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Guidelines on The Ethical Use of ChatGPT or Baidu Among University Students in Xinjiang, China

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ABSTRACT

With an emphasis on important ethical aspects, this study investigates the connection between students' academic achievement and the Artificial Intelligence (AI) Ethics and Compliance Model. It's crucial to comprehend how AI technologies like ChatGPT and Baidu (China's version of ChatGPT) conform to ethical standards given their growing usage in educational settings. Student privacy, data governance, fairness, accountability, transparency, explainability, and reproducibility are among the dimensions of the AI Ethics and Compliance Model that are being looked at. These dimensions were picked in order to evaluate how the AI ethical practices affect students' attitudes and actions, which in turn affect their academic performance. Three hundred and thirty-five students from two universities in Xinjiang, China, participated in the study by answering a questionnaire. Students' opinions on the ethical behaviour of AI systems and their personal obligations when utilising these tools were revealed by the data collected. The findings demonstrate students' favourable perceptions of all ethical dimensions and show that mean ratings for dimensions like explainability (4.417) and student accountability (4.413) are high. Students usually believe that employing AI tools has improved their academic performance, as evidenced by the mean score of 4.510 for self-evaluated academic achievement. Only student privacy was identified as a statistically significant predictor of academic achievement ($p = 0.033$) among the six variables that were analysed, according to the regression analysis. According to this positive relationship ($B = 0.229$), students are more likely to give their academic achievement higher ratings when they believe that privacy requirements are being upheld when they use AI tools. According to the findings, ethical compliance supports improved academic performance and increases students' faith in AI, which emphasises the necessity of ongoing evaluation of AI tools in educational institutions. This study recommends that universities must enhance AI tool privacy, promote transparency, encourage responsible usage, and train students on ethical guidelines to prevent misuse and ensure academic integrity.

KEY WORDS: AI ethics, student privacy, data governance, fairness, accountability, transparency, explainability, reproducibility, academic performance

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1. INTRODUCTION

In China, plagiarism through AI platforms such as Baidu is a known problem, particularly in educational contexts. By putting in place more stringent plagiarism detection procedures, Chinese universities have taken the initiative to solve this issue. For instance, before submitting their dissertations, students at Hunan University of Technology are permitted to double-check them against web databases. The thesis is immediately rejected if it is discovered that over 35% of the content is copied. This strategy is a component of a larger initiative by several Chinese institutions to use AI detection techniques to fight academic dishonesty (South China Morning Post, 2024). The integrity of the students is at stake due to unethical of ChatGPT or Baidu in China. About 85% of students reportedly employed AI unethically to help with their assignments, from concept generation to work execution, according to Deema and Nehme (2023). According to ETICO (2024), users from the institutions and companies who make unethical AI uses cause a range of issues such as academic integrity, data security breaches, lack of trust on the company brand, income losses and etc.

Consequently, universities that encourage the use of AI tools must develop important policies and guidelines for the creation of responsible digital citizen of the 21st century to make sure students use them responsibly and avoid misuse so that trust and academic integrity can be upheld. AI tools have not only emerged in the education sector but also in all sectors such as health, industries and etc. Therefore, all governments of the day must ensure the immediate implementation of these AI ethical guidelines. Users in educational institutions must ensure the responsible use of ChatGPT or Baidu with zero plagiarism policy so that they can uphold trust and personal integrity with lecturers. For example, all assignments, projects, thesis and etc must be properly and responsibly cited to ensure trusted grades are earned. This purpose of this study is to investigate to what extent the issues of irresponsible use of AI tools such as ChatGPT or Baidu in academic works by China students. The following are the research questions:

1) According to the AI Ethics and Compliance Model's dimensions of student privacy and data governance, fairness, accountability, transparency, explainability, and reproducibility, what are the status of ethical AI usage?
2) According to the AI Ethics and Compliance Model's dimensions of student privacy and data governance, fairness, accountability, transparency, explainability, and reproducibility, does academic performance of the students influenced by unethical AI usage?
3) Which dimension of the AI Ethics and Compliance Model's dimensions of student privacy and data governance, fairness, accountability, transparency, explainability, and reproducibility predicts students' academic performance?

2. LITERATURE REVIEW

a. *Framework of AI Ethics and Compliance Model*

Since the launch of ChatGPT in the USA in November 2022, numerous institutions of higher education and commercial industries have embarked into AI technologies and usage. Currently, the most popular AI tool for universities and colleges is ChatGPT. China forbids the use ChatGPT due to its war with Google. China launched its own version of ChatGPT known as Baidu in 2023. Due to the emergence of AI tools, these usages have not been properly regulated by most governments. Therefore, policies and AI ethical frameworks must be formulated to ensure fairness, transparency and privacy of the users.

There are some workable AI ethical frameworks proposed by some western countries currently. The U.S. Department of Education and European country such as Denmark have proposed some principles regarding these aspects. According to studies by Gruenhagen et al. (2024), Yusuke and Kouhei (2024), and Memorian and Doleck (2023), they highlight the significance of integrating ethical considerations into the design of AI systems and promoting critical thinking and responsible use in both creators and learners. Additionally, in order to avoid potential harm to society, ethical frameworks are essential for finding a balance between technological innovation and ethical governance (Chauncey & McKenna, 2023; Fırat Akova, 2023).

Some significant frameworks pertaining to the use of AI ethics have been produced by the U.S. Department of Education (2023). The AI ethical framework for lecturers and students is depicted in Diagram 1 (U.S. Department of Education, 2023).

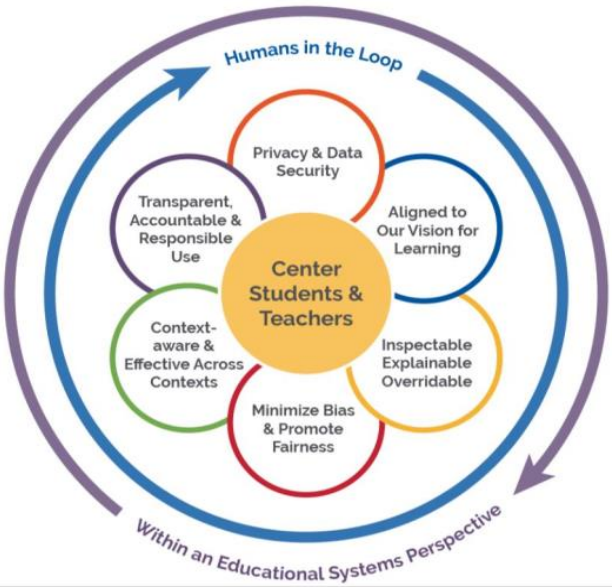

Diagram 1. AI ethics framework for education

Diagram 1 displays the U.S. Department of Education's (2023) framework for the ethical and responsible use of AI in educational institutions, emphasising the vital responsibilities that students and instructors play. The focus of the framework is to maintain teachers and students as its main stakeholders. The six dimensions of the frameworks are "privacy and data security", "learning vision alignment", "inspectable, explainable, and overridable", "minimise bias and fairness", "context-aware and effectiveness", and "transparency, accountability and responsible use".

"Privacy and data security" entails the respect accorded for data protection and privacy laws by the respective AI systems and tools while "learning vision alignment" has measures to make sure the school's missions and visions as well as instructional objectives of all the course are achieved with the supports of AI tools. The dimension "inspectable, explainable, and overridable" states that AI systems must maintain transparency in order for the public to understand and comprehension its operation and functions. All users must be treated fairly to reduce bias in the "minimise bias and fairness" principle. The "context-aware and effectiveness" principle expounds that AI tools must be able to offer a wide range of contents and contexts so that it can perform all the required queries. Lastly, the principle of "transparency, accountability and responsible use" is

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meant to define user as a responsible digital citizen who has clear accountability towards AI ethical behaviour. The whole diagram shows a paradigm that focuses on ethical use of AI tools in order to enhance the learning and teaching process.

Many studies on ethical AI usage have revealed characteristics of guiding principles towards responsible digital citizenship in the this 21st century (Memarian & Doleck, 2023; Faycal et al., 2023; Fırat Akova, 2023). The emergence of AI tools since the ChatGPT era in 2022 has brought about the needs for frameworks that can guarantee ethical AI usage standards, human rights and acceptable society moral values. According to researchers such as Memarian and Doleck (2023) and Fırat Akova (2023), the basic ethical principles for AI standards must be equity, fair and transparent attitudes, responsible and accountable, data security, privacy and autonomy. For example, in the healthcare sector, reducing discrimination in bringing staff and ensuring patient safety are priorities when creating AI ethical framework Zhou et al. (2020).

Many countries and organisations such as IEEE, and the European Commission are working on standardised ethical AI frameworks to accommodate the emergence of AI technologies (Memarian & Doleck, 2023). Carrying out and monitoring ethical AI practices are a challenging task that needs tools such as assessments with checklists to ensure the success of ethical AI in the organisations. These enforcements of ethical AI usage will inculcate the integration of ethical norms in the AI era in the long term (Memarian & Doleck, 2023; Faycal et al., 2023; Fırat Akova, 2023).

In this study, the researcher investigates the ethical usage of AI tolls such ChatGPT or Baidu by adopting the NNIT frameworks for ethical AI usage. In Denmark, NNIT offers consultations on information technology and create new ways and methods for the government and industries such as life sciences and healthcare. It also operationalises on AI ethical usage for the education sector. The AI Ethics and Compliance Model (NNIT, 2024) from NNIT has six dimensions such as “student privacy and data governance”, “student fairness”, “student accountability”, “student transparency”, “explainability”, and “reproducibility”.

Diagram 2. The AI Ethics and Compliance Model (NNIT, 2024)

According to Diagram 2, NNIT (2024) explains that when a user uses AI ethically, “student privacy and data governance” dimension means securing data protection and security while “student fairness” ensures equitable outputs for all academic tasks. The “student accountability” principle ensures user becoming a responsible digital citizen by for example, promoting zero plagiarism policies. The “student transparency” dimension maintains that user needs to be “in the know” of the AI operations of the institution, whereas, “explainability” is for example, where student who use AI tools ethically in universities is provided clear reasons for essay grades. This action will promote trust and belief between lecturers and students in AI-assisted academic tasks and achieving student learning outcomes (Deema and Nehme (2023). Lastly, the “reproducibility” dimension assures users reliable and trusted academic assignment solutions in various kinds of circumstances and purposes in the field they are pursuing.

2.2. Example of AI Ethical Breaches in education

University students who breached AI ethical usage when using ChatGPT for example, can harm the reputation and academic trust of the university in a number of ways. Other examples of unethical AI breaches include privacy intrusions, irresponsible actions that create threats and bias to the security systems. If left uncontrolled and unregulated, these unethical AI breaches demonstrate human autonomy degradation and marks a dark spot in this AI era. Criminal laws and regulations must be enforced by all governments to protect the AI industry. Confidentiality breaches, illegal surveillance, and exploitation of personal data can all lead to privacy violations (Memarian & Doleck, 2023; Faycal et al., 2023).

It is challenging to place blame because AI systems, particularly autonomous ones, are capable of making judgements without human input (Lee et al., 2024). Consequently, the public will be plagued with trust and transparency issues towards the ethical development of the AI industry particularly in the education sector (Faycal et al., 2023). Inaccurate predictions and the use of hazardous content pose security problems. Another issue is the undermining of human autonomy. Establishing and rigorously adhering to ethical norms in the creation and usage of AI is necessary to guarantee that the technology is applied for the benefit of society. Data privacy violations, bias in AI-driven decision-making, and discrimination in hiring practices are a few instances of ethical transgressions associated to AI (Fırat Akova, 2023).

The six dimensions of the AI Ethics and Compliance Model namely student privacy and data governance, fairness, accountability, transparency, explainability, and reproducibility, allow us to talk about certain instances of unethical usage of AI tools. Yusuke and Kouhei (2024) claim that student privacy issues surfaced with ChatGPT and other AI technologies because students were uneasy about the usage of their personal data, even when agreement was obtained. In order to promote favourable perceptions of AI, developers are advised to handle data cautiously.

As seen in the education industry, where ethical requirements place a strong emphasis on data openness and secure handling, effective data governance in AI entails putting in place stringent data security measures, such as anonymisation and compliance with data legislation. An example of a breach in data governance in AI would be if a data breach happened after an educational AI platform collected and stored student data without proper encryption. For example, sensitive student data like names, grades, or personal identifiers may be made available to unauthorised individuals if a university utilises an AI tool to analyse student performance and the system is compromised as a result of inadequate security measures (Catherine Adams et al., 2023).

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AI-enabled evaluations raise concerns about fairness since biases may result in unjust treatment. As mentioned in worries about generative AI potentially perpetuating biases, it is imperative to ensure equal outcomes across varied student groups in order to retain integrity in AI deployment (Memarian & Doleck, 2023). The usage of ChatGPT or Baidu by students has sparked discussions about accountability, particularly when it comes to instances of academic dishonesty, according to examples on the student accountability dimension. According to Lee et al. (2024), universities should enforce the zero-plagiarism policy by setting a policy of plagiarism level below the 15% threshold.

Regarding student transparency, openness and honest behaviour of students must be encouraged while completing coursework assignments using AI tools. Students must be taught how to cite correctly and paraphrase sentences in an appropriate manner that are acceptable to university authorities as well as adhere to academic publication industry standards and requirements (Deema & Nehme, 2023). If concise and correct inputs with citations in the academic assignments are produced by the students, the AI ethical framework is working well (Firat Akova, 2023).

The explainability principle is a crucial factor in the AI ethical framework. Explainability is important for building lecturers-students belief and trust in order to pinpoint the correct AI tools for students (Chauncey & McKenna, 2023). For example, universities can empower AI assessment tools to check the academic works of the students and provides precise feedbacks to them for the improvement of grades (Lee et al., 2024). This is a move to improve transparency between lecturers and students while ensuring students understand their status of learning and correct their works via feedbacks provided.

3. METHODOLOGY

Nardi (2018) defines survey method as a structured research method for eliciting data from the populations and samples to study their behaviours, attitudes, opinions, and characteristics. The method entails employing surveys or interviews to gather quantitative data, which is expressed as numbers. To test research questions or hypotheses, statistical analysis is subsequently performed on the gathered data.

In this study, a written tool called a questionnaire is filled out by study participants and sent to the researcher for review. Participants select responses to the questions and supply basic demographic data. Students' academic achievement and the degree of each ethical factor were evaluated using a descriptive statistical analysis (Creswell, 2012). 335 students from two universities in China's Xinjiang Province participated in the study. Responses from the 335 students who employed AI tools (such ChatGPT or Baidu) for their academic work served as the basis for the analysis. Mean scores and standard deviations for each dimension and academic achievement were included in the data. Table 1 provides a list of demographic information.

Table 1. Demographic details of the respondents

Institution	Male	Female	Percentage (%)
Shihezi University	3	63	19.7%
Shihezi Engineering Vocational and Technical College	12	257	80.3%
Total (n = 335)	15	320	100%

The study's instrument is a questionnaire that was adopted and adapted from the NNIT (NNIT, 2024), a major supplier of IT solutions to the public and private sectors in Denmark as well as to the life sciences globally. NNIT also works on AI ethics for education recently. The six dimensions of its model namely student privacy and data governance, fairness, accountability, transparency, explainability, and reproducibility are referred to as the AI Ethics and Compliance Model. The questionnaire has 26 items on a 5-point Likert scale. According to Fitters et al. (2013), a 5-point Likert scale makes it easier to analyse a wide range of views and opinions, simplifies responses, and assesses attitudes effectively. Table 2 shows the questionnaire items.

Table 2. AI Ethics and Compliance Model questionnaire

Construct	Questionnaire Item
Student Privacy and Data Governance	1. I feel that my personal data is adequately protected when I use ChatGPT or Baidu in my academic work.
	2. I trust that the ChatGPT or Baidu that I use will not share my personal data without my consent.
	3. I am sure ChatGPT or Baidu will not intrude into my personal data.
	4. I am sure ChatGPT or Baidu can protect my integrity from the information it gathers about me.
	5. I am sure ChatGPT or Baidu will remove my data upon my request.
	6. ChatGPT or Baidu will not compromise on the safety of my data from unverified parties.
Student Fairness	7. All students will be fairly treated irrespective of their personal characteristics, learning styles and background information.
	8. The use of ChatGPT or Baidu does not give any extra benefits for me compared to others.
	9. I am sure ChatGPT or Baidu do not bias towards or favour any student groups.
	10. The ChatGPT or Baidu will create a fair and equal academic workspace for everyone.
Student Accountability	11. I will be an ethical and responsible ChatGPT or Baidu user.
	12. Misusing ChatGPT or Baidu will give me serious consequences such as eroded academic integrity.
	13. I will respect the privacy of others when using ChatGPT or Baidu for my academic assignments.
	14. I have awareness of using ChatGPT or Baidu in an ethical manner.
	15. I am responsible for the consequences of any misuses of ChatGPT or Baidu while doing my academic assignments.

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Student Transparency	16. I use ChatGPT or Baidu in a transparent manner.
	17. After using ChatGPT or Baidu for my assignments or projects, I will accord accurate and proper citations.
	18. I believe it is important to be transparent about the role ChatGPT or Baidu plays in the completion of my academic work.
	19. I provide sufficient information to others about how I used ChatGPT or Baidu to help produce my academic outputs.
Explainability	20. The ChatGPT or Baidu that I use provides clear and understandable explanations on the concepts that I query for.
	21. The ChatGPT or Baidu clearly search all the relevant sources to enable my understanding of explainable concepts.
	22. I find it easy to understand the explanations by the ChatGPT or Baidu for a particular outcome that I query for.
	23. The ChatGPT or Baidu provides sufficient information to help me trust its content.
Reproducibility	24. The ChatGPT or Baidu consistently produces the same outcomes when presented with similar inputs or situations.
	25. I trust that the ChatGPT or Baidu's results are reproducible and can be validated with reliable sources.
	26. The ChatGPT or Baidu performs reliably and produces consistent results over time.

The questionnaire has good and acceptable reliability. The AI Ethics Constructs, the associated items, and their Cronbach's Alpha values, which represent each construct's internal consistency reliability are displayed in Table 3.

Table 3. The reliability values of the AI Ethics and Compliance Model questionnaire

No.	AI Ethics Dimensions	Items	Cronbach's Alpha
1	Student privacy and data governance	1 – 6	0.980
2	Student fairness	7 – 10	0.983
3	Student accountability	11 – 15	0.982
4	Student transparency	16 – 19	0.987
5	Explainability	20 – 23	0.987
6	Reproducibility	24 – 26	0.980

The concept of validity refers to how well a research tool or assessment tool evaluates the intended concept (Heale & Twycross, 2015). The construct validity demonstrates a high excellent internal consistency for each construct according to the Cronbach's Alpha values (all above 0.95), which show accurate assessment of the corresponding AI ethics dimensions.

SPPS Version 27 is used to examine all of the data gathered from the questionnaire. The mean and standard deviation are used to examine the degree of each of the seven dimensions in this AI Ethics and Compliance Model as well as the self-evaluated academic performance (RQ1 and 2). Yellapu (2018) asserts that examining conceptions with mean and standard deviation provide information about overall consistency, variability, and central patterns in responses.

The effect of each of the six ethical dimensions (dependent variables) on students' self-assessment of their academic performance after using the AI tools was assessed using a regression analysis. Finding the factors that predict a student's academic success is the goal. Finding predictors aids in understanding the effects of using AI tools on academic performance, directing advancements in teaching methods and AI integration (Mallillin, 2024).

4. FINDINGS

a. *Dimensions of AI Ethics in-relation to Academic Performance*

This section shows the findings related to the level of each of the six dimensions in this AI Ethics and Compliance Model and the Self-evaluated Academic Performance (RQ1 and 2) in term of mean and standard deviation. Table 4 shows the mean scores and standard deviations for each dimension of the AI Ethics and Compliance Model.

Table 4. The level of each dimension (AI Ethics and Compliance Model) and academic performance

AI Ethics Dimensions	Mean	Standard Deviation
Student privacy and data governance	4.345	0.870
Student fairness	4.380	0.857
Student accountability	4.413	0.830
Student transparency	4.372	0.857
Explainability	4.417	0.828
Reproducibility	4.378	0.837
Self-evaluated academic performance	4.510	0.573

The findings show that all of the factors had comparatively high scores, indicating that students usually have a favourable opinion of the ethical implications of AI tools. Student privacy and data governance had the lowest mean score (4.345) among the aspects, although it was still rather strong. Explainability had the highest mean (4.417), closely followed by student accountability (4.413). These findings demonstrate that students have a favourable opinion of all ethical aspects. After utilising AI techniques, students were also asked to assess their academic success. As shown in Table 4, the mean score of self-evaluated academic performance was 4.510 which indicates that students generally perceive their academic performance as being positively influenced after using AI tools.

b. *Regression Analysis on the Influence of Ethics Model Dimensions on Students' Academic Performance*

This section offers responses to questions on how the AI Ethics and Compliance Model's aspects affect students' academic achievement following their use of AI-based tools like ChatGPT or Baidu (RQ3).

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The effect of each ethical factor on the dependent variable, students' self-assessment of academic performance following the use of AI tools, was assessed using a regression analysis. The self-evaluation of students' academic performance following the use of AI tools is the dependent variable, whereas the independent variables are the AI Ethics and Compliance Model's dimensions (student privacy and data governance, student fairness, student accountability, student transparency, explainability, and reproducibility). The model summary and ANOVA results were examined to ascertain the importance and impact of each predictor, as indicated in Table 5.

Table 5. Model summary and ANOVA results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.412[a]	.170	.152	.528

a. Predictors: (Constant), Reproducibility, Student Privacy, Student Fairness, Explainability, Student Transparency, Data Governance, Student Accountability

b. Dependent Variable: After using CHATGPT or Baidu, how do you evaluate your academic performance?

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.647	7	2.664	9.566	<.001[b]
	Residual	91.066	327	.278		
	Total	109.713	334			

a. Dependent Variable: After using CHATGPT or Baidu, how do you evaluate your academic performance?

b. Predictors: (Constant), Reproducibility, Student Privacy, Student Fairness, Explainability, Student Transparency, Data Governance, Student Accountability

The R^2 result shows that the characteristics of the AI Ethics Model used in this study may account for about 17% of the variation in students' academic achievement. The total model is statistically significant, according to the ANOVA results, indicating that the independent factors taken together significantly affect the dependent variable. The results of the ANOVA, $F(7, 327) = 9.566$, $p < 0.001$, show that the six AI ethics constructs namely student privacy and data governance, student fairness, student accountability, student transparency, explainability, and reproducibility have a statistically significant effect on students' self-evaluations of their academic performance. These results imply that when students use AI technologies, these constructs are significant predictors affecting their academic results.

Table 6. Regression Coefficients of each AI ethics constructs

Predictor	B	Std. Error	Beta	t	Sig.
(Constant)	3.303	0.158	-	20.891	0.000
Student privacy and Data governance	0.240	0.117	0.365	2.048	**0.041**
Student fairness	-0.064	0.141	-0.095	-0.450	0.653
Student accountability	0.972	0.656	1.408	1.482	0.139
Student transparency	-0.224	0.156	-0.335	-1.435	0.152
Explainability	-0.659	0.610	-0.953	-1.080	0.281
Reproducibility	0.055	0.139	0.080	0.395	0.693

However, further examination of the regression analysis shows that only student privacy and data governance dimension was a statistically significant predictor of academic achievement ($p = 0.041$) out of the six dimensions that were investigated, as shown in Table 6. According to this positive relationship ($B = 0.240$), students are more likely to give their academic achievement higher ratings when they believe that privacy requirements are being upheld when

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they use AI tools.

Although the coefficient for student accountability was positive (B = 0.972), it was not statistically significant (p = 0.139). This points to a possible benefit, but more research is required to prove a concrete connection. Other dimensions like explainability, reproducibility, student fairness, and student transparency did not significantly predict academic performance, suggesting that these factors do not seem to have a significant impact on students' perceptions of their academic success when using AI tools.

5. DISCUSSION

Students had a positive opinion on the application of ethical principles, according to the ethical dimensions analysis (RQ1). With mean ratings of 4.417 and 4.413, respectively, explainability and student accountability were the most highly scored dimensions, suggesting that students value the openness and clarity of AI operations as well as the sense of accountability that comes with employing AI technologies in academic contexts. According to Chauncey and McKenna (2023), high scores in explainability suggest that students value understanding how AI tools make decisions. When AI systems provide clear, understandable feedback, it builds trust and allows students to learn effectively from their interactions. Student accountability scored high because educational institutions emphasize ethical conduct, especially when using AI tools like ChatGPT. Students are encouraged to be responsible and transparent, avoiding misuse or plagiarism, which aligns with the focus on responsible practices (Deema & Nehme, 2023).

Among the six dimensions, student privacy and data governance received the lowest mean score (4.345), which indicates that privacy issues might need more attention even if it is still quite high. Improving privacy features may result in even greater adoption and use of AI systems in learning settings. Students may feel that their personal information is not adequately protected when using AI tools, leading to lower trust in data privacy measures (Yusuke & Kouhei, 2024). There might be fears of data breaches or misuse, as noted in discussions around data protection weaknesses.

The high mean score (4.510) for academic achievement (RQ2) indicates that most students think AI tools have improved their learning results. This research lends credence to the notion that incorporating AI tools into classroom environments can improve students' academic achievement. According to Deema and Nehme (2023), when students use AI tools ethically, such as by properly citing AI-generated content and using AI to supplement rather than replace their work, they engage more deeply with learning materials. This leads to better understanding and improved academic performance.

Regarding RQ1 and RQ2, we can get a thorough summary of how students understand the ethical implications of AI tools and how they affect academic achievement. The findings imply that:

1) Students see AI technologies' ethical components favourably, with explainability and student accountability receiving especially high ratings.
2) The influence of AI tools on academic performance is generally seen favourably, suggesting that these tools enhance students' educational experiences.

In some way, the regression analysis yields contradictory findings. Regression analysis shows differently, even though student privacy and data governance had the lowest mean score. According to the study's findings, student privacy and data governance is one of the AI Ethics Model's factors that significantly influences academic achievement prediction. When using AI tools, students appear to prioritise privacy, which affects how they view their academic performance. Other aspects including explainability, transparency, fairness, data governance, and reproducibility, however, did not have a noteworthy influence. Privacy ensures that students' personal data is not misused, creating a safe and supportive learning environment. This security allows students to focus more on their studies without concerns about data breaches or misuse, enhancing academic performance (Catherine Adams, 2023; Chauncey & McKenna, 2023).

6. RECOMMENDATIONS

Regarding the responsible use of AI tools, like ChatGPT or Baidu, the study suggests the following actions for university students. The recommended actions are as follows:

1) Universities ought to concentrate on improving AI tools' privacy. It is good to formulate rules that can help the regulation of AI tools without forgoing any unethical academic behaviours. In this study, although student privacy has the lowest mean among the six dimensions but it is still considered as high. According to Gruenhagen et al. (2024), strongly worded privacy policies must be established to inculcate the values of high ethical use of AI tools. This will also help to ensure student privacy is protected and students use AI application responsibly.
2) This study found that student accountability and explainability mean scores were high. Due to this strong appreciation and openness towards these two dimensions, university lecturers should make them top priorities to ensure students maintain high awareness, transparency and use AI tools ethically when completing their coursework assignments. These strongly worded AI ethics policies will ensure all AI generated assignments to be accurately and precisely cited and thus reducing the number of plagiarism cases in the institution (Chauncey & McKenna, 2023; Lee et al., 2024). The university's student admission section must train students be responsible and ethical digital citizens while using AI tools as well as ensuring ways to protect data, and the discouragement of society bias (Zhou et al., 2020).
3) The study also found that student privacy and data governance predict academic performance. In this regard, enhancement of privacy controls must be done by the university's administration when students use AI tools for academic assignments. Stringent data protection policies must be formulated to ensure all AI technologies adhere to privacy laws. Besides that, privacy protections for the students can be enhanced when they are trained to practise transparency when using AI provided data. Promoting and comprehending students' data rights will help safeguard academic trust and increase academic engagement with AI tools. Both the lecturers and the students may get advantages from such practices.

As a conclusion, this study recommends that universities will give priority to a workable AI ethical framework for daily academic operations. Important AI ethical dimensions that can be prioritized include student accountability and student privacy because these dimensions are linked to the enhancement of academic performance of the students. While policies and guidelines are in place for responsible and ethical usage of AI tools, universities must also make sure they are implemented without compromising data security and protection.

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