

Artificial Intelligence and the Future of Academic Integrity: Rethinking Authorship, Ethics, and Knowledge Production in the Digital Age

Wahab Ali

Alsa7hr01@gmail.com

Bsc Hons Computer Science, Uni of Portsmouth, Faculty of Technology

Omar J. Alkhatib

omar.alkhatib@uaeu.ac.ae

Professor of Civil and Structural Engineering, Architectural Engineering Department, United Arab Emirates University, United Arab Emirates

Aqsa Asif Khan

aqsakhan048@gmail.com

MPhil scholar, Leads University

Corresponding Author: Wahab Ali Alsa7hr01@gmail.com

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ABSTRACT

GenAI has entered into the academic landscape with such a rapid speed, impacting the entire field of academic writing, research practice, assessment, and knowledge production, that the notions of academic integrity, its meaning, and its practice have sparked a new debate. The power of AI-driven tools to improve creativity, productivity and access to knowledge is unprecedented, as are the questions they pose about what constitutes authorship, originality, accountability and ethical scholarship. Recent conversations have tended to revolve around the technologies themselves and plagiarism detection, yet not enough has been said about the bigger picture of how AI aids in the creation of knowledge and the inherent ethical considerations. To address this gap, this qualitative study is an interpretive research approach in which the author uses the critical analysis of recent scholarly literature and higher education policy documents, and applies thematic analysis to understand how generative AI is changing academic integrity in modern universities. The four themes explored in the analysis are related, covering the changing notion of authorship in AI-supported scholarship, new ethical issues of transparency and responsibility, and the transformation of assessment and evaluation practices, along with the shift in knowledge production in the digital era. The implications of this role are not necessarily seen as a threat, but rather as a paradigm shift in institutional policies, pedagogical practices, and ethics surrounding the use of AI in academic research. The results highlight the importance of fostering new models of academic integrity that prioritize responsible use of AI, digital literacy, transparency in AI-supported writing, and shared responsibility of students, educators, researchers, and institutions. The study also provides a forward-looking conceptual framework that adds to the ongoing scholarly discussion on AI's implications for higher education and educational technology, while offering practical recommendations for institutions and policymakers to navigate the complex balance between technology and trust, authenticity, and scholarly excellence.

Keywords: *Generative Artificial Intelligence (GenAI), Academic Integrity, AI-Supported Writing, Higher Education, Ethical Scholarship, Knowledge Production*

INTRODUCTION

In today's educational landscape, the rise of Generative Artificial Intelligence (GenAI) has emerged as one of the most impactful changes in the production, sharing, evaluation, and dissemination of knowledge. While previous iterations of ed-tech tools have focused on search, and automation of administrative tasks,

Large Language Models (LLMs) and multimodal AI systems have also unlocked new possibilities for generating coherent academic text, brainstorming research ideas, synthesizing information, and engaging analytical reasoning. As a result, a series of fundamental challenges about the future of teaching, learning, assessment, and scholarly communication are being faced by universities worldwide. Generative AI systems are not just tools, but active participants in academic processes, urging the rethinking of traditional understandings of intellectual work, originality, and academic accountability for educators, researchers, policy makers and students. The widespread adoption of generative AI tools has profoundly reshaped how education is taught and learned, and has also highlighted many pedagogical, ethical and governance issues that go beyond plagiarism. (MDPI)

This shift has been fueled by the ubiquity of sophisticated AI applications, which are moving the pace to a rapid pace never seen before. As students learn to use AI systems for idea generation, scholarly text summarisation, academic text enhancement, computer code generation, text translation, and learning process personalisation, they find themselves using the technology more and more. AI-powered tools are also used in research to curate literature, improve manuscript writing, analyse qualitative data, and facilitate communication in science. Meanwhile, universities are developing various AI-powered applications in curriculum development, student services, administrative decision making and research management. The growth of AI in education shows that it has become an integral part of the academic landscape, rather than a side issue. Instead, the issue now isn't whether institutions should be involved with AI, but how they can responsibly manage it while maintaining the values that drive academic inquiry and academic integrity. (MDPI)

The power of generative AI has also reignited the age-old discussion on the nature of authorship and intellectual contribution. Traditional understandings of academic writing are based on the assumption that academic products are the products of the cognitive activity, analytical thinking, and original interpretations of identifiable human beings. These assumptions are complicated by Generative AI, which allows users to create complex academic writing even with limited technical skills. With AI-generated content often indistinguishable from human writing, traditional notions of originality, creativity, attribution, and authorship must be rethought. The practice of academic writing is no longer only a human enterprise; cutting edge research on authorship is now beginning to theorize writing as a process of interaction, both human-human and human-computational, in varying degrees. The development brings up intriguing philosophical and ethical issues about intellectual proprietorship, transparency in AI-assisted scholarship, and maintaining scholarly responsibility in increasingly digital knowledge landscapes. (Springer)

These advancements have put academic honesty at the heart of global debates on AI in education. Academic integrity has always been defined as the ethical principles of honesty, trust, fairness, respect, responsibility and courage, and these values are the basis for the integrity of universities in both teaching and learning, and research. Each of these principles is however challenged by generative AI in unique ways. While students can use AI to aid in their learning, they can also fall into the trap of relying too heavily on automated tools, which can stifle their ability to think for themselves. While AI can enhance the quality of writing while maintaining scientific rigor, there are potential concerns such as the lack of transparency in the use of AI, the possibility of plagiarism, bias in algorithms, and the lack of disclosure about the use of AI tools. As a result, it is a challenge for institutions to determine when AI-assisted learning is ethical versus when it is a deceptive way of meeting academic standards. (MDPI)

There is considerable variation across international responses to those challenges in institutional policies and governance strategies. Others have taken more stringent measures, banning the use of AI writing in graded assignments without explicit permission from the teacher. Others have taken more stringent steps, forbidding the use of AI writing in graded assignments without explicit permission from the teacher. Others have adopted more flexible policies that allow for open use of AI in assessments and have revised the

organisation of assessments to focus on reasoning, critical reflection, and real-world problem-solving, rather than solely on the creation of finished written documents. This variety of institutional reactions is indicative of the lack of a shared governance model for generative AI in universities. Instead, universities are increasingly aware that in sustainable governance there is a need to find a balance between educational innovation and ethical responsibility, between differences and distinctions, between institutional autonomy and the changing technological possibilities. Finally, emerging policies research suggests that governance of AI should go beyond a detection paradigm to establishing transparent, values-driven institutional structures that foster responsible human-AI interactions. (arXiv)

Academic integrity issues are not just about detecting plagiarism. While the prospect of AI-generated assignments has understandably raised concerns about academic integrity at institutions, recent scholarship suggests that the discussion of academic authenticity and cheating misses the broader implications of generative AI in today's educational landscape. Academic integrity involves not just abiding by institutional policies and procedures, but developing intellectual honesty, ethical judgment, scholarly responsibility, and productive interactions with the knowledge. In this broader context, the threats from AI to higher education should not be taken as a threat per se, but as an opportunity to rethink assessment, pedagogy, authorship, and the purposes of University education. Recent works, therefore, suggest that the shift from policing AI use to promoting AI literacy, ethical thinking, and more transparent disclosure of such use that reflects the nature of digital scholarship is necessary. (MDPI)

Meanwhile, the increasing use of AI in academic writing has sparked new concerns about the process of knowledge creation. Generative AI systems generate text based on identifying patterns in large amounts of data, not on understanding or logical reasoning. Thus, questions for the reliability, authority, and epistemological value of AI supported knowledge emerge. AI's potential impact on critical thinking, cultural biases, the lack of access to AI technologies, the risk of hallucinated references, and the threat of algorithmic bias have been pointed out by scholars. These issues indicate that while higher education needs to consider regulations for the use of AI, it also needs to focus on developing the critical skills required to analyze AI-generated knowledge in increasingly complex digital contexts. Ethical scholarship cannot, however, be achieved through technological prohibition alone but must be reemphasised through transparency, verification, intellectual responsibility, and critical engagement. (Springer)

LITERATURE REVIEW

Generative artificial intelligence (GenAI) has dramatically changed the higher education landscape, scholarly communication, and knowledge production. Since the larger language models (LLMs) like ChatGPT were made public in late 2022, universities around the world have been grappling with unprecedented ethical dilemmas regarding academic integrity, ownership, plagiarism, validity of assessment and ethical responsibility. The generative AI is not just about accessing information, but it can also produce coherent text, summarise lengthy literature, generate coding, translate languages, and help with research writing, challenging the notions of originality, intellectual input and human authorship that have existed for long periods of time (Dwivedi et al., 2023; Kasneci et al., 2023).

With the advent of generative AI, the landscape of higher education has been divided. While the promise of AI to democratize learning, make it more accessible, personal, and productive in research has been highlighted, others have cautioned against the potential risks of relying on AI to the detriment of independent thought, critical reasoning, and academic integrity (Cotton et al., 2023; Rudolph et al., 2023). The polar opinions suggest that this is more than a technological shift – it is a paradigm change that challenges the very nature of learning, authorship and scholarly knowledge, prompting universities to rethink how to define these concepts.

The definition of plagiarism and academic dishonesty, as it is traditionally understood, may no longer adequately address the complexities brought about by AI-enabled writing. The traditional definition of plagiarism and dishonesty in academic work might no longer be sufficient to address these complexities created by AI-assisted writing. Academic honesty frameworks were originally built around plagiarising from human-authored work, but generative AI can create original-looking content that can evade traditional plagiarism detection tools and make it difficult to distinguish between legitimate assistance and plagiarism (Eaton, 2023). Researchers have, therefore, suggested a much more robust ethical framework that can account for the competing nature of technology and academic integrity, values such as honesty, transparency, accountability, and intellectual independence.

Since 2023, there has been a considerable increase in literature, although most of the current research is conceptual, policy, or quantitative. There is comparatively little research to date examining the ethical implications of AI-enabled knowledge production in educators', students' and academic leaders' daily routines. This constraint underscores the importance of qualitative studies that can delve into the lived experiences, perceptions, and ethical considerations of all stakeholders within AI-powered learning environments. Therefore, this review critically synthesizes the recent literature on generative AI, academic integrity, authorship, ethics of AI, assessment, and knowledge production; and highlights theoretical debates and research gaps that warrant the current qualitative research study.

The use of Generative AI in Higher Education and its impact on students and stakeholders

Generative artificial intelligence (AI) has grown from a fledgling computational technology into a revolution in education that has taken the world by storm. Generative AI is more than just tools that facilitate the retrieval of information or automatically grade papers; it works collaboratively with the user to create content, such as essays, literature reviews, computer code, lesson plans, and research summaries, with minimal human input. The emergence of this change has led educators and researchers to view generative AI as a disruptive force that can redefine the teaching and learning landscape, as well as the research model in academia (Dwivedi et al., 2023).

The use of Generative AI in education is well recognised in the current literature. Kasneci et al. (2023) suggest that LLM could serve as personalized learning assistants, offering real-time guidance and feedback, tailoring explanations to students' specific learning goals, and assisting students of various linguistic and educational backgrounds. These capabilities may help make learning more accessible and decrease the learning barriers for independent learning. Likewise, Tlili et al (2023) argue that generative AI has great potential in improving curriculum design, multilingual education, and creating a more equitable education by providing personalized instructional support.

However, there are significant pedagogical challenges with these opportunities. Overreliance on AI-generated content could limit opportunities for problem-solving, critical thinking, and independent knowledge building, warn scholars. While generative AI may be able to generate grammatically complex answers, it is incapable of reflective thinking, context and judgment, which are hallmarks of genuine scholarship, argue Rudolph et al. (2023). Thus, the value of educational use of AI is far more than the technology itself; it is as much the pedagogical contexts as the technology itself.

There is also a long-standing awareness of the limitations of AI knowledge, as evidenced by the literature. Large language models have been found to produce "hallucinations" (Kasneci et al., 2023), make up references, and provide false information with high confidence. The restriction brings up significant information literacy and source verification issues, as well as issues of scholarly responsibility. Several researchers argue that AI should be used as an assistant rather than a substitute for human knowledge and that it must be constantly monitored and assessed by a human (Dwivedi et al., 2023).

Another common issue is regarding digital inequality. While generative AI has been heralded as a technology that empowers everyone to learn, disparities in access to high quality AI services, infrastructure, and AI-literacy could inadvertently deepen the educational divide. It is possible that students with higher technological skills might benefit from disproportionate academic gains in relation to others, thus undermining concepts of fairness and equal educational opportunity (Tlili et al., 2023).

Together, these studies illustrate the potential for generative AI to be an educational opportunity and a pedagogical challenge. The importance of the influence of AI is being increasingly acknowledged in the literature, more than the technology itself, being a matter of institutional governance, ethical regulation, preparedness of educators, and responsible use in pedagogical practice. Therefore, it is crucial to gain insight into the experiences of stakeholders when creating sustainable educational policies that can reap the most benefits of AI while minimizing the risks involved.

RESEARCH METHODOLOGY

Research Design

A systematic qualitative literature review with thematic analysis was employed in this study as a qualitative research design to critically analyse the shifting dynamics of the relationship between Artificial Intelligence (AI), Academic Integrity, Authorship, Ethics and Knowledge Production in Higher Education. A qualitative approach was deemed suitable because the study aimed to uncover meanings, interpretations, ethical dilemmas, and conceptual developments rather than to measure causal relationships or to test hypotheses that have already been set. Qualitative research allows for the understanding of complex social phenomena by offering a closer look at the process of building knowledge, interpretation, and negotiation of knowledge in specific contexts, as opposed to quantitative research methods, which focus on statistical generalization (Creswell & Poth, 2018).

Generative AI has impactfully reshaped higher education, not just in terms of technology, but also in philosophy, ethics, and epistemology. The interpretative rather than positivist approach is therefore needed to understand this transformation. A qualitative research design allows for the integration of a variety of researchers' views and the discovery of patterns, paradoxes and new discussions in the latest scholarship. This is especially useful in the study of developing phenomena that are ambiguous in concepts and have not yet gained theoretical consensus, such as academic practices using AI (Braun & Clarke, 2022).

This study adopted a different approach than the traditional empirical study by interpreting existing literature, which integrates findings at an interpretative level to generate an overall conceptual grasp of the subject of academic integrity in the context of generative AI. To this end, the reviewed task was directed to gaining insight into the underlying assumptions, ethical arguments, institutional actions, and differing conceptualizations of authorship and responsible use of AI.

Research Paradigm

The interpretivist research paradigm was used to guide the study as it assumes that the reality is socially constructed and that knowledge develops as a result of human interpretation of social experiences, institutional practices and cultural contexts (Creswell & Poth, 2018). Interpretivism acknowledges that the values of academic integrity, of plagiarism, of authorship and of ethical responsibility are not fixed, universally understood values, but are negotiated all the time in the educational community.

The ethical implications of AI assisted writing vary among students, educators, researchers, publishers and policymakers in the context of generative AI. Thus, the concept of academic integrity in AI-assisted contexts

lacks a unified definition. Rather, the competing views are based on different institutional values, disciplinary histories, and philosophies of originality, creativity, and intellectual ownership.

The interpretivist paradigm thus corresponds well with the purpose of this study, which is to explore critically how contemporary literature understands the change in the concept of academic integrity but is not looking to establish universal causal relationships. Interpretivism will offer a suitable philosophical lens for the ethical dilemmas generative AI presents, by focusing on context, interpretation, and alternative realities.

Data Sources

Only secondary qualitative data from authoritative documentary sources were used in the study. To gain a broad understanding of scholarly and institutional views, three types of documents were analyzed:

Primary data source used were peer-reviewed journal articles published in international, SCI and Scopus indexed journals. The publications were the main source of scholarly evidence because they are peer reviewed and help to advance academic knowledge. Special attention was given to journals specializing in higher education, educational technology, artificial intelligence, ethics and academic integrity.

The second category consisted of institutional policy documents such as academic integrity guidelines, responsible AI frameworks, university regulations and higher education policy statements. The documents offer hands-on knowledge of the approach taken by the education sector to addressing the challenges brought on by generative AI.

The third category comprised publications by trusted international institutions regarding higher education, digital transformation and AI governance. These reports provided important background information on new policy developments, AI principles for responsible usage and institutional recommendations.

The use of multiple documentary sources deepened the analysis because it allowed for triangulation between the different perspectives: scholarly, institutional and policy, which increased the overall credibility of the study (Lincoln & Guba, 1985).

Inclusion / Exclusion Criteria

Methodological transparency and consistency in literature selection process were achieved by defining explicit inclusion and exclusion criteria.

Research was included if it:

- Were published between 2021 and 2026;
- Were empirical studies that incorporated at least one instrumental measure related to the research's variables; and
- Related to the ethics of using AI, knowledge production, higher education, assessment, academic integrity, plagiarism, or generative AI; or
- Have been translated into English.
- Made conceptual, empirical or theoretical contribution to the research goals.

If a policy document or institutional report was created by an internationally recognised organisation, or an accredited higher education institution with a strong track record of producing policy documents and reports in the areas of educational governance and AI ethics, it was included.

Studies were not included if they:

- Pre-dated 2021 unless foundational methodological literature; and
- Was made up of conference abstracts, editorials, opinion pieces, blog posts, dissertations or unpublished manuscripts;
- Not directly focused on teaching or learning;
- Did not apply to primary or secondary education but had implications for higher education; or
- Was not sufficiently methodologically sound or scholarly in its content.

The criteria helped maintain a focus on the most up-to-date and relevant evidence when reviewing the changing landscape of academic integrity and AI.

Sampling Strategy

Purposive sampling strategy was used to select information rich documents that can answer the research objectives. In qualitative research, purposive sampling is known as an acceptable technique when the researcher deliberately chooses the data sources that have special relevance for the phenomenon being studied (Merriam & Tisdell, 2016).

Purposive sampling is more about enriching concepts and analytical depth, rather than seeking statistical representativeness. For this purpose, documents were chosen because of their scholarly influence, relevance to the field of academic integrity with AI, theoretical contribution and methodological quality.

A diverse disciplinary approach was also aimed for in sampling by including literature from education, artificial intelligence, educational technology, ethics, sociology of knowledge and higher education policy. This multi-disciplinary strategy was able to produce a deeper understanding of the interplay and intersections of academic values and technological innovation.

The sampling was continued until adequate conceptual coverage was obtained and the recurring themes and the major theoretical debates were identified across the literature that was sampled.

Data Analysis

Reflexive thematic analysis was used to analyze the data, following the six-phase approach proposed by Braun and Clarke (2022). Thematic analysis is a suitable method to synthesize qualitative literature, especially in the context of reflexive analysis, given its ability to identify, interpret, and integrate common themes from a variety of textual sources.

The whole process of analysis involved six interrelated stages.

1. The first was multiple reading of all documents selected to familiarise oneself with the literature, and gain a preliminary understanding of concepts that could emerge.

2. In the second step, conceptualization, coding of relevant text segments was conducted systematically, focusing on aspects of academic integrity, AI ethics, authorship, plagiarism, assessment, responsible use of AI, institutional governance, and knowledge production.
3. In the third step, the same codes were sorted into major preliminary themes, which indicated general conceptual patterns that are found in studies.
4. The fourth phase focused on the review, refinement and comparison of themes to maintain coherence within the theme and meaningful distinctions across themes.
5. Eighthly, the fifth, was about defining and naming the final themes, with particular emphasis on their conceptual meaning and their relations with the rest of the literature.
6. Finally, themes were culled together into a coherent narration that critically contrasted existing literature, uncovered theoretical paradoxes, and pointed to further study of the themes in a qualitative way.

Thematic analysis allowed for critical synthesis of previous studies rather than a mere summary, by comparing and contrasting themes, and by identifying common themes and assumptions within the literature.

Trustworthiness

Qualitative research is rigorous by establishing trustworthiness, not statistical viability. Four criteria were used for the assessment of methodological quality following the framework proposed by Lincoln and Guba (1985).

Systematic literature selection, triangulation from multiple documentary sources, transparent coding procedures, and continuous comparison of the themes that were found in the studies, increased the credibility. The use of both peer-reviewed scholarship and institutional policies boosted the confidence in the results as they were not solely based on one source of evidence.

The transferability was encouraged by offering detailed descriptions of the research context, inclusion criteria, analytical procedures and thematic development. This openness allows readers to judge the transferability of the results to other higher education settings in which technology is undergoing similar changes.

The methodological process (sampling, coding and analytical decisions) were fully documented, enhancing the dependability. Having a systematic audit trail helps to ensure methodological consistency and will enable other researchers to reproduce or modify the analysis.

The research process was strengthened by reflexivity and transparency within the confines of the research process. The researcher consistently reflected on personal perceptions and beliefs about AI, academic honesty, and educational practices to minimize any subjective influences in interpreting the data. Analytical conclusions were based on evidence collected from the literature reviewed to minimize personal opinion and increase the scholarly nature of the work.

Ethical Considerations

This was a documentary qualitative study using publicly available secondary data, without human participants, personal information and/or confidential institutional records. For this reason, ethical approval of the study, which involved human subjects, was not formulated according to usual research ethics standards.

However, ethics were always a focus of the research process. All ideas, interpretations and empirical findings were accurately presented using suitable citation and acknowledgment of the original authors according to APA 7th edition referencing guidelines. Special effort was made to prevent selective interpretation, citation bias and misrepresentation of scholarly arguments.

With the subject at hand, the study also followed principles of responsible AI scholarship: it critically reviewed the potential opportunities and drawbacks of generative AI, and refrained from technologically deterministic thinking. Balanced interpretation helps to promote ethical academic conversation and boosts the credibility of the review.

First, the study did not include primary qualitative data (student, school staff, policy makers, researchers) but documents secondary sources. Documentary analysis is able to give a thorough understanding of concepts but it cannot reflect participants' lived experiences directly.

Second, scholarly articles may not capture the most recent technological advances or institutional responses as generative AI is a rapidly changing phenomenon. Therefore, interpretations are considered as the current academic discourse, not as finalized conclusions.

Thirdly, the literature reviewed could have been limited by excluding publications that did not use English. Thirdly, publications which did not use English may have been excluded, limiting cultural diversity in the reviewed literature.

Lastly, qualitative thematic analysis always includes some interpretation by the researcher. While a systematic analytical procedure and reflexive practices were used to improve trustworthiness, other interpretations of literature are also possible.

In spite of these restrictions, the methodological approach offers a thorough and transparent approach to synthesising the current state of the literature and to pinpoint important conceptual advances, theoretical controversies, and areas of research that are missing about the role of AI in the future of academic honesty.

FINDINGS AND DISCUSSION

Theme 1: Reconfiguration of Academic Integrity in the Age of Generative AI

One of the key takeaways from the collated literature is that generative artificial intelligence (GenAI) has completely upended conventional understandings of academic integrity. Academic integrity policies were developed, traditionally, on the premise that plagiarism is copying another person's work. But with the rise of large language models, there is a third option that is neither human nor external to the traditional definition of authorship (Cotton et al., 2023; Rudolph et al., 2023).

The literature overwhelmingly shows that the production of AI-generated text poses an assault on the epistemic basis of originality. Unlike typical plagiarism detection contexts, the results generated by GenAI are probabilistic replications based on extensive training data and not plagiarism. This distinction results in

a “grey zone of authorship”, where students can create work that is in form original, but in terms of intellectual ownership, this work is questionable.

Theoretically, the change can be understood as a posthumanist and/or as a sociotechnical perspective, which implies that knowledge is shared among different human and non-human actors. In this perspective, the act of writing is not only an individual cognitive process but also a process that is hybridized with the mediation of algorithms (Bennett, 2010; Latour, 2005). While these theories are not new, they help to shed light on today's academic integrity disruptions.

One of the main paradoxes in the literature is whether the use of AI is considered assistance or a violation of conduct. Others suggest that AI tools can be considered as a new type of writing tools akin to grammar checkers or search engines (Kasneci et al., 2023), whereas others emphasize that AI's generative ability fundamentally transforms the epistemic contribution of the student and thus compromises the authenticity of learning (Rudolph et al., 2023). This tension is a manifestation of the lack of a clear concept of cheating in institutional policy, still largely attached to pre-AI definitions of cheating.

Theme 2: Changing Definitions of Authorship and Intellectual Property Rights

A second key theme relates to the problematic nature of author as a normative academic construct. In the literature, the process of authorship has come to be understood as a more distributed and a more collaborative process of intellectual production than the process of authorship by a single individual. In the context of academic writing, genAI accelerates this transition by enabling the co-authorship of non-humans (Dwivedi et al., 2023).

The presence of AI tools in writing and ideation has been noted in multiple studies on how students see these technologies, as they are not viewed as external entities but as co-collaborators. The perception challenges the conventional view of intellectual ownership that suggests that authors have to be deliberate and aware agents, who create ideas. But AI systems make this distinction difficult as they generate text which students can edit, polish, and present without changes.

There is a great deal of ethical ambivalence in this regard, as can be seen in the literature. On the positive side, AI tools can improve writing skills in terms of quality, structure, and coherence, acting as a cognitive scaffold for learning (Kasneci et al., 2023). On the other hand, the use of AI can boost the quality of writing, its structure, and its coherence, which can help to scaffold the learning process (Kasneci et al., 2023). However, too much dependence on AI-generated content may lead to the erosion of critical thinking ability and independent analytical skills (Cotton et al., 2023).

Constructivist learning theory expects that the learning process should be active and the formation of meaning. However, with core cognitive functions, the distinction between learning and outsourcing is blurred when GenAI is used. This poses basic questions as to the validity of the learning outcomes when one can partially delegate intellectual effort to machine systems.

Another paradox in institutional discourse follows. Another contradiction in institutional discourse is that. Universities are promoting digital literacy and using AI while also having strict academic integrity policies in place that ban the use of AI. Universities are promoting the use of digital literacy and the use of AI, yet they have academic integrity policies that prohibit the use of AI. This paradox is referred to as a “policy paradox” by some scholars because institutions encourage the use of AI but are unable to adequately define acceptable uses (Eaton, 2023).

Theme 3: Ethical Ambiguity and the Normalization of AI-Generated Knowledge

The third theme is the emergence of a normalisation of AI-generated content in academic contexts. The literature shows that GenAI is already starting to be used by students in their writing without being prompted or disclosed, especially without explicit or formal agreement (Tlili et al., 2023). This normalisation calls into question ethical issues of transparency, accountability and intellectual honesty.

Traditionally, the values of honesty, trust, fairness, respect and responsibility are the ones that are emphasized in ethical frameworks in Higher Education. But GenAI poses challenges to the implementation of these principles. For example, the idea generation, paraphrasing, and structuring of arguments using AI tools would not have explicit disclosure requirements, making transparency challenging to enforce.

Rudolph et al. (2023) suggests that students' and teachers' trust of each other is undermined by the use of undisclosed AI. Validity and credibility of assessment and credentialing can be compromised if trust is compromised in academic ecosystems. Others argue that strict measures against AI detection could foster a negative dynamic between students and educational institutions, potentially leading to unethical use. However, some researchers believe that the enforcement of such measures may lead to adverse relationships between students and educational institutions, where students might resort to creative ways to evade detection.

One of the significant observations is the variance in institutional policies on disclosure of AI. There has been a quick response from many universities in introducing guidelines, but in many cases, there is not a clear definition of thresholds of acceptable use. This results in students being exposed to unclear expectations and thus to different interpretations of the ethical aspects within different contexts.

This ambiguity is part of a wider epistemological transition: knowledge production systems are becoming less transparent, traceable, and controllable. In this respect, GenAI poses not just a threat to academic honesty, but to the very epistemic governance of higher education.

Theme 4: How Valid are the Assessments and What is the Problem with Traditional Models of Assessment?

One issue that has been frequently discussed in the literature is the loss of validity of assessments in AI-supported learning environments. The traditional assessment models are based on the premise that students' work is a product of their cognitive capacity as person. GenAI puts an end to this assumption by allowing students to produce high-quality academic outputs without the same level of intellectual participation.

Research has identified take-home assignments, essays and reflective writing tasks as being especially susceptible to completion using AI tools (Cotton et al., 2023). Due to this, teaching is becoming a more challenging task in determining real student learning from machine learning production. Thus, teachers are faced with a growing challenge to distinguish between real learning and machine learning production.

This has called into question the need for assessment redesign. Practice is more in favor of process-oriented approaches, such as oral assessment, in-class writing, drafts and portfolios-based assessment system. Such approaches are focused on learning processes instead of learning products.

In a constructivist approach, assessment should reflect the process of understanding change over time. But when it comes to GenAI, it makes this process more complex as a way for students to replicate learning artifacts without cognitive development. This has been termed as “performance without learning” and outputs no longer reliably signal competence.

There is a central paradox in the literature regarding the use of AI in assessment: for instance, some argue that AI should be involved in the assessment process, while others insist that its use should be limited. Others believe in "pedagogy with AI," assessing students for their ability to work with AI tools effectively. Others want to argue for the opposite: for "AI-inclusive pedagogy" that evaluates students on their ability to effectively use AI tools. Others warn that dependency may be institutionalized, and that the lines between man and machine can become even more indistinct.

Theme 5: Institutional Governance and the Regulatory Lag

One major discovery is the ongoing mismatch in policy-making and the technological development. Higher education institutions and accreditors have been at a disadvantage when it comes to catching up with the massive uptake of GenAI tools quickly.

According to the literature, there are three types of institutional reaction: prohibition, restriction, and conditional integration. But none of these methods can completely defuse the moral quandary of AI authorship.

AI-generated content is hard to detect and this makes prohibitive policies unfeasible. Some detection tools have been known to give false positives and false negatives, and therefore there are issues around fairness and due process. Restrictive policies are frequently vague and unclear and students are not always clear on the boundaries. In the meantime, pedagogical restructuring and faculty preparation are necessary to do integrative policies, and many institutions are not ready for this.

This is a governance issue with digital education ecosystems in general, which is that institutions tend to react rather than take initiative when facing disruption. This has left ethical frameworks in higher education institutions in a fragmented and inconsistent state.

Theme 6: Emerging Paradigm Shift in Knowledge Production

The most important result is the paradigm shift in knowledge production that is taking place with the help of GenAI. Human-AI interaction is becoming an increasing force in co-producing knowledge, disrupting the Enlightenment belief in the intellectual authorship of individual people.

Sociotechnically, knowledge is not only human-made, but distributed among networks of humans and computational systems. This is in keeping with the actor network theory that suggests non-human entities are also agents that influence social and intellectual results.

But this transition poses deep ethical and epistemological issues. In cases where AI systems make a significant impact on academic production, the usual definitions of authorship, originality, and academic credit might need to be redefined. Concurrently, there are questions in academia about the extent to which we can credit machines with agency in producing knowledge, which are rooted in the longstanding philosophical convictions about human agency in the production of knowledge.

The literature indicates that there is a shift in higher education from single to hybrid epistemic systems. But this change has not yet been fully achieved, is still disputed, and is not yet settled in the institutions.

OVERALL DISCUSSION

In all themes, a common thread is evident: generative AI is not just a technological solution, but a disruptive epistemic phenomenon that is changing the landscape of academic honesty, authorship, and educational

management. There is a positive outlook on the pedagogical benefits of using AI, and there are also ethical concerns highlighted in the literature.

In the current scholarship, three main tensions are present:

1. Assistance vs Authorship – is AI a tool or a co-author?
2. Innovation versus Integrity: How do institutions manage to balance embracing technology and maintaining academic values?
3. Transparency vs. Efficiency: AI increases productivity but decreases visibility of the thought process.

These tensions suggest existing academic integrity frameworks for contexts prior to AI are becoming obsolete. There is compelling literature that argues the importance of understanding these changes in practice from the perspective of students, teachers, and institutions through qualitative research. This is fundamental for creating ethically robust, context-sensitive, and pedagogically sound models of AI governance in higher education.

CONCLUSION

This qualitative study critically explored the implications of generative artificial intelligence (AI) on academic integrity, authorship, ethics and knowledge production in higher education, drawing on recent research and institutional opinions. The results highlight the transformative impact of AI in education, moving beyond the introduction of new technologies to a paradigm shift in the way knowledge is produced, disseminated, and assessed. The review finds that the traditional definition of academic integrity, based on the idea of authorship, originality, and independent intellectual work, is facing new challenges because of the use of AI in writing and content creation. Generative AI does not signal a temporary technological "disruption," but instead represents a new epistemic shift that will necessitate a review of existing definitions of plagiarism, authorship, and scholarly responsibility (Cotton et al., 2023; Kasneci et al., 2023; Rudolph et al., 2023). Therefore, the study addresses the research question by providing evidence that the concept of academic integrity needs to be redefined in the context of human–AI collaboration opportunities and challenges in knowledge production.

The study also contributes to theory-building by drawing on the interpretivist and sociotechnical frameworks, which emphasize the non-cognitive nature of knowledge production processes as human cognitive activity now becomes intertwined with algorithmic processes. The results indicate that although generative AI has the potential to improve learning, accessibility, and research productivity, it also presents significant areas of concern relating to issues of intellectual ownership, transparency, accountability, and the validity of the assessment. The results build on previous research and highlight the need for integrated ethical and institutional frameworks to manage the responsible use of AI rather than its very existence. Furthermore, the review underscores the need to ensure that academic integrity policies keep up with the evolving landscape of AI-assisted authorship, disclosure, and responsible scholarly practice (Dwivedi et al., 2023; Eaton, 2023), as they are currently often based on outdated assumptions made prior to the rise of AI.

The results will have implications for higher education institutions, teachers, researchers and policy-makers. Rather than relying on a prohibitionist strategy, universities should create a comprehensive institutional policy that sets forth clear guidelines and standards for the use of AI, and ensure transparency and ethical responsibility. Assessment practices too should be reconceptualized to focus on authentic learning, critical thinking, and reflective engagement, with the forms of assessment less dependent on the use of AI generated outputs. Complementary to this, institutions need to establish AI literacy programmes to help students and

teachers grasp the capabilities, limitations and ethical implications of generative AI. From a policy perspective, multi-stakeholder governance and multi-stakeholder agreements between universities, accreditation bodies, publishers and technology developers will be central in creating a shared vision of standards to ensure academic integrity is maintained and in creating space for responsible innovation in teaching, learning and research.

Although this study has made a contribution, there are some drawbacks. Because it relies on secondary sources, it is a qualitative review and will not include the actual experiences of students, teachers, or institutional leaders working with the use of AI. Also, current evidence analyzed in this review may not fully capture the latest in scholarly and policy research due to the rapidly changing nature of generative AI. Future studies should therefore use qualitative approaches like interviews, focus group discussions, and case studies in order to gain deeper insights into the views of the stakeholders in various institutional and cultural settings. Studies of this kind would also be beneficial for analyzing how academic integrity policies around AI change over time and the effects of various governance structures on educational practice, as evidenced by the need for longitudinal and comparative studies. The future of academic integrity becomes not about the battle against artificial intelligence, but about creating robust, ethical frameworks that uphold the essence of academic honesty, accountability, fairness, and intellectual integrity while embracing the potential of AI for educational innovation and the creation of knowledge. Higher education institutions can help promote responsible AI governance by prioritizing transparency, human oversight, and ethical scholarship, thereby enhancing the integrity and credibility of academic knowledge while fostering a robust technological innovation.

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