' survey was conducted using a web-survey (Google form) to find the relationship between AI ethical use and overall university students' experience. The survey consists of three categories: *the ethical use of AI*, its *impact on learning*, and *challenges and recommendations* adapted from [2, 3]. Furthermore, the survey includes 15 questions, and the scale varies from open-response answers to gathering qualitative data in the challenges and recommendations section. Moreover, using a Likert scale from 1-strongly disagree to 5-strongly agree to get quantitative data from the ethical use of AI and its impact on learning sections. Additionally, the use of Excel and Python program language for creating data visualizations and the use of external research/articles. Moreover, we will use already-made visualizations provided by Google Forms.

Procedure

This study is conducted to create a survey to find the relationship between AI ethical use and the student's overall performance. In the study guidelines, we made sure that our survey and study followed ethical standards by explaining the participant rights and the confidentiality of their answers. Participants were informed that they could drop the survey if they were unwilling to continue. Descriptive statistics using frequency, mean, and standard deviation were implemented, and the data selected already made and created self-made visualizations. We also created tables to separate the qualitative and quantitative data.

4. RESULTS

Demographics data table

Table 1.
Demographic information for participants.

Demographics	Construct	%
Age	18-19	68.4%
	20-21	23.7%
	22-23	5.3%
	24-25	2.6%
	>25	0%
Gender	Males	15.8%
	Females	84.2%

Ethical Use

The findings for the ethical use, as shown in Table 2, dimension highlight strong student agreement on the need for clear ethical guidelines to govern AI in higher education. Key points include addressing biases in AI algorithms, ensuring fairness, responsibly collecting and managing student data, and promoting education on ethical issues to prevent misuse. Students also emphasize the role of guided instructions for ethical AI development and the need to prioritize student autonomy and agency.

Impact on learning

The findings for the impact on the learning, as shown in Table 3, dimension highlight strong student agreement on AI's potential to enhance education through personalized feedback, adaptive learning environments, and improved accessibility for diverse learners. Students recognize AI's role as a personal tutor for understanding complex concepts, its ability to provide real-time performance insights for timely interventions, and its overall contribution to creating more tailored and effective learning experiences.

Challenges and Recommendations

What challenges did you face while using AI tools?

Not accurate	Not understanding user needs	Ethical concerns and the risks of over-reliance on AI
The majority of students mentioned AI providing outdated, or wrong answers.	Many students highlighted that AI struggles to understand user needs or context fully.	Some students emphasized ethical use and caution against over-reliance.

What recommendation would you give to students to use AI safely?

Not to rely on AI.	Avoid sharing personal information.	Verify the accuracy of information.	Ethical Usage
The majority of students suggested not to rely fully on AI but to use it as a learning tool.	Many students emphasized not sharing personal information with AI.	Many students recommended double-checking AI-generated information for reliability.	Some students emphasized the importance of using AI responsibly and ethically.

What recommendations would you give to AI creators in creating and/or developing any AI tool.

Accuracy	Privacy	Ethical use	Adding features
The majority of students recommended making AI tools more accurate, reliable, and up-to-date.	Many students suggested ensuring user privacy and security, including not saving personal data.	Several students emphasized programming AI for ethical uses and protecting users.	Some students suggested enabling offline access, live chat support, and more advanced features like reading PDFs.

Table 2.
The frequency of students' responses for *Ethical Use.*

Survey items	*M*	SD	D	N	A	SA
Ethical guidelines and regulations should be established to govern the use of AI in higher education.	3.66	10.5%	0%	26.3%	39.5%	23.7%
AI should be developed and used in a manner that respects student autonomy and agency.	4.13	5.3%	2.6%	15.8%	26.3%	50%
AI should be used responsibly to avoid the increase of societal inequalities.	4.05	5.3%	0%	23.7%	26.3%	44.7%
AI algorithms should be designed to address potential biases and ensure fairness in higher education.	3.82	10.5%	0%	26.3%	23.7%	39.5%
The use of AI in higher education should prioritize the ethical collection and use of student data.	3.84	5.3%	2.6%	21.1%	44.7%	26.3%
To avoid the potential misuse of AI, a lot of people should be educated on relevant ethical issues.	4.32	2.6%	0%	7.9%	42.1%	47.4%
AI creators should consider the ethical use of AI through guided instructions.	4.05	5.3%	2.6%	15.8%	34.2%	42.1%

Overall mean for Ethical use: 3.98

Table 3.
The frequency of students' responses for *Impact on learning.*

Survey items	*M*	SD	D	N	A	SA
AI has the potential to improve the accessibility of higher education for diverse learners.	4.16	2.6%	5.3%	10.5%	36.8%	44.7%
AI technologies have provided constructive feedback that facilitate personalized learning experiences for students.	4.21	2.6%	7.9%	7.9%	28.9%	52.6%
AI can help create adaptive learning environments tailored to individual student needs.	4.05	7.9%	2.6%	7.9%	39.5%	42.1%
AI can provide real-time insights into student performance, allowing for timely interventions.	4.05	2.6%	10.5%	15.8%	31.6%	39.5%
AI can act as my personal tutor to learn about complex concepts.	4.42	2.6%	0%	10.5%	26.3%	60.5%
Students should ensure the proper use of AI technology and not be reliant on it.	4.11	2.6%	5.3%	13.2%	34.2%	44.7%

Overall mean for Impact on learning: 4.16

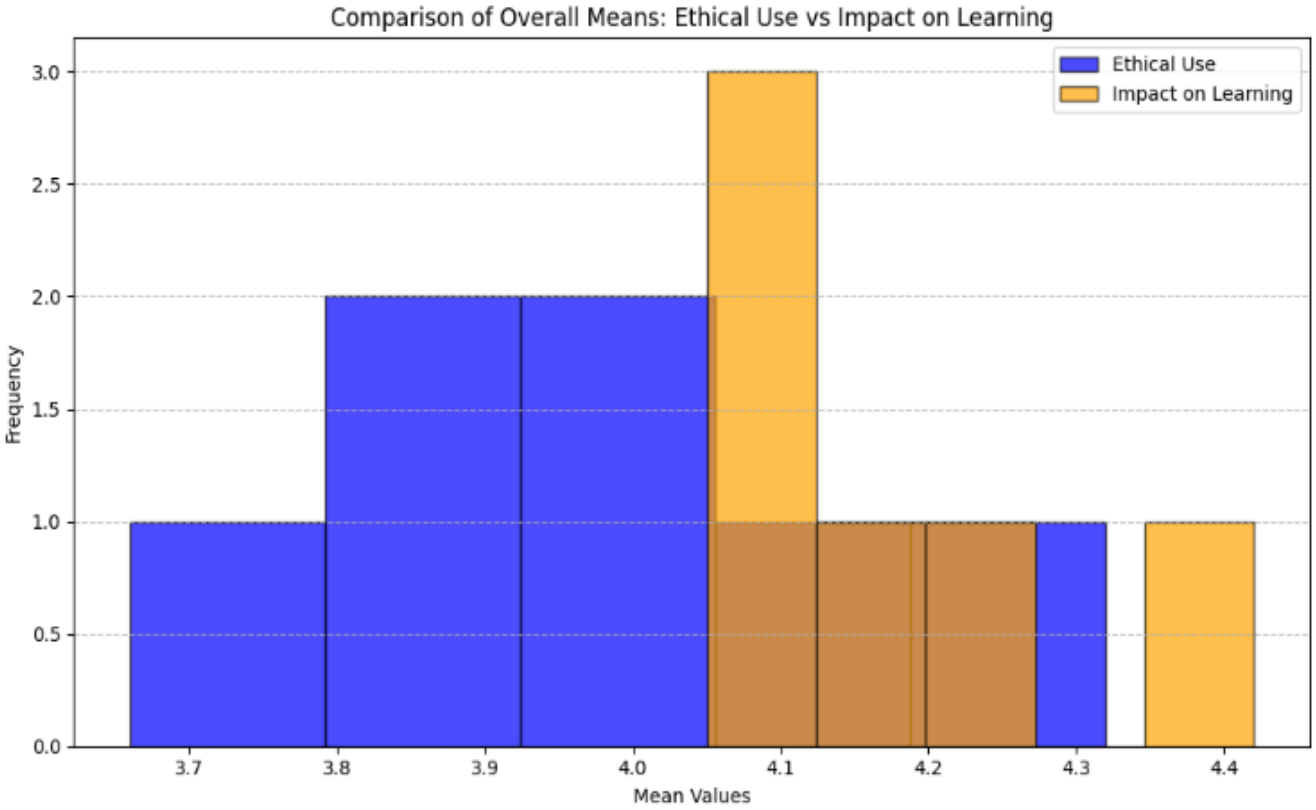

Figure 2. Histogram graph that highlights the comparison of overall means for ethical use vs impact on learning. The mean value is on the x-axis, and the frequency is on the y-axis.

Pie Chart

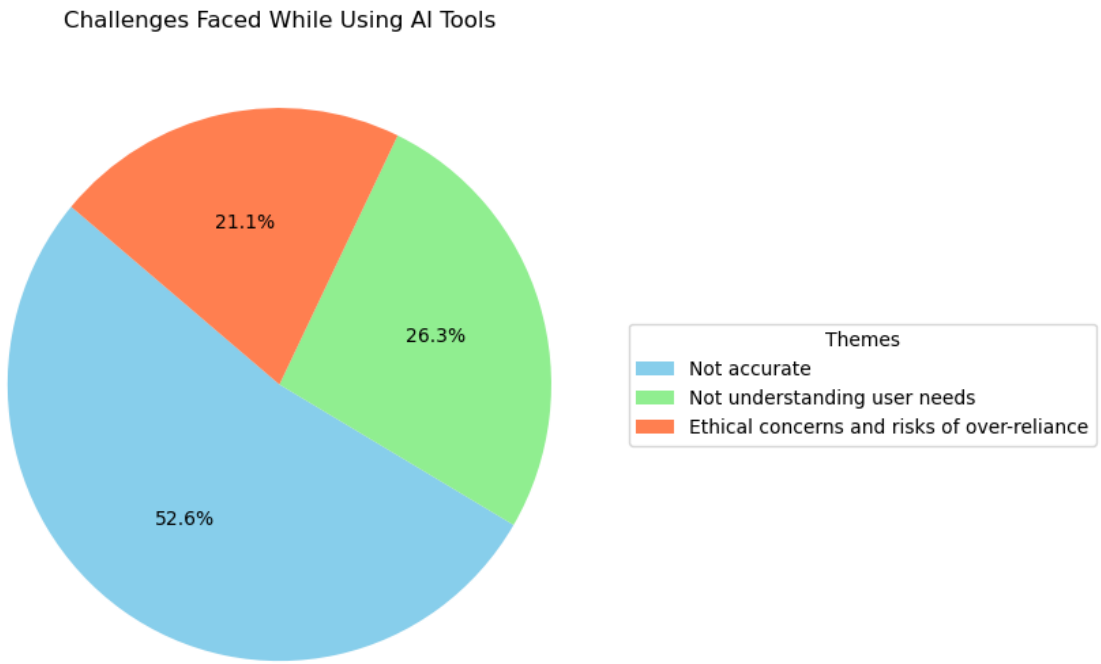

Figure 3. Pie chart represents the percentage of each theme in the challenges and recommendation dimension

5. DISCUSSION

The hypothesis states that if students use AI ethically in their academic work, their overall experience, performance, and knowledge will significantly improve. The result largely supports this. A significant number of students (60.5%) strongly agreed that AI tools function as personal tutors, helping them understand complex concepts, and 42.1% noted that AI improves accessibility for diverse learners, thereby enhancing their academic experiences. Additionally, issues like inaccuracies and outdated responses from AI tools were highlighted, indicating that the reliability of AI is crucial for its effectiveness in education. For instance, in Wang et al. [6] research, they found out AI in education settings improves learning outcomes and tailors educational experiences. In Singh & Hiran [7] research paper, they found that most students care about transparency and accountability when using AI. In Wenhui et al. [8] research study, they found technology and science-based students are more concerned with privacy regarding AI than other students in different majors. In Kooli [9] research paper, they found ethical challenges associated with AI, such as AI lacking to understand the context as humans do, the data AI provides being biased to contain errors, and results by AI needing humans. In Al-Zahrani & Alasmari [2] study, they found positive attitudes toward AI in higher education. These results from previous studies indicate that AI has a positive impact on students, but at the same time, it carries challenges and limitations regarding the ethical aspect of AI. When we come and reflect on our own study results, we can notice that our results directly align with these past research studies since A significant number of students (60.5%) strongly agreed that AI tools function as personal tutors, helping them understand complex concepts, and 42.1% noted that AI improves accessibility for diverse learners thereby enhancing their academic experiences. Not only that, but in the qualitative questions in our instrument, most students mentioned challenges of AI, such as AI providing outdated or wrong answers and AI struggling to understand user needs or context fully. Additionally, some students emphasized ethical use and caution against over-reliance.

6. CONCLUSION AND RECOMMENDATION

The primary aim of this study was to explore the impact of ethical AI use on university students' academic experiences, performance, and knowledge. By examining using AI tools in an educational context, this study sought to determine whether ethical AI practices ought to enhance gaining knowledge of consequences and beautify the overall academic experience. The examination additionally aimed to evaluate capacity-demanding situations and limitations in adopting AI technology inside schooling.

The essential findings of this examination monitor that moral AI use influences college students' gaining knowledge of experiences and academic performance. Many members said that AI equipment, including adaptive learning systems and AI-pushed feedback mechanisms, contributed to progress in expertise in complicated subjects and facilitated personalized studies. More than 1/2 of the respondents agreed that AI's ability to provide optimistic feedback, together with its ability to impart actual-time educational insights, helped to enhance their performance. Furthermore, college students recognized the importance of ethical AI practices in selling equity and inclusivity, ensuring that AI usage does not exacerbate inequalities in education. However, the take look also highlighted a few challenges and worries over students becoming overly dependent on AI, doubtlessly hindering their critical thinking and hassle-solving capabilities. Additionally, troubles associated with the reliability and accuracy of AI equipment have been raised, emphasizing the need for chronic development of these technologies to ensure their effectiveness.

The broader importance of these findings lies within the capacity of AI to transform educational practices through presenting customized knowledge of experiences and facilitating well-timed interventions that could improve educational performance. As AI continues to evolve, its integration into academic systems should contribute to more inclusive and accessible learning environments, benefiting students from diverse backgrounds and gaining knowledge of styles. By knowing how AI may be ethically applied, academic establishments can expand techniques to harness its full ability while mitigating the risks of over-reliance and inequality. Moreover, the take look underscores the importance of developing policies and frameworks for the moral use of AI in training, ensuring that student's rights are protected and that AI technology is used responsibly and correctly.

In terms of recommendations, further studies have to explore the unique styles of AI equipment that have the most widespread impact on scholarly consequences, as well as the first-class practices for integrating AI into the curriculum. Additionally, it'd be precious to investigate the lengthy-time period results of AI on students' instructional growth and expert improvement. Further studies can also discover the moral implications of AI use in more intensity, mainly regarding privacy issues, statistics protection, and the capability for algorithmic bias. Institutions may benefit from incorporating those findings into their coaching practices and developing guidelines to help ethical AI utilization amongst college students and educators. Training packages on accountable AI use should be established, making sure that students understand the capacity dangers and benefits of the equipment.

Despite the critical insights gained, numerous barriers to this examination must be acknowledged. First, the sample length and demographic range of the individuals were restrained, which could have affected the generalizability of the findings. They look at primarily trusted self-suggested records, which can introduce biases in college students' perceptions of AI's effectiveness. Additionally, they have a look centered on a specific organization of university students, and the consequences won't represent college students from different academic ranges or areas. Another hassle is the scope of the observation, as it no longer looks into the actual implementation of AI equipment in instructional settings, focusing on a substitute for students' perceptions and stories. Future studies ought to address those limitations by undertaking longitudinal research with various samples, examining the actual global application of AI equipment in classrooms, and exploring the effectiveness of AI interventions in enhancing educational effects across unique instructional contexts.

Ultimately, this examination gives treasured insights into the fantastic impact of ethical AI use on university students' academic studies and overall performance. While the findings support the hypothesis that ethical AI practices can enhance getting to know, additionally, they spotlight the need for a

balanced approach to AI adoption in education. By addressing the demanding situations associated with over-reliance and device reliability, institutions can harness the capacity of AI to improve instructional consequences and create more equitable studying environments.

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