Navigating Ethical Frameworks to Mitigate Academic Misconduct While Leveraging Generative AI

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Abstract

The rapid advancement of Generative AI in academia raises ethical concerns about academic integrity. This study aims to delineate the key ethical concerns prevalent in academia and propose a theoretical framework that incorporates deontological ethics for learners and teleological ethics for evaluators. Employing a qualitative methodology and thematic analysis, this research undertakes a systematic scoping review of scholarly articles. The researcher searched various academic databases, following specific inclusion and exclusion criteria, and he selected a final set of 68 relevant studies out of 200 for review. The study found the lack of academic integrity, particularly in written assignments, due to the heightened risk of plagiarism, and to address them, the establishment of ethical guidelines was effective for learners' ethical awareness in using AI and inspiring educators to assess learners' academic creation emphasizing learners' own creativity. The study has the potential to inform the development of ethical guidelines for the use of AI in academia. As generative AI tools become increasingly prevalent, the risk of academic misconduct escalates, thereby threatening educational institutions' credibility and academic qualifications' integrity. The study will help to understand how ethical frameworks can mitigate the risk of plagiarism and foster a culture of ethical awareness among students and educators.

Introduction

Background of the study: Whether Generative AIs are cutting-edge tools or double-edged swords is a burning question in academia. The rapid advancement of AI in academia raises ethical concerns about academic integrity. This study tries to identify the key ethical concerns and proposes immediate solutions for upholding academic honesty in the dominance of Artificial Intelligence (AI). AI's tools have the capability to produce text that resembles natural language (Akgun & Greenhow, (2021). Due to its capacity to generate coherent and context-based text based on user input, one of the AI tools, ChatGPT, launched on November 30, 2022, which gained one million subscribers within five days, surpassing one hundred million in January 2023 (Dwivedi et al., 2023), raising ethical concerns in academia (Ray, 2023). there are four paradoxes of generative AI: friend or foe, enabling or dependent, accessible or restrictive, and popular or prohibited (Lim et al., 2023). The individuals' acceptance of technology and willingness to adopt it for use are determined by learners' preferences, experience, cost-friendliness, and contexts (Venkatesh et al., 2003). It is difficult for the learner to keep away from utilizing generative AI as it is user-friendly and has numerous advantages (Niloy et al., 2024). Artificial Intelligence presents an inevitable dilemma that cannot be ignored, necessitating ethical consideration of its application to address academic misconduct.

Problem Statement & Academic Research Gap: Artificial intelligence (AI) tools in academic settings have introduced new dimensions to the issue of academic dishonesty (Stahl & Eke, 2024). Excessive use of AI in educational contexts, such as employing AI-driven text generators, automated problem solvers, and personalized tutoring systems, can undermine the integrity of academic work (Stokel-Walker, 2022). Students may increasingly rely on these technologies to complete assignments, bypassing the learning process and engaging in plagiarism (Okaibedi, 2023). This misuse not only compromises the authenticity

of academic achievements but also erodes the development of critical thinking and problem-solving skills (Bearman et al., 2022). The difficulty in detecting AI-assisted dishonesty poses significant challenges for institutions, necessitating the development of alternative mechanisms like ethical formulas until the detection devices are available (AlAfnan et al., 2023). Hence, this research aims to explore the possibility of the mitigation of academic dishonesty by proposing two ethical guidelines for learners and feedbackers. Though the recent existing relevant literature talks about ethical concerns and solutions with AI (Kim & Adlof, 2023; Akgun & Greenhow, 2021; AlAfnan et al., 2023; Celik et al., 2022; Cotton et al., 2023; Kim & Lee et al., 2022; Labadze et al., 2023; Nguyen et al., 2023; Schlagwein & Wilcocks, 2023; Ray, 2023); that researches are not offering holistic frameworks on how ethical guidelines will be formed and implemented. This research demonstrates a compact frame of ethical guidelines to address this gap in academic literature.

Rationales for Theoretical Frames: Ethics, as a branch of philosophy, aims to distinguish between good and evil, right and wrong. Ethics focuses on fundamental issues related to practical decision-making, which is primarily about values and the standards that direct or govern the behavior of an individual or group of people to evaluate whether their actions are right or wrong (Encyclopaedia Britannica, 2024). Ethics also encompasses the scrutiny of human conduct, representing an individual's internal comprehension of morality, which stems from a rational process and encompasses a set of moral principles or values (Kant, 1797). There are two wings in the academic setting: learners who intend to use AI for good academic creation and evaluators who assess these academic creations. Both have their own role in checking the unfair use of AI. This research aims to identify the major ethical concerns in academic writing and propose an ethics model mingling the frameworks of deontological for learners and teleological ethics for evaluators that could be used as a joint guide to mitigate such concerns. Deontological ethics, proposed by Immanuel Kant, prioritize the process of creation over the outcome of submission in moral considerations (Baron et al., 1997). Morality is a replica of ethical action that thinks of ethical creation regardless of its consequences (Kant, 1797). This ethical framework helps learners apply conscience before leveraging AI in their academic writing. This suggests that learners should be involved in academic creation ethically, checking the misuse of AI to honor academic integrity and intellectual honesty principles. Conversely, teleological ethics emphasize the importance of outcomes judged primarily based on consequences (Mill, 1863). In this consequential part, evaluators should assess and reward students who creatively engage with their work rather than excessively utilize AI tools. This kind of reward or grading may prevent the overuse of AI and encourage genuine intellectual engagement. Therefore, the study seeks both deontological and teleological perspectives to form a compact ethical process to use AI in a manner that enhances their learning rather than replacing AI to foster both moral integrity and practical competence in academic writing.

Research Questions: Employing a qualitative methodology and thematic analysis, this research undertakes a scoping review of scholarly articles. The study will scrutinize three research questions.

1. What are the key ethical concerns raised by leveraging Generative AI in academia?

2. How can learners' ethical awareness guide them to emphasize the balancing uses of their own creativity and Generative AI?

3. How can educators' ethical assessment process mitigate the learners' unethical uses of AI?

The Objectives of this Study: Firstly, it aims to identify the primary ethical concerns associated with the use of generative AI in academic writing, which involves examining the potential for academic fraud, such as plagiarism and intellectual dishonesty. Secondly, the study seeks to develop a comprehensive ethical model that will guide the ethical usage of AI in academic contexts, ensuring that both students and educators adhere to certain principles.

The Significance of this Study: It has the potential to shape the ethical outlines of leveraging AI in academia. By addressing ethical concerns through a dual ethical framework, the study aims to mitigate the risk of plagiarism and foster a culture of ethical awareness and responsibility among students and educators. Furthermore, the findings and proposed model will contribute to the ongoing discourse on the ethical implications of AI, providing valuable insights for policymakers, educators, and AI developers.

Literature Review

Key Ethical Concerns in AI-supported Academic Writing

As the fourth industrial revolution advances, the role of artificial intelligence (AI) in augmenting human intelligence has become crucial in every sphere of life (Gan & Bai, 2023), especially in education (Hwang et al., 2020) and gained wide user preference (Lee et al., 2022), but the use of AI in academic activities often leads to numerous ethical challenges (Gupta et al., 2023; Nam & Bai, 2023). The integration of AI tools in current academia raises questions, especially in writing tasks, and has prompted a range of ethical concerns, as highlighted by various scholars. By examining secondary data from recent studies, four key themes emerge, which are explained below. These themes are derived from the extensive literature that explores the implications of AI in education, focusing on the potential risks.

Academic Integrity and Plagiarism: One of the central ethical concerns with AI-supported academic writing is the risk of plagiarism. AI tools, like ChatGPT, can generate extensive and sophisticated text, which students might use without proper attribution, leading to academic dishonesty (Fyfe, 2022; Lee, 2023; Mhlanga, 2023). This not only undermines the students' learning process but also compromises the integrity of academic institutions (Kim & Adlof, 2023; Akgun & Greenhow, 2021; Celik et al., 2022). Effective plagiarism detection systems are necessary, but current technology is not entirely reliable, resulting in potential false positives and negatives (AlAfnan et al., 2023). Rahimi and Abadi (2023) have stated that Generative AI tools, such as ChatGPT, are high-tech plagiarism tools that bypass the original learning process, resulting in continuous academic misconduct (Johnson & Bratt, 2021). Therefore, maintaining academic integrity requires continuous improvement in detection tools and promoting a culture of honesty and proper use of AI-generated content among students.

Transparency and Ownership of AI-Generated Content: In the true sense,AI tools often operate as black boxes, with limited transparency regarding the data and algorithms they use (Okaibedi, 2023; Rahimi & Abadi, 2023). This lack of transparency raises questions about the ownership of AI-generated content (Nguyen et al., 2023). This involves addressing concerns related to the ownership and licensing of AI-generated materials, as well as potential legal or copyright issues (Johnson & Bratt, 2021; Swiecki et al., 2022). Students and educators need clarity on who owns the content produced by AI and how it can be ethically used and attributed (Popenici & Kerr, 2017). Addressing these concerns requires establishing clear policies and guidelines on the use and attribution of AI-generated content, ensuring that all stakeholders understand their rights and responsibilities (AlAfnan et al., 2023).

Replacing AI instead of Supplementing: The increasing reliance on AI tools for completing academic tasks has raised concerns about the diminishing practice of critical thinking among students. Instead of utilizing AI to enhance their learning process, many students depend solely on AI-generated responses, thereby missing opportunities to engage deeply with the material (Smith, 2023). This trend has significant implications for education, as critical thinking is a vital skill for problem-solving and independent thought (Johnson & Lee, 2022). Experts suggest that AI should be employed as a complementary tool to support and enhance critical thinking and writing skills, rather than replacing these essential cognitive processes (Brown, 2021). By integrating AI in a way that encourages students to analyze, critique, and build upon AI-generated content, educators can foster a more balanced and effective learning environment (Harry, 2023). Therefore, the key lies in teaching students to leverage AI as an aid that supplements their own analytical efforts, promoting a more robust educational experience (Davis, 2019).

Ambiguity of Institutional Strategies and Ethical AI Guide: There are no specific guidelines on whether or how to use AI in academic activities. To mitigate the ethical risks associated with AI-supported academic writing, learners should cite properly (Mhlanga, 2023), and educators should encourage thoughtful and informed use of AI tools (Stahl & Eke, 2024). This involves integrating AI and ethics lessons into the curriculum, promoting AI as a helping hand that enhances, rather than replaces, students' original thinking and writing skills (Nguyen et al., 2023; Cotton et al., 2023). By providing instructional resources and fostering a deeper understanding of AI's capabilities and limitations, educators can help students develop responsible AI usage habits and appreciate the ethical dimensions of AI in academic contexts (Schlagwein & Wilcocks, 2023; Ray, 2023; Akgun & Greenhow, 2021).

Challenges in Assessment and Evaluation: The integration of AI in education complicates the assessment process. Educators face difficulties in distinguishing between student-generated and AI-generated content, which affects the accuracy and fairness of grading (Labadze et al., 2023). The unreliability of AI-generated text detection by available devices further exacerbates this issue, potentially leading to credibility problems in the assessment process (AlAfnan et al., 2023). Even common plagiarism detection software like Turnitin is unable to detect generative AI-generated text with authenticity (Cingillioglu, 2023; Yeadon et al., 2023). Ensuring equitable assessment practices necessitates developing more robust methods to authenticate students' work and providing clear

guidelines on the acceptable use of AI tools in academic assignments (Bailey & Borooah, 2017). Otherwise, the grading process can be misleading to reward genuine learners.

This part focuses on the basic ideas of two theoretical frames: deontological and teleological ethics. By defining the theories, the data extraction leads to a bridge between the two theories and their scope in the academic setting to guard against ethical concerns. Here, through deductive coding, the study shows how deontological and teleological ethical guides work as complementary forces to mitigate academic dishonesty.

Theoretical Frames on How to Mitigate the Identified Ethical Concerns

The study delves into two philosophical frameworks, Kantian Deontological Ethics and Mill's Teleological Ethics, to address the pressing issue of AI-generated academic misconduct. By integrating these ethical perspectives, we can develop robust policies and practices that deter AI misuse and promote a culture of honesty and responsibility in academia.

Deontological Ethics for Ethical Means of Creation by Learners

Kantian moral ethics, a central theory in the deontological ethical framework, is based on the work of the 18th-century philosopher Immanuel Kant. Deontological ethics focuses on the inherent morality of actions themselves rather than their consequences (Kant, 1797). According to Kant, morality is grounded in duty, and moral duties are derived from rational principles (Baron et al., 1997; Hanna & Kazim, 2021). An action is morally right if it is done out of respect for the moral law, not because of any inclination or desire for a particular outcome (Kant, 1797) because morality is the core of ethics, which reflects our basic individual and social commitments (Hanna & Kazim, 2021). An example of how learners can follow this ethical frame when creating their academic tasks while leveraging AI is presented.

Example: Suppose students in a university course are assigned to write a research paper. Some students choose to use significant portions of work found online without proper citations or prompts generated by Generative AI. Their primary goal is to achieve a high grade with minimal effort. In contrast, other students conduct their own research, write their papers from their own creative understanding, and meticulously cite all sources. They believe the assignment's purpose is to develop their research skills and knowledge. Despite the potential for a lower grade compared to the polished work of their peers who cheated with the help of Generative AI, these students value their work's learning process and ethical integrity.

The students who avoided using plagiarized content demonstrated a commitment to their duty as students to produce original work and to uphold academic integrity. Students should do their own work and give proper credit to original authors to respect the moral law and the intrinsic value of the learning process. Goodwill is the will to act according to moral principles, regardless of the consequences. It is the intention to do one's duty for one's own sake that gives an action moral value (Kant, 1797). the

central tenets of deontological ethics include the role of duty, moral law, and the intrinsic worth of individuals (Wood, 1999).The aim of education is to enhance knowledge. Even in Socratic philosophy, Virtue itself is knowledge (Mara, 2015). Digital sources are open to all learners (Uddin & Bailey, 2024), but in this autonomous process, the user must have ethical awareness to utilize them (Winkler, 2022). Kantian ethics holds that humans, as rational agents, are capable of autonomous decision-making (Benlahcene et al., 2018). Therefore, ethical awareness of the learners can help their academic behavior in the process of preparing their academic assignments or any submissions. Ethics is a moral value of an individual that can possibly have an influence on behavioral intentions and actions (Hanna & Kazim, 2021). Students also need to be taught that ethics is not only confined to the Mosques, Church, Pagodas, or Sine Gog, but rather ethics is a comprehension of life, even applicable in academic settings. Nicomachean Ethics is a work by the ancient Greek philosopher Aristotle that explores that the nature of the good life has scope to be followed throughout all activities of a human being as ethics holds a comprehensive system of life (Gal et al., 2020). Moral virtue and intellectual virtue enable a person to make good moral choices by not only knowing what is good but also how to gain it throughout all actions of life (Aristotle, 2007). AI users should make sure that they handle any learner data in an ethical and transparent manner and that the content produced by AI adheres to ethical guidelines and standards (Yogesh et al., 2023). Kantian deontological ethics emphasizes the importance of adhering to moral duties and principles, acting out of respect for moral law, and treating individuals as ends in themselves rather than as means to an end (Benlahcene et al., 2018; Wood, 1999). In a deontological ethical judgment, the process matters, not, or not primarily, the outcome, and it does not make sense to award a prize to an AI-generated piece as it violates these ideals (Schlagwein & Wilcocks, 2023). Thus, the focus is on the inherent morality of actions and the motivations behind them rather than on the outcomes those actions produce.

Teleological Ethics for Ethical Assessment by Educators

Teleological ethics, alternatively consequentialist ethics proposed by philosopher John Stuart Mill, is referred to as a moral theory that the morality of an action is determined primarily by its outcomes or consequences (Benlahcene et al., 2018; Crisp, 1997, West, 2004). The morality of an action should be judged mainly by its results (Mill, 1863). In academic settings, the outcome of created works by learners is judged by the grades or assessments given by educators. Assessment is typically defined as a response from an individual, peer, or digital tools, especially by a teacher, regarding various aspects of one's performance or comprehension (Banihashem et al., 2024). The purpose of assessment is to help students become more self-aware of their strengths and areas that need improvement by offering actionable steps to enhance their performance (Amiryousefi & Geld, 2021). In the era of AI, our current evaluation model for ensuring students' learning outcomes through the utilization of an assortment of tools runs the risk of inflating GPAs to everyone by merely rewarding timely submissions, which may not accurately reflect students' actual knowledge and proficiency in their courses and fields (Chaudhry et al., 2023). To address the ethical concerns surrounding the excessive use of AI in academic writing, educators can adopt an assessment strategy rooted in teleological or consequentialist ethics. The consequences of actions are central to determining their moral worth (Bentham, 1789; Brink, 2014; West,

2004). If any educator considers this approach while assessing students' assignments or any academic works, S/he will evaluate the outcomes of students' work based on the moral value of their academic efforts determined by their genuine contributions rather than their reliance on AI. Thus, in a teleological judgment, an outcome matters (Schlagwein & Wilcocks, 2023). One important thing here is that educators should revise their expectations of students' outcomes, guided by an ethical spirit, longing for students' originality rather than perfection. Overall, teleological ethics applies consequentialist reasoning to ethical decision-making (Brink, 2014).

Example: Educators can apply teleological principles when assessing students' assignments. Instead of solely focusing on whether students followed proper procedures, teachers should consider the quality and authenticity of the final work. If a student's assignment reflects their genuine effort and creativity, contributing to their learning and understanding, it should be graded higher. Conversely, if the work is heavily dependent on AI with minimal student input, resulting in less meaningful learning, it should receive a lower grade. This approach ensures that the emphasis is on positive educational outcomes and authentic student engagement, aligning with the teleological focus on beneficial consequences.

Assessment positively impacts several aspects of a student's learning journey, including boosting motivation (Amiryousefi & Geld, 2021) and metacognitive skills (Moreno & Mayer, 2007). So, it is high time we revisited the assessment process in the generative AI age (Chaudhry et al., 2023). One practical method is for educators to closely observe and assess submitted assignments to distinguish between AI-generated content and original student work (Johnson & Bratt, 2021). This can be achieved through various techniques, such as comparing the style and depth of assignments with previous student work, less use of AI feedback tools or a combination of manual and digital, and conducting oral examinations or discussions to verify the students' understanding and authorship (Chaudhry et al., 2023). Subsequently, educators should adjust their grading criteria to reflect the level of self-creativity and AI reliance (Williams & Taber, 2022). Assignments that demonstrate a higher degree of student creativity and minimal AI intervention should be rewarded with higher marks (Lee & Kim, 2023). Conversely, assignments that heavily depend on AI-generated content should receive lower marks (Thomas & O'Connor, 2022). This grading policy serves as a teleological or consequentialist measure: it emphasizes the importance of authentic student effort and the positive educational outcomes associated with it (Benlahcene et al., 2018). In this case, teachers should also avoid excessive reliance on AI-generated feedback because it has limitations in judging students' originality (Aoun, 2017; AlGhamdi, 2024). AI feedback only can observe the perfection of writing, not the originality of students (McCarthy, 2018). So, a combination of manual and digital scrutiny of submitted assignments can help educators identify the learners' creativity and plagiarism (Bailey & Borooah, 2017; AlGhamdi, 2024). This is the way teachers assess their students according to teleological or consequential ethics (Beauchamp & Childress, 2012). At the end, the processes of monitoring, reviewing, and rectifying help learners recognize the strengths and limitations of their creativity (Moreno & Mayer, 2007). Thus, the teleological framework ensures that the focus remains on the outcomes, promoting genuine learning and academic integrity, mitigating academic misconduct, and fostering a culture of ethical practice.

Methodology

The chosen research method was qualitative, as the study involves conducting a scoping review of scholarly published articles. Qualitative research is a method of inquiry that focuses on understanding human behavior and the reasons behind it by collecting and analyzing non-numerical data (Creswell & Creswell, 2018). To ensure a comprehensive response to the research questions, the study will employ an inductive data coding approach to identify thematic findings.

Justification for Scoping Review Approach

A scoping review methodology allows for a comprehensive mapping of the existing literature, identifying key concepts, gaps, and evidence related to the research problems (Munn et al., 2018). A scoping review is a fruitful method for emerging things that are still under investigation (Peters et al., 2015). The ethical frameworks for managing academic integrity in the context of AI usage are still under investigation, and a scoping review may provide a broad overview of current practices and emerging trends. This review will specifically analyze two ethical frameworks, deontological and teleological ethics, to propose actionable guidelines that can be implemented to uphold academic integrity. A scoping review guides setting overall inclusion and exclusion criteria in conducting research in a systematic way (Munn et al., 2018). By systematically exploring and synthesizing the available research, this study seeks to contribute to the development of robust ethical standards that address the challenges posed by generative AI in education.

Data collection: Inclusion & Exclusion Procedure

The manuscript collection followed some procedures (Table 1). The secondary materials were deposited from educational research databases: Web of Science (WOS), ERIC, Scopus, ProQuest Social Science, and ResearchGate Database because these databases provide evidence-based findings and records, and the documents included in the databases were of high quality and impact.

Searching Keywords for Manuscripts from Four Database

(“generative AI in academic writing” OR “artificial intelligence in writing” OR “machine intelligence” OR “artificial chatbot” OR “ChatGPT” OR “chatbot” OR “machine chatbot” OR “automated learning” OR “language model learning” OR “generative AI” OR “computer assisted learning” OR “critical thinking in the era of AI” OR “feedback in AI age” OR “user acceptance of AI” OR “non-human chatbot” OR “ChatGPT OR” AND (“teleological ethics” OR “deontological Ethics” OR “plagiarism detection” OR “ethical principle for natural language processing” OR “consequentialist philosophy” OR “deontological philosophy”) AND (“ethical issues with ChatGPT” OR “scoping review.”)

Data Analysis

The data were sourced from secondary articles and seminal books. In analyzing ethical concerns in academic writing, the analysis began with an inductive coding approach, wherein data were meticulously

examined to identify recurring patterns and themes without imposing preconceived categories, while in the cases of ethical guidelines, analysis began with deducting coding with performed categories. Both processes involved a detailed, line-by-line review of the texts to develop initial codes, which were then grouped into broader themes reflecting the core aspects of the research topic. Findings emerged from these themes, providing a practical understanding of the ethical implications and guidelines related to the use of generative AI in academic settings. This qualitative analysis offered in-depth insights grounded in established literature to inform the development of ethical frameworks for mitigating academic dishonesty.

Findings

Findings identify key themes (Figures 1 & 2) and subthemes (Tables 2 & 3) within secondary data against research questions, highlighting the key ethical concerns, the importance of academic integrity, genuine student effort, and the role of educators in fostering ethical practices and providing fair feedback. These findings focus on the necessity of balancing the intrinsic morality of actions to promote a culture of ethical academic conduct. To strengthen ethical implications, the study also underpinned an unexpected theme followed by sub-themes (Table 4).

After all, the findings show that using both deontological and teleological ethical frameworks can address and mitigate academic dishonesty. Ensuring a balanced approach that values the inherent morality of actions (deontological) and the beneficial outcomes (teleological) in academic settings, learners and educators can simultaneously develop ethical practice in academic settings. Thus, comprehensive ethical guidance should be developed to promote a culture of integrity and responsible AI use in academic writing.

Discussions

Integrating AI tools in academic writing continuously evolves the educational landscape, enhancing learning experiences. This advancement has also raised ethical concerns that educators, students, and institutions must grapple with. By examining these ethical challenges through the lenses of deontological and teleological ethics, we can develop a comprehensive approach to mitigate risks and promote ethical practices in academia.

Discussion on the Findings of Research Question 1

The integration of AI tools in academia brings forth significant ethical concerns that must be critically examined. Central among these is the risk of plagiarism, where students might use AI-generated text without proper attribution, leading to academic dishonesty and undermining the integrity of educational institutions. This reliance on AI tools can compromise the learning process, as students may bypass essential learning experiences, resulting in a superficial understanding of the subject matter. The "black box" nature of AI further complicates this issue, as the lack of transparency regarding the algorithms and data used by AI tools raises questions about the reliability and bias of AI-generated content. Ownership

issues also emerge, with ambiguity surrounding who holds the copyright to AI-generated materials, complicating intellectual property rights and ethical usage. Excessive reliance on AI without thoughtful engagement can hinder the development of critical thinking and writing skills. However, when used appropriately, AI can complement and enhance these skills, offering valuable feedback and diverse perspectives. No clear policies and guidelines that can address these ethical challenges. Academic institutions have not yet developed explicit rules on the use and attribution of AI-generated content. Because of the ambiguity of ethical guides to verify the authenticity of student's work and difficulty in distinguishing between student-generated and AI-generated content poses significant credibility issues, affecting the accuracy and fairness of grading.

From a deontological perspective, students ought to activate a moral duty within their mindset to produce original work and uphold academic integrity. Therefore, learners must commit to ethical principles, emphasizing that the process of learning and creating original work is as important as the final outcome. Conversely, teleological ethics judges the morality of actions based on their outcomes. In this context, by emphasizing the long-term negative outcomes of dishonest practices by providing lower grades, evaluators can foster a culture that values genuine effort and authentic achievement.

Discussion on the Findings of Research Questions 2

The study reported that a deontological ethical framework is particularly effective in mitigating academic misconduct, especially in the realm of academic writing, by promoting an inherent sense of moral duty and integrity. In the context of academic writing, this principle encourages students to engage in scholarly work with honesty and integrity, producing original content and giving proper credit to sources. By fostering a deep respect for intellectual property and the work of others, students are less likely to engage in plagiarism or other forms of academic dishonesty. Deontological ethics also emphasizes duty over outcome, which means that the motivation behind actions should be driven by a sense of moral obligation rather than the pursuit of specific results. This principle is particularly relevant in academic settings where the pressure to achieve high grades can sometimes lead students to compromise their ethical standards. By prioritizing duty, students are encouraged to focus on the quality and integrity of their work rather than solely on the end result. This shift in focus helps create an academic environment where ethical behavior is valued over mere performance. Thus, deontological ethics helps to cultivate a culture of honesty and respect within academic communities, reducing the incidence of plagiarism and fostering a more authentic exchange of ideas. Moreover, deontological ethics values the learning process itself, aligning with Socratic and Aristotelian philosophies that prioritize the development of knowledge and virtue. By valuing the process of learning over the mere acquisition of grades or credentials, students are encouraged to engage deeply with their studies and develop a genuine understanding of the material. This approach not only reduces the temptation to engage in academic misconduct but also enhances the overall educational experience, leading to more meaningful and lasting learning outcomes. The emphasis on goodwill and moral principles within deontological ethics further reinforces the importance of ethical behavior in academic writing. By acting according to moral principles and performing duties with goodwill, students demonstrate their capacity for autonomous

ethical decision-making. This intrinsic motivation to act ethically helps to ensure that academic work is conducted with integrity and respect for the academic community. Finally, the intrinsic value of ethics underscores its importance in shaping behavioral intentions and actions. By recognizing the intrinsic value of ethical behavior, students are more likely to internalize these principles and apply them consistently in their academic pursuits. By emphasizing the inherent morality of actions, the importance of duty, the value of the learning process, and the rejection of unethical practices, this ethical framework fosters a culture of integrity and respect within academic communities.

Discussion on the Findings of Research Questions 3

The study found that the combination of deontological and teleological ethical frames can mitigate the major concern, which is the transparency and ownership of AI-generated content. This lack of transparency raises questions about who owns the content produced by AI and how it should be ethically used and attributed. Addressing these concerns requires a dual ethical approach. Both students and evaluators have a duty to ensure clarity about the origins of their work. This involves proper attribution of AI-generated content and an understanding of the ethical implications of using such tools. On the other hand, the teleological ethical frame suggests evaluators emphasize students' originality rather than perfection. Hence, evaluators should not rely highly on AI to assess the assignments because AI-generated feedback has shortcomings, especially in identifying students' originality, while focusing on the perfection of writing. Here, a manual or a combination of manual and digital scrutiny of submitted assignments can identify the learners' creativity and plagiarism. Educators have a duty to ensure that grading reflects the true effort and understanding of each student. This may involve developing more robust methods to authenticate students' work, such as oral examinations or comparing current assignments with previous student work. This is the way the evaluators give feedback according to teleological or consequential ethics. Ensuring that grades accurately reflect students' genuine efforts and understanding promotes learning and motivates students to engage authentically with their studies. By focusing on the beneficial consequences of fair assessment practices, educators can enhance the overall quality of education and maintain the credibility of academic institutions. Besides, Institutions must establish clear policies and guidelines to govern the use and attribution of AI-generated content, ensuring that all stakeholders understand their rights and responsibilities. From a teleological perspective, the focus shifts to the outcomes of transparent practices. Ensuring transparency and proper attribution can prevent potential legal and copyright issues and foster an environment of trust and integrity in academic settings. By highlighting the positive consequences of transparency—such as enhanced credibility and respect for intellectual property—educators can motivate students to adhere to ethical standards.

Discussion on the Findings of Unexpected Theme

The study also picked an unexpected theme. For example, to mitigate the ethical risks associated with AI-supported academic writing, it is crucial to adopt educational strategies that promote thoughtful and informed use of AI tools. This involves integrating AI and ethics lessons into the curriculum and

encouraging students to use AI as a supplementary tool to enhance their critical thinking and writing skills rather than as a replacement. Educators can instill this sense of ethics by providing instructional resources and fostering a deeper understanding of AI's capabilities and limitations. Students can develop responsible AI usage habits by highlighting the intrinsic value of learning and the importance of academic integrity for positive educational outcomes, fostering a culture of genuine learning and academic integrity.

Conclusion and Recommendation

Leveraging AI in academia is beneficial, and we cannot oppose its usage due to its vast potential, such as personalizing learning for students and adapting the educational experience to meet their unique needs and preferences (Bahammam, 2023). Rather, we ought to build an awareness that we should use AI as a supplement, not a replacement. In the cases of resisting replacement, this study offers comprehensive guidelines for the mitigation of the ethical issues involved in integrating AI tools into academic settings by proposing frameworks: deontological and teleological ethical guides. Firstly, the exploration of academic integrity and plagiarism reveals the heightened risk of dishonest practices facilitated by AI tools. The dual ethical approach—deontological and teleological—provides a strategy to mitigate these risks. Deontological ethics emphasizes the moral duty of students to produce original work, highlighting the intrinsic value of the learning process. Teleological ethics, on the other hand, focuses on the long-term negative consequences of plagiarism, promoting a culture of genuine effort and authenticity. This dual perspective helps address the gap in existing literature that often focuses on either the moral or consequential aspects in isolation rather than integrating both to form a more robust ethical guideline. Secondly, the issue of transparency and ownership of AI-generated content is a relatively underexplored area in academic research. This study portrays the necessity for clear policies and provides guidelines regarding using and attributing AI-generated content that can inform policy development and institutional guidelines. This contribution is crucial in an era where AI tools are becoming increasingly prevalent, and clear ethical standards are urgently needed. Thirdly, the challenges in assessment and evaluation highlighted in this study address a critical gap in the literature. Current research often overlooks the practical difficulties educators face in distinguishing between student-generated and AI-generated content. By proposing robust methods for authenticating students' work and emphasizing the fairness of the assessment process, this study offers practical solutions to enhance the credibility of academic assessments. Lastly, the educational strategies and ethical AI use proposed in this research provide actionable insights for integrating AI ethics into the curriculum. The dual ethical approach encourages students to use AI tools responsibly, promoting both a sense of moral duty (deontological) and the recognition of long-term benefits (teleological). This holistic approach addresses the gap in current educational practices that often fail to equip students with the ethical awareness necessary for responsible AI usage.

Implication of the Practice

The findings of this research offer a clear roadmap for practical implementation to address ethical concerns in AI-supported academic writing. Educational institutions can develop comprehensive policies that integrate both deontological and teleological ethical frameworks, ensuring that students understand their moral responsibilities and the long-term consequences of their actions. By incorporating these ethical guidelines into the curriculum, educators can foster a culture of academic integrity and responsible AI use. Practical measures such as mandatory AI ethics courses, regular workshops on proper citation practices, and the development of robust AI detection tools can be implemented. Additionally, assessment strategies should be revised to emphasize originality and genuine effort, utilizing mixed methods of evaluation, including manual reviews and oral examinations, to verify authorship. These practices not only safeguard academic integrity but also enhance the overall educational experience by promoting critical thinking and ethical awareness among students. By embedding these ethical principles into the academic framework, institutions can effectively mitigate the risks associated with AI in education while maximizing its potential benefits.

Limitation of the Study

While this study provides valuable insights into the ethical concerns surrounding AI-supported academic writing and offers theoretical solutions based on deontological and teleological ethics, it is not without its limitations. The research was primarily based on a qualitative approach using secondary data. The absence of primary data collection, such as interviews or surveys among students and educators, limits the ability to gather firsthand accounts and detailed insights into how AI is being utilized and perceived in developing specific, actionable strategies for detecting AI-assisted work in academic submissions, which could validate and expand upon these finding. Furthermore, the study does not address practical methods for educators to detect excessive reliance on AI in student submissions, which is a critical aspect of maintaining academic integrity. This would provide a more comprehensive and practical framework for addressing the ethical challenges posed by AI in academia.

Recommendation for Future Research

To build upon the findings of this study and address its limitations, future research should incorporate primary data collection methods such as interviews and surveys with educators, students, and administrators. This approach would provide deeper insights into the practical experiences and challenges associated with AI-supported academic writing. Specifically, studies should explore effective strategies and tools for detecting AI-generated content in student submissions, which is crucial for upholding academic integrity. Additionally, longitudinal studies could examine the long-term impacts of AI integration in education, assessing how well ethical guidelines and policies are adhered to and their effectiveness in promoting genuine learning. Future research should also investigate the development and implementation of robust AI detection technologies and their integration into the academic assessment process. By combining qualitative and quantitative methods, future studies can offer a more comprehensive understanding of the ethical implications of AI in academia and provide actionable recommendations to enhance educational practices and policies.

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Tables

Tables 1 to 4 are available in the Supplementary Files section

Figures

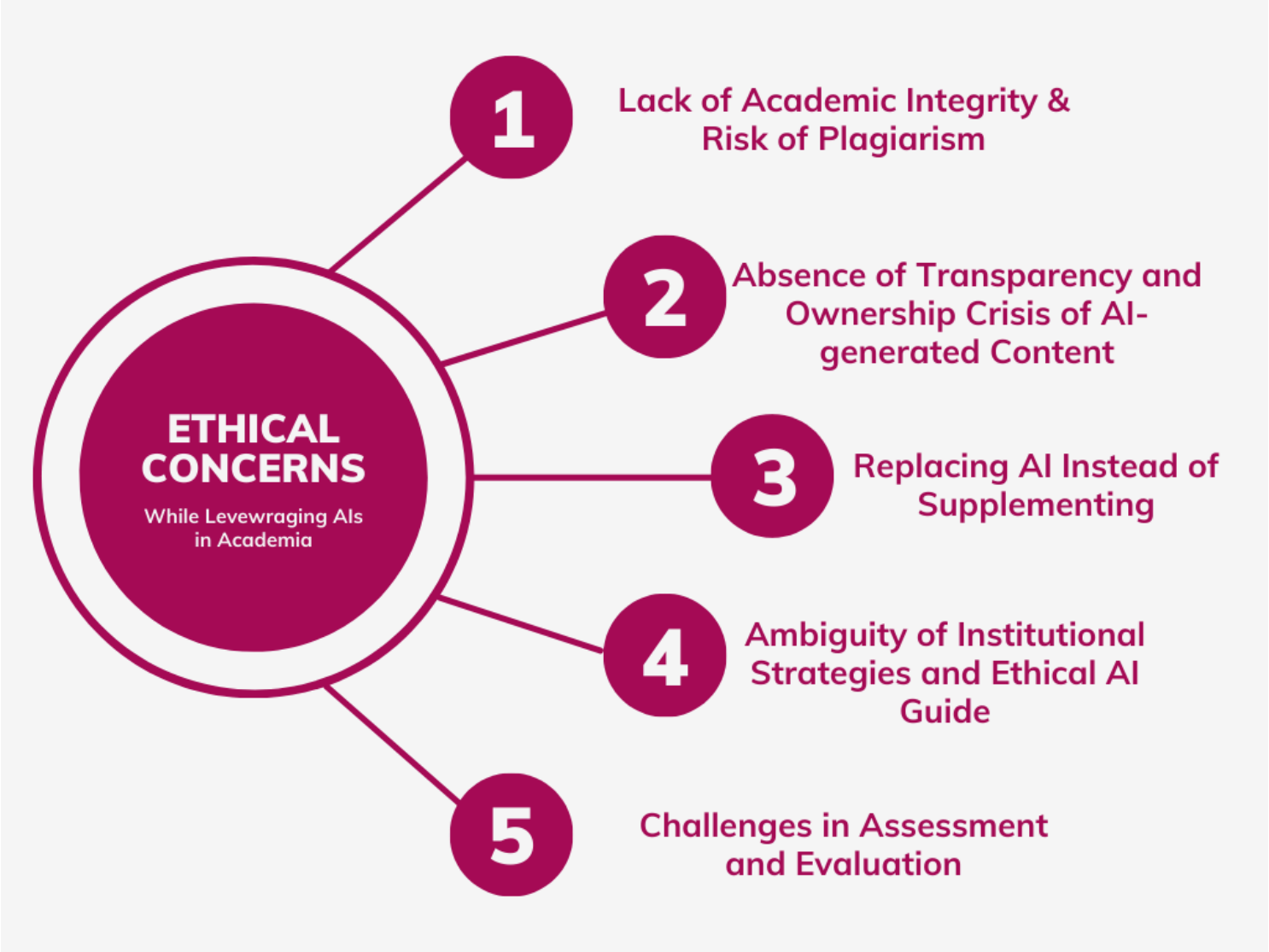

Figure 1

The Themes of Findings for Research Questions 1

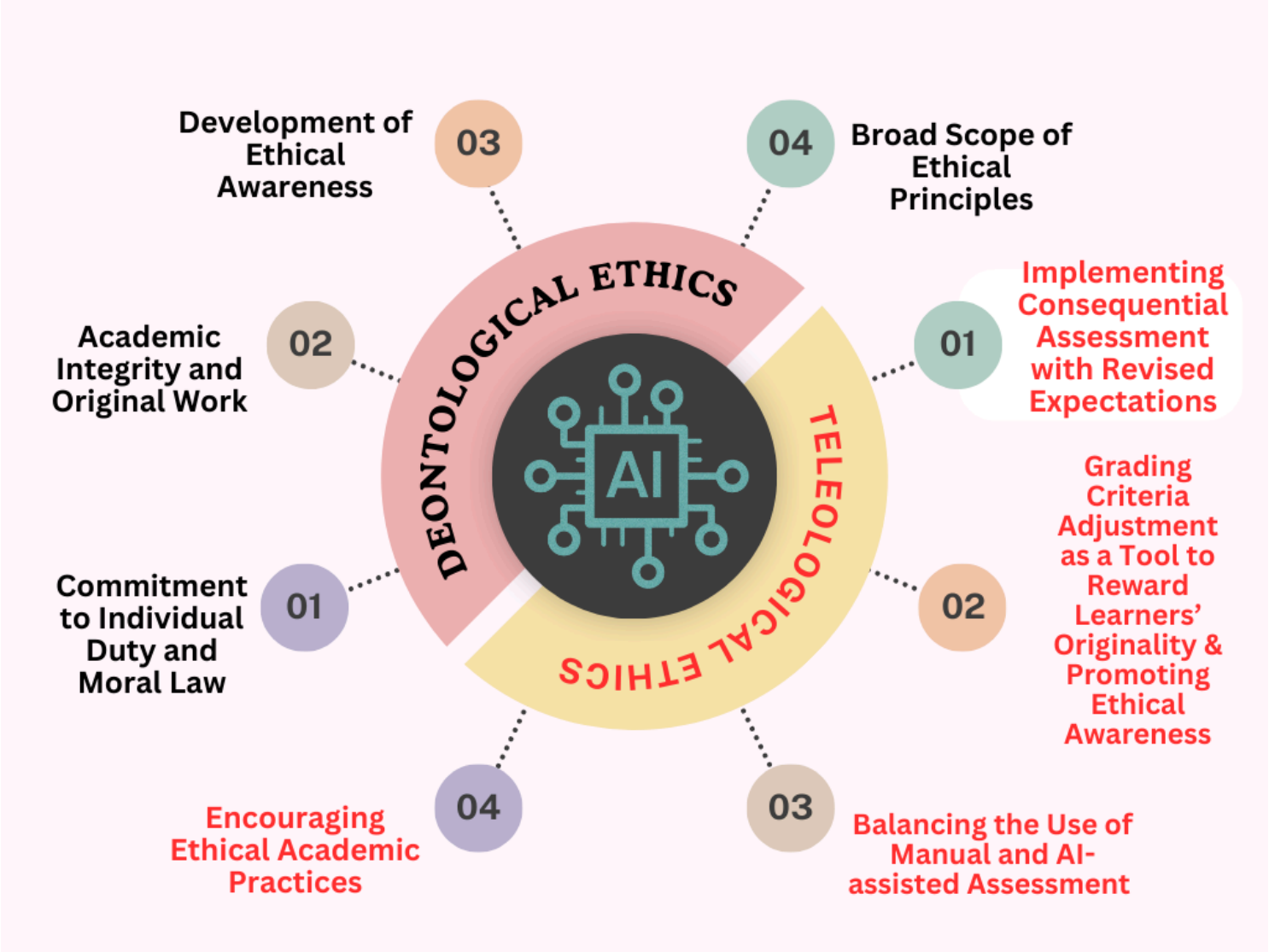

Figure 2

The Themes of Findings for Research Questions 2 & 3

Supplementary Files

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