

## Use of AI in Education

Dr. Keshav Kumar, Assistant Professor, Govt. College, Bhuna

### Abstract

As higher education institutions prepare students for the workforce, so the emergence of generative AI has caused a major dilemma. In the Present scenario, development of digital skills must become a normative aim in students, while simultaneously preserving academic integrity and credibility. The challenges, which are facing by them, is not simply a matter of using AI responsibly because of typically of reconciling i.e. preparing students for the future of work and maintaining the traditional role of developing personal academic skills. Because of critical thinking, the ability to acquire knowledge and the capacity to produce original work. Objectives must be typically balanced in Higher education institutions while addressing financial considerations, creating value for students and employers, and meeting accreditation requirements. There are multiple-case study of fifty universities across eight countries examined institutional response to generative AI. As proposed actions varied widely, the content analysis revealed apparent confusion and a lack of established best practices, from complete bans on generated content to the development of custom AI assistants for students and faculty. We concluded that timely innovation will be required for the apparent confusion of higher education institutions and suggest every possible approaches to that. However our results will suggest that their top concern now is the potential for irresponsible use of AI by students to cheat on assessments. In the short term and long term, We, therefore, recommend that, the credibility of awards is urgently safeguarded and argue that this could be achieved by ensuring at least some human-proctored assessments are integrated into courses, e.g., in the form of real-location examinations and viva voces.

**Keywords: Generative AI; Academic Integrity; Plagiarism; Academic Quality; Chatgpt; Student Assessment; Learning Technology**

### Introduction

Responsible use of artificial intelligence (AI) in education has become a flashpoint by students, instructors, and academic administrators. This question i.e. using technology responsibly is preferable to using it irresponsibly is not easily answered. It becomes a question of value rather than a question of fact in the absence of a clearly defined notion of responsibility. The generative AI revolution caught academia by surprise.

In present, fastest spreading digital application are underscores a gap by noting that less than 10% of schools and universities have formal guidance on AI. Further, stressing that while schools and universities are appear to be taking their time to make recommendations and lay down rules, students and teachers are not waiting. Relatively few institutions have published or adopted a policy or policies governing the use of AI, including in teaching and research. The technology is being widely used, with business officers using AI to make job-related decisions, and reporting using AI virtual chat assistants and chatbots. The number of academic leaders who felt optimistic about the emerging technology was much higher than those who were concerned. In contrast, fewer schools and universities have expressed concern about AI's impact on higher education and has a grip on the situation.

In this paper, we focus on generative artificial intelligence, defined here as a set of computer algorithms that simulate intelligent human behaviors, and examine its impact on the academic processes. One may argue that generative AI is just another technological tool—a more advanced learning and teaching aid if we find the latter useful and allow its use in the classroom, there is no reason we should deny the use of the former. This technology has tremendous potential to improve the learning environment; it can fill in the gaps in student and faculty support, providing a personalized learning experience, on-demand tutoring, and immediate feedback, as well as automating assignment grading and streamlining course

creation and research activities. However, this argument leads to a conundrum.

Information technologies have long played a vital role in supporting teaching, learning, and research in education. Critical thinking skills and the ability to produce original work have largely been the hallmark—and obsession—of academia. Communication and computational devices are often banned, with the focus placed on individual achievement, and collaboration may be misconstrued as collusion.

Examinations have been conducted in strictly controlled environments, as if the subjects were tested in a lab where exposure to contaminants could skew the results. The technological space where learning takes place differs from the realities outside the classroom. One might further argue that generative AI is not just another technological tool because it represents a notable leap forward. While earlier algorithms were primarily used to analyze human-produced data, the new class of algorithms is capable of logical reasoning and generating its own data.

It can take the human out of the loop—generate bespoke essays, conference papers, course outlines, and computer code, allowing students, instructors, and researchers to delegate much of their work to AI assistants. AI is omnipresent in education and noted that new roles and profiles are emerging beyond traditional ones. The public release of generative AI tools such as ChatGPT was met with excitement. Within the first few months, it attracted millions of users. In the present scenario, The use of generative AI is growing, and many students would continue using the tools even if they were banned. This may be viewed as alarming and a reason for concern. A recent study demonstrated that AI can be the brightest student in the class who scores higher on assignments than human counterparts. Another the most significant finding is not that chatgpt behaves as an outstanding student across some of the undergraduate modules, but that it performs consistently as an adequate undergraduate student—able to pass assessment without drawing undue attention to itself.

The AI submissions would outperform a random selection of the same number of real student submissions. Currently, AI can generate texts that are not detectable for teachers, which poses a challenge to schools and universities in grading student essays”. This evidence should not be ignored by higher education institutions.

A further challenge that generative AI poses to the academic process is that, while the originality requirement can be satisfied with little effort, algorithms are biased toward linguistic diversity, which may lead to false accusations. This opens a door to a whole new array of issues relating to authenticity and ownership. For instance, admission portfolios, grant and patent applications, among other works expected to be produced by humans, can be generated in-part by machines and presented as original works created by humans. This leads to a peculiar situation where human-produced artifacts are compared and ranked against the machine-generated content. Considering that generative models can be trained on award-winning artifacts, there are implications for justice, as some may gain an unfair advantage by using the machine, thereby skewing the outcome.

In this case, the winners are likely to be those with technology skills, rather than those with the ability to produce original work. This raises the questions of whether using AI to achieve a desired outcome is morally justifiable and whether academia’s obsession with the originality of one’s work has, in the light of technological advancements, been rendered obsolete. The literature and media debates indicate that generative AI has sown seeds of distrust among teaching staff, who are on the lookout for machine-assisted plagiarism, and in the absence of adequate means of detection, may falsely accuse students of using ChatGPT.

A growing body of literature raises concerns about the potential misuse of AI and about the gaps in the traditional checks and balances. Technology that provides on-demand answers promotes overreliance on technological aid, whereby one deprives oneself of an opportunity to learn from their own mistakes, to find one’s own style, and to think critically. These threats will likely be exacerbated in the future as wearable AI devices become more ubiquitous. All

this has implications for academic processes including teaching, learning and research, and therefore, it prompts a revision of the concepts of learning, integrity, authenticity, and originality and raises questions about the future of the teaching profession and the value higher education is expected to provide.

It is ironic that the absence of policies governing the use of AI does not prevent some academic leaders from using the technology to make decisions pertaining to academic processes. This highlights that while academia as an institution may adhere to traditional values, academia as an industry, driven by the need for efficiency and economic viability, may adopt a more flexible, technology-driven approach. AI tools are good enough for academic leaders to keep courses and research programs running, they should also be considered acceptable for students to use in completing assignments. Similarly, it could be argued that the former have no moral right to punish the latter for practices they themselves partake in if, after all, one role of institutions of higher education is viewed as being to prepare students for the future of work, which is becoming predominantly technological.

### **Objectives of the Study**

The main objective of this study is to examine how higher education institutions are confronting the new reality of generative AI. It is motivated by the gap in the literature on institutional responses and their commitment to doing the proverbial right things. This research is important and timely for several reasons. First, there is some evidence to suggest a disparity between the adoption rates of AI and the policies governing its use, which is a cause for concern. Moreover, the novelty of the issue, coupled with its growing adoption rates, makes the matter even more urgent. For instance, ChatGPT alone reached 100 million monthly active users in the two months after its launch. The impact of generative AI on academic processes is largely unknown and therefore warrants examination.

### **Research Methodology**

This qualitative study employs a multiple-case study design to examine the institutional response to generative AI and its impact on their respective stakeholders as indicated in their publicly available written sources. Our aim was to provide a high-level overview of the institutional response to emergent generative AI through a content analysis of these sources. The multiple case study design is a valuable qualitative research tool in studying the links between the personal, social, behavioral, psychological, organizational, cultural, and environmental factors that guide organizational and leadership development. This method is often applied in educational research to examine the inner workings of academic institutions, as it allows researchers to draw comparisons and identify common denominators, not only across different institutional environments but also organizational functions and actions, as well as their policies and initiatives. This method provides a structured framework to achieve the study's objectives and identify patterns in institutional responses to the emergence of generative AI. The data collection and analysis process was divided into five phases. We began data collection with purposive sampling as a primary data source.

### **Limitations of the Study**

The limitations of this study include the modest sample size, the limited and variable public availability of documents which suited our enquiry, our restriction to English language documents, and the dynamic nature of the current response of universities to AI.

### **Findings of the Study**

The documents varied in scope and breadth; among them were AI-specific guidelines and statements, as well as academic integrity policies, library resources, research guides, study guides, workshop outlines, presentations, and teaching resources. Some documents provided a broad overview of AI technology, while others provided specific use cases.

The results summary is Proposed actions ranged widely from observing the situation to banning it outright to fully embracing the technology. The general trend, however, was toward threat

mitigation, to curb the irresponsible use of generative AI, with a less frequent emphasis on opportunities and benefits. The top concern was the impact of large language models (LLMs) on academic integrity, due to their potential for irresponsible use by students to cheat on assignments. To address the problem, four overlapping strategies were discussed, including communication, the detection of AI misuse, referencing and acknowledgment of AI-generated content, and disincentivizing AI use.

Teaching staff were advised to update their syllabi, communicate expectations, redesign assignments, familiarize themselves with students' writing styles, and remain vigilant about the potential misuse of AI tools. Some library guides provided examples and links to detection tools and resources explaining how to acknowledge the use of and cite ChatGPT. Teaching staff were also advised to AI-proof assessments by requesting rough drafts to track work progress, replacing essays with authentic assessments, and incorporating in-class writing exercises and group activities. A related concern stemmed from depriving students of opportunities to practice their critical thinking skills. In response, instructors were advised to engage with and support students, and to ban the use of AI when necessary. Moreover, students and instructors were warned about the limitations of generative models and advised to approach an LLM's output with caution as algorithms are known to generate biased and inaccurate responses, and in the case of computer code, bugs and security vulnerabilities. AI's potential to undermine equality, as not everyone has access to these tools, was mentioned, although it was not a top concern. The level of concern about AI was higher among universities in Western countries.

The results suggest that privacy concerns came in the way of academic integrity because submitting students' work to plagiarism detection services without permission could constitute an infringement of privacy or intellectual property, thereby creating a unique dilemma. Instructors have a duty to uphold the values of academic integrity and a duty to use AI responsibly; however, the guidelines were not explicit about which duty or concern claims priority or how the dilemma should be resolved. Having discretionary powers to assign relative importance when making decisions about responsible use in an ad hoc fashion is likely to result in confusion or, worse, inconsistent policy application.

Many institutions in our sample acknowledged the emergence of AI as a unique challenge, efforts to address it, by reconciling the two seemingly conflicting goals of innovation and preserving the status quo, inevitably create inconsistencies in decision-making. Material drawn from ChatGPT or other AI tools must be acknowledged; representing as one's own an idea, or expression of an idea, that was AI-generated will be considered an academic offense. Students may use artificial intelligence tools for generating ideas, creating an outline for an assignment, or polishing language, but the final submitted assignment must be the student's own work.

When Using Generative AI provides the following advice regarding referencing AI-generated content. Generative AI is not an academic source, so it may be inappropriate to cite or use in an assignment. However, the guide warns that students should not neglect to reference generative AI used in research. AI should help you think, Not think for you. Use these tools to give ideas, perform research and analyze problems.

Do not use them to do your work for you, e.g., do not enter an assignment question into ChatGPT and copy & paste the response as your answer. When a machine generates ideas that students are allowed to integrate into their assignments and submit for credit, helps them compile research literature, explains findings, and analyzes problems, how much thinking is left for the students to perform on their own if the intelligent machine shoulders much of the cognitive load. Considering that modern tools such as word processors and search engines have AI at the back end, this becomes a question of degree rather than kind.

When a policy is not specific enough to define the concept of originality and avoids setting a hard limit on the level of assistance a student can receive for the submitted work to be

considered original, the irresponsible use of AI becomes a gray area. While ChatGPT was the most common tool described in the sample, other LLMs, such as Elicit for conducting research tasks. AI has been proposed as a learning and teaching aid to help students improve the quality of their writing, summarize text, provide on-demand feedback, answer questions, and brainstorm ideas for course projects. AI image generators may prove useful in visualizing data and ideas. Likewise, instructors may use generative models to teach AI ethics and discuss moral issues arising from the use of technology; they may also use AI tools to automate teaching tasks, such as creating lesson plans, and research tasks, such as extracting data from and summarizing research papers.

### Conclusions

This study examined how the emergence of generative AI prompted academic institutions to confront a new reality by analyzing a modest sample. The findings suggest that academic institutions are struggling to find the right balance between mitigating risks and leveraging opportunities. Most significantly, AI is seen as a threat to academic integrity and quality, challenging established assessment and detection strategies while raising important ethical, social, and pedagogical implications. For instance, reliance on AI tools may hinder students' ability to think critically, affecting their capacity for creative expression, independent problem solving, and decision-making. This blurs the line between responsible and irresponsible use; even if the intent is good, the long-term effects are unknown and could be devastating. This raises the question of whether the traditional academic values of integrity and originality impede the relevance of education to workforce needs.

Future research should also examine the extent to which the established academic processes need to be preserved and how. Or, put another way, how should the teaching, learning, research, and administration practices be retrofitted to keep pace with technological change. Another topic for future research is to examine why academic institutions responded to the issue of generative AI the way they did. The literature describes the lack of formal guidance on AI, despite its widespread adoption, as a simple problem—just write the policy and follow it. However, the absence of a policy may serve as a strategic compromise to avoid the pitfall of violating the very rules one has established. To this end, a survey of key stakeholders in the policymaking process should be conducted to explore why some concerns are prioritized over others and why certain opportunities are forfeited. One may argue that the effort to fit AI use into the existing normative framework focuses on the question of how to preserve the status quo and distracts from the question of why.

We conclude that the integration of generative AI into higher education will have an impact that stretches beyond merely the need to prevent academic misconduct and minimize privacy and copyright infringement. In response to this apparent confusion, we argue that the considerable challenge for higher education institutions is to ensure the responsible use of AI to “support the learning process without reducing cognitive abilities” as recommended by the United Nations Educational, Scientific and Cultural Organization . Our study suggests that whilst this could usefully be based on the foundations set, it will require time and innovation.

Our study, however, showed that the impact of large language models (LLMs) on academic integrity, due to their potential for irresponsible use by students to cheat on assessments. In what is often viewed as an arms race between those who would cheat and those who would seek to stop them, we therefore also recommend that, in the short term (and probably still in the long term), the credibility of awards is urgently safeguarded. This could be achieved by ensuring at least some human-proctored assessments are integrated into courses, e.g., in the form of real-location examinations and viva voces.

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