

The Promise and Peril of AI in Academic Writing: Understanding AI Plagiarism in Higher Education.

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ABSTRACT:

Objective: To document the knowledge of AI and its benefits among medical students and faculty for academic purposes, also to identify their knowledge about potential threats and ethical issues related to the use of AI.

Methodology: Data was collected from total of 350 participants (150 students and 100 faculty) from Ibn-e-Sina University through random selection after their written consent. From May 2025 to August 2025, faculty, students and health care workers were approached both by using google form, feedback forms and interview. In addition, related review of the literature done and data compared.

Results: The acceptability and use of AI was more common among students (75% vs 45%) when compared to faculty. 68 % of participants found AI helpful for clarity of expression, 55% find AI as tool to save time, 40% reported that AI is helpful for us as we are nonnative English writer. By using AI only 35% agreed upon improvement in clarity of expression while 55 % emphasized advantages of time saving. 40 % respondents reported that AI provide agreement with strong support for nonnative English speakers whereas incidence of improvement in confidence of the participants with use of AI was 35%

Conclusion: As use of AI is getting its way into academia, awareness and ethical bonding must be taught to each student to maintain academic honesty

Key words: Artificial intelligence, Integrity, Regenerative AI, Academic writing, Ethics

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Introduction:

We are observing radical change in educational technique and research as each medical institute now has support of department of medical education. During current decade the development of generative AI has increased the responsibility of students, faculty and medical educationist. Ethically academic write up should reflect originality and critical thinking. Surg of AI has affected both originality of medical write up and critical thinking of the researcher, in addition to damage to ethical norms. Generative AI, based upon machine learning model on massive dataset, identify input pattern and then generate output that resemble human created content. These responses may be incorrect or misleading yet presented as "factual" a phenomenon commonly known as AI hallucinations. Students commonly use generative AI to rephrase, rewrite and refine the texts, while researchers make its use to review literature and polish the manuscript.¹⁻³ AI, no doubt employs a paradigm shift. Its capacity to phrase new and novel sentences makes conventional plagiarism detection inefficient.⁴⁻⁶ AI generated text may not be in line with the known facts, even then lacks authentic ownership. Hence so-called AI plagiarism poses a real challenge for academic and re-

search activity. Faculty and facilitators are usually uncertain about learner's submissions whether these reflect original creation or AI generated text.^{7,8} The integrity of academician and researcher depends entirely upon following transparent, sincere and honest effort for medical writing. Plagiarism has long before identified as serious threat to this integrity. Various similarity check software are used to detect plagiarism, however generative AI created content by apparently looking as human style content may dodge similarity check software.⁹⁻¹¹ The generative AI therefore has potential to present "disinformation" related to text, data and references as original and eliminate integrity.^{10,12,13} Moreover, students instead of using their own intellect, use regenerative AI unwarrantedly that undermines critical thinking abilities of the students.^{14,15} Despite these potential threats associated with the use of AI, we have to keep pace with the world and therefore complete ban on regenerative AI is impractical, particularly when evidence suggest that higher education institutes are utilizing regenerative AI, however with wisdom and moderation.^{16,17} Therefore, the major hurdle in not increasing use of AI, instead how this emerging technology may be incorporated ethically into the academic writing.

Rationale of the study: To probe the status of use of regenerative AI by the students and faculty of ibn-e-Sina university and whether its affecting integrity of the medical writing

Objective:

1. To document the knowledge and expertise of medical students and faculty using regenerative AI for academic writing
2. To suggest recommendation, based on the finding, for the optimum use of AI, maintaining the ethics and integrity but avoiding AI plagiarism and AI hallucination.

Methodology:

This qualitative study was carried out at 3 institutes of ibn-e-Sina university using web-based questionnaires and inter-

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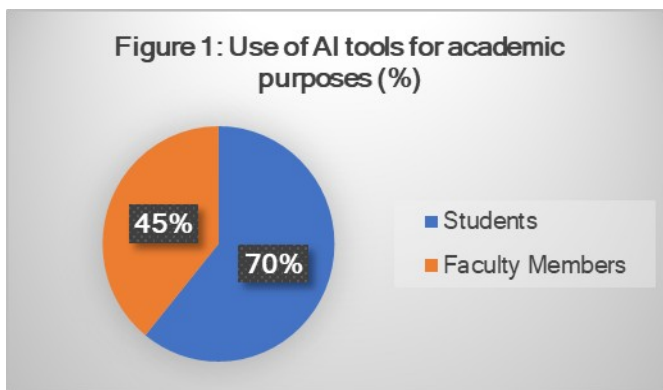
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views, after authorization for the study from the Institutional Ethical Review Board (vide letter no isu/erc/p-2025/16 Feb 2025) between May-August 2025. After getting informed written consent a total of 350 participants (150 students+50 faculty members) were selected using simple random sampling technique. The structured questionnaire was developed as google form and sent through WhatsApp/email. Twenty faculty members participated in semi-structured interviews to get feedback about challenges faced with use of regenerative AI in teaching and assessment. The literature was evaluated to analyze policy papers, editorials, and peer-reviewed studies published between 2019 and 2025. Descriptive analysis was used for quantitative data, and theme coding was used for qualitative data.

Results:

The results showed that there are notable differences with respect to the regular use and acceptability of regenerative AI among students and faculty (70% vs 45%), whether it reflect less familiarity with the use of AI or adherence to ethics is not known as shown in fig 1

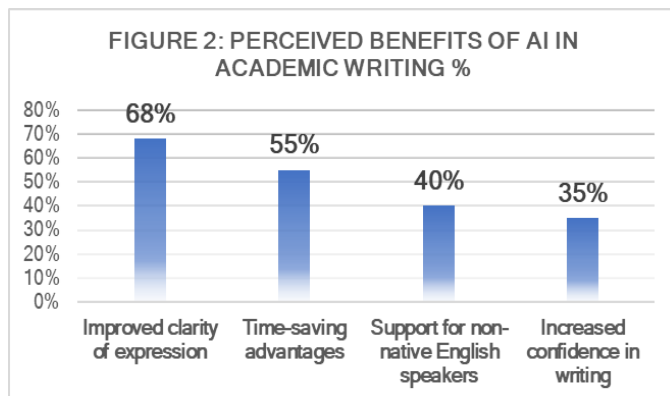
Fig No 1: Use of regenerative AI



When asked about the perceived benefit of use of AI, time saving was answered by 55% of the participants while 68% felt that AI gives clarity of communication, the concept we want willing to deliver become easier to understand by readers. Being nonnative, English writing is a difficult task and 35% participants reported that with use of AI to improve English is remarkably improved and they feels more confident, as shown in fig no 2.

72% of faculty members expressed concern about the possible abuse of AI by demonstrating the risk of plagiarism. Additional possible issues include a 60% chance of not being able to read data produced by AI and a 50% chance

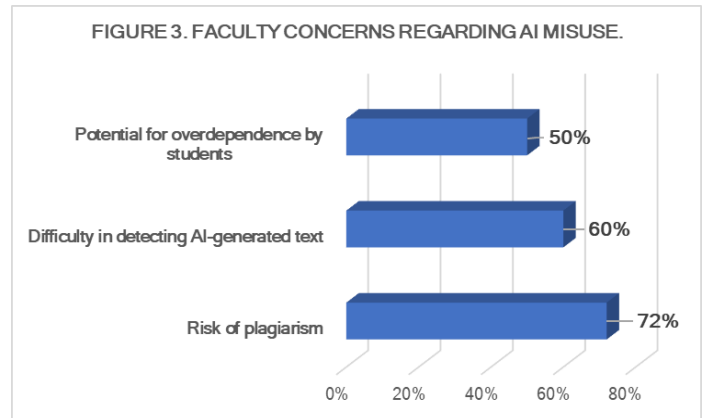
Fig No 2. Benefits of using AI.



of students being overly dependent. The results are displayed in Figure 3.

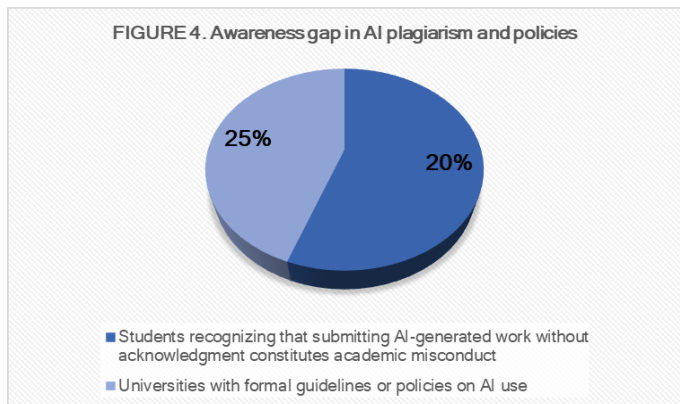
Whenever regenerative AI is used, the section and software used for must be acknowledged, otherwise academic writing may be considered as academic misconduct. Only 25% of the participants (70% faculty) were knowing that

Fig No 3: Perception regarding misuse of AI



unacknowledged work is a form of academic misconduct. When asked while doing academic work do you follow the university guidelines regarding use of AI, surprisingly only 20% of the participants were aware that the university has some guidelines for using regenerative AI for academic writing as shown in fig 4

Table No 4. Awareness regarding ethical use of



Discussion:

The two edge sword role AI of in Higher Education is supported by the current data both as important tool to compete with the ongoing advances in AI industry as well as a source of ethical and academic misbehavior. This is supported by data from Cheng A et.al, Xu Z and Khan AA et al. that highlights the positive role that includes improved writing skills, improves accuracy, saves time and helps those whose native language is other than English.^{1,2,14} Similarly there is equal potential threats too. This can lead to data based on hallucinations rather than actual facts misleading the end user and therefore leads to inaccurate spread of scientific information.^{10,12,13} AI detection also possesses another threat. There are multiple AI detection systems which can detect regenerative AI and while plagiarism platforms remain unreliable as they can misinterpret human data as AI produced and vice versa.^{4-6,18} Studies show discrimination against persons who are not fluent in English writing, which poses serious concerns.⁷ The major concern in academic writing is breakthrough of trust, students' don't know about ethical considerations, while faculty raises question about the originality of research data.^{8,9,11} This is

in agreement with studies around the world authenticating extensive use of AI tools in the universities.^{11,19} However, absolute exclusion of regenerative AI is unfeasible. Various institutions have included use of regenerative AI into curriculum that emphasize meaningful involvement rather than penalty.^{16,17} The opportunity for unacknowledged AI dependence has been almost eliminated by using innovative assessment techniques; in contrast to traditional assessment methods that includes viva, short essay, and written assignments.^{20,21}

As technology advances, latest AI tools are built upon semantic segmentation models to help distinguished between humanized language and AI-generated data.^{18,22} The reliability issue cannot be controlled by technological advancements alone. Appropriate instruction policies are needed at each level i.e. student and faculty. Based upon the findings of the current study and review of the published data on the subject it may be recommended that

- Faculty and students be trained to use the regenerative AI appropriately
 - SOPs for using AI ethically, must be developed and propagated among students and faculty.
 - All assessments may be based on critical thinking not merely upon recall of knowledge
 - Provide a supportive environment where AI can be used while taking ethical considerations into account. 19,23,24.
- As a result, AI in academic writing has revolutionize knowledge generation, yet it also poses a risk of undermining originality and objectivity if left unchecked. Standard operating procedures in education and assessment techniques may provide stability.

Conclusion:

The use AI can enhance knowledge and research, however their use a primary source leads to undervalued material creation, affecting integrity at worst. Both faculty and students are currently using AI with increasing frequency therefore complete exclusion of AI from academic writing is beyond realism, instead universities should work to develop ethical frameworks, integrate AI expertise into courses, and create tests that encourage critical thinking. The future of academic credibility in the AI era will depend on striking a balance between advancing technology and traditional academic principles.

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Author's Contribution	
Nosheen Zafar	Concept & design of study.
Farzana Majeed	Methodology and Manuscript Draft
Zafar H. Tanveer	Data Collection and Analysis: