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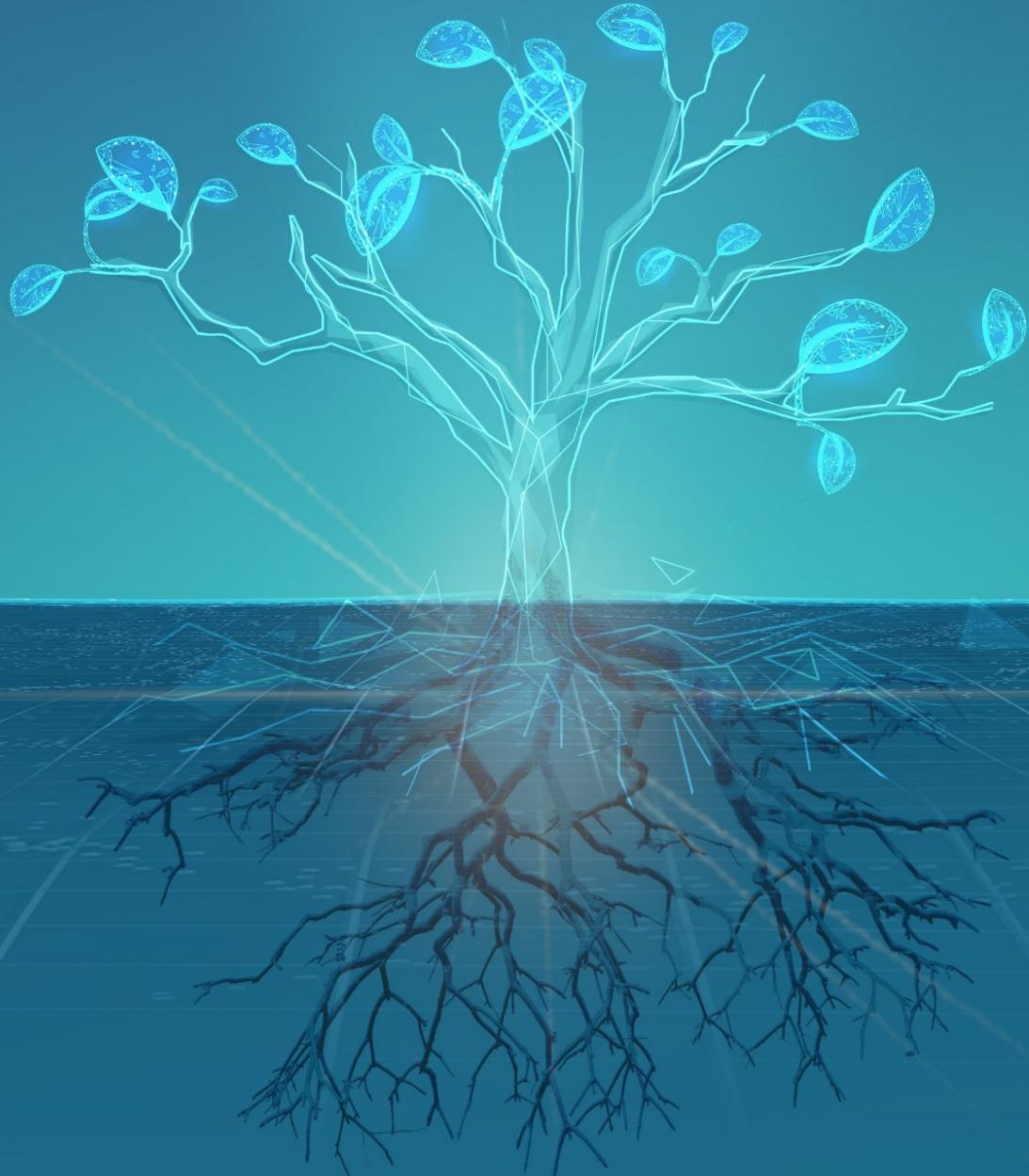# IRAFPA

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Academic Integrity and Thesis Writing at Master's Level in the Digital Age

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Bassem KANDIL

Professor, Saint Joseph University of Beirut, Faculty of Education, Lebanon

Estelle RACHED

Professor, Institut Catholique de Paris, France

Abstract

The use of Generative Artificial Intelligence (GenAI) applications in the research work at the graduate level provided unprecedented opportunities for researchers and significant challenges to academic integrity. The study aims to explore the practices and perceptions of master's students and educators in higher education regarding academic integrity in the age of GenAI. Based on qualitative data collected from interviews conducted with graduate students in education and a focus group with their respective supervisors, the findings reveal a dual role of GenAI in both supporting research work and challenging traditional norms of academic integrity. The study identifies gaps in institutional policies, supervisors' preparedness, and student uncertainty working in an AI driven academic environment.

Keywords

thesis writing, Generative Artificial Intelligence, academic integrity, AI ethics

Résumé

Le recours aux applications d'intelligence artificielle générative (IAG) dans les travaux de recherche menés au niveau du Master en sciences de l'éducation offre des

opportunités inédites aux chercheurs, tout en présentant des défis liés à l'intégrité académique. La présente recherche explore les pratiques et les perceptions des étudiants de master et celles des enseignants universitaires concernant cette intégrité à l'ère de l'IAG. S'inscrivant dans une approche qualitative basée sur des entretiens menés auprès d'étudiants en master et des *focus group* conduits auprès de leurs directeurs de recherche respectifs, cette étude révèle que l'IAG renforce la productivité mais elle remet en question les normes traditionnelles de l'intégrité académique. Les résultats soulignent des lacunes liées aux politiques institutionnelles, à la préparation des directeurs de recherche et à l'incertitude ressentie par les étudiants dans un environnement académique marqué par l'intelligence artificielle.

Mots-clés

Rédaction de thèse, Intelligence artificielle générative, intégrité académique, éthique de l'intelligence artificielle

Introduction

Generative Artificial Intelligence (GenAI) is influencing almost every aspect of our lives. Doing research in higher education institutions is no exception. Graduate students are integrating AI tools into the various aspects of their academic life, including research work and thesis writing. Research supervisors are also using GenAI applications in their work, and they are supposed to provide guidance for their students.

In graduate programs, especially those involving thesis writing, the stakes are high: students must produce original research, contribute to scholarly discourse, and uphold rigorous ethical standards (ICAI, 2021). However, this already complex process has been further complicated by the proliferation of GenAI technologies capable of producing human-like text, translating languages, and summarizing research. These tools challenge conventional ideas of authorship and originality, making it more difficult to distinguish between legitimate academic support and unethical shortcuts (Flanagin et al., 2023).

The process of writing a thesis at the master's level presents a unique challenge in maintaining academic integrity, as it requires original thought, rigorous research, and adherence to ethical guidelines. The main issue or problem is the tension between the

benefits of using AI in research work or thesis writing and the potential risks to academic integrity. Should students use GenAI in thesis writing or not? If yes, what are the boundaries of such usage? How can they use it and still respect the standards and ethics of empirical research? To address the above stated issues, the following research questions were raised:

Research Questions

1. How do MA students in Education, at a private university in Beirut, use GenAI tools (e.g., ChatGPT) in thesis writing?

2. How do GenAI tools influence academic integrity in writing theses, and what ethical considerations arise from their use?

3. What institutional policies or guidelines are available or needed to regulate the ethical use of AI in academic research?

This research will contribute to the growing body of knowledge on academic integrity by providing empirical insights into the factors that influence ethical research practices in graduate education. The findings will help institutions refine their policies and support mechanisms, ultimately fostering a culture of integrity that benefits students, supervisors, and the academic community.

Literature Review

In the era of GenAI, academic integrity in thesis writing faces additional challenges. As GenAI systems can generate text that mimics original work, content is often prone to uncredited use of AI in academic work or what scholars term "AIgiarism" (Sipayung et al., 2025). Since current plagiarism checkers struggle to reliably detect AI-generated content, students may be more tempted to misuse AI (Ortiz-Bonnin & Blahopoulou, 2025).

At the same time, overreliance on AI can reduce student autonomy as GAI assistance may inadvertently suppress critical thinking and reduce students' engagement with the intellectual aspects of thesis writing (Chan et al., 2023). In thesis writing specifically, recent research shows that doctoral students are using GAI for various writing tasks but remain unsure where legitimate assistance ends and plagiarism begins, including

dilemmas about whether to disclose GenAI involvement (Hoomanfard & Shamsi, 2024).

Educational institutions are responding unevenly, some ban GenAI tools in research work while others focus on teaching students about ethical AI use. Nevertheless, most universities still lack clear policies or guidance on GenAI use (Ortiz-Bonnin & Blahopoulou, 2025).

Academic Integrity in Contemporary Contexts

Academic integrity encompasses a commitment to values such as honesty, fairness, respect, and responsibility, as outlined by the International Center for Academic Integrity (ICAI, 2021). In graduate education, academic integrity goes beyond avoiding plagiarism; it also involves critical thinking, ethical data handling, and proper attribution of ideas. Scholars like Bretag (2013) emphasize that academic integrity should be seen as a proactive, educative framework rather than a reactive, punitive mechanism.

GenAI in Education

GenAI tools, particularly large language models (LLMs) such as ChatGPT, Gemini, and Copilot, have rapidly found their way into higher education contexts. These tools can write fluent paragraphs, summarize articles, assist with data analysis, and mimic academic tone. According to a global student survey conducted by Turnitin (2023), nearly 60% of university students admitted to using AI tools for at least one academic task, from generating ideas to drafting sections of assignments.

Such an integration of AI tools may encourage over-reliance and hinder the development of critical thinking skills if used without proper guidance (Lund & Wang, 2023). Educators and scholars are invited to draw a line between acceptable academic assistance and AI-enabled academic dishonesty.

Ethical Dilemmas and Authorship Ambiguities

A central challenge presented by GenAI is the ambiguity surrounding authorship and originality. Traditional norms assume that the writer is the intellectual originator of the content. However, when a student inputs a prompt and receives a fully formed paragraph in return, the issue arises: who is the true author? AI tools cannot be credited as authors because they cannot be held accountable (Nature, 2023; Flanagin et al., 2023).

More concerning is the phenomenon of AI hallucination, where models generate convincing but fabricated information, such as non-existent citations. A study by Else (2023) found that over 30% of AI-generated academic abstracts contained fictitious references. This not only misleads readers but also undermines the credibility of academic or research work, especially in theses.

The emergence of GenAI tools calls for a reassessment of traditional academic integrity principles. These tools fundamentally change how students engage with academic tasks, especially in writing and research synthesis. While traditional academic misconduct focused on issues like direct plagiarism or cheating, AI introduces subtler forms of ethical grey areas such as idea laundering (presenting ideas generated by AI as one's own original thought), AI-generated paraphrasing, and source hallucination (Perkins et al., 2023).

Conceptual Framework

This study adopts a hybrid conceptual framework that integrates Bandura's Social Cognitive Theory (SCT) and Vygotsky's Socio-Cultural Theory to investigate how graduate students navigate academic integrity in thesis writing when using GenAI tools.

Bandura's SCT emphasizes the reciprocal interaction between personal factors, observed behaviors, and the social environment. In the context of GenAI use, student decisions about ethical conduct are shaped by self-efficacy, peer modeling, and institutional norms. The theory also introduces the concept of moral disengagement, explaining how students may rationalize ethically questionable use of GAI —such as

copying generated content— when such behavior is normalized by peers or perceived as low-risk (Bandura, 1999).

Complementing this, Vygotsky's Socio-Cultural Theory views learning as a socially mediated process where tools like GenAI act as cultural artifacts (Vygotsky, 1978). Through interaction with thesis supervisors, peers, and institutional discourse, students construct their understanding of originality, authorship, and academic responsibility. GenAI may serve as a scaffold within students' Zone of Proximal Development (ZPD), supporting their ability to draft, revise, or understand complex academic content. The ZPD represents the zone between current ability of a student and his or her potential growth with assistance. GenAI facilitates such assistance by providing adaptive and timely support that bridges what learners can do alone and what they can achieve with guidance.

Together, these two theories offer a comprehensive lens for analyzing the interplay between individual agency, institutional culture, and tool mediation.

Methodology

This study employed a qualitative approach to provide an in-depth exploration of the issue under examination. Qualitative methodology was chosen for its ability to capture the lived experiences and perceptions of students and faculty.

Participants

A purposive sampling approach was used to select the current master students in the faculty of education at a private university that is located in Beirut-Lebanon. These students were selected because they are actively working on their theses. Twenty students and eight supervisors took part in this study. Students were at various stages of thesis completion. Supervisors were selected based on their active involvement in the advising of theses of the selected students. Inclusion criteria ensured participants had experience with or used AI-assisted writing tools.

Data Collection Methods

The researcher conducted interviews with the students as well as the focus group with the supervisors. Participation was voluntary and anonymity as well as confidentiality were ensured. The researcher clearly stated that the aim of this study is to provide insights that will help in the development of clear and practical guidelines for an ethical and responsible use of GAI in academic research and thesis writing. And for this purpose, we are seeking input from various stakeholders.

Interviews with Master Students: Semi-structured interviews were conducted with the participating students. Each student participated in a one-to-one interview lasting for approximately 40 minutes. Interviews were guided by a protocol that included open-ended questions about the GenAI tools they are using and for what purposes. In addition, questions covered challenges faced during thesis writing and opportunities made available by GenAI. Also included were questions about the ethical use of AI and the availability of guidelines or relevant policies.

Focus Group Discussions with Supervisors: A focus group was organized with the eight thesis supervisors to understand their perceptions, experiences and strategies for promoting academic integrity among students. Questions covered topics about GenAI and its use in research work. Additional questions covering academic integrity and its promotion were included as well.

Document Analysis: Thesis writing guideline and academic integrity policy were reviewed. The aim was to spot whether GenAI and academic integrity were explicitly addressed in the available documents.

Findings and Discussions

This study employed qualitative research design, using thematic analysis as outlined by Braun and Clarke (2006) to analyze the data. Thematic analysis was selected for its flexibility and systematic approach to identifying, analyzing, and reporting patterns within qualitative data. The analysis began with data familiarization through repeated readings of the transcripts and initial notetaking. This was followed by the generation of initial codes, where segments of data relevant to the research questions were systematically labeled. Codes were then collated into categories and themes were

generated. Finally, themes were supported by narrative descriptions supported by data extracts. Below you will find the themes emerged from the interviews done with students.

RQ1. How do MA students use GenAI tools in thesis writing?

Theme 1: GenAI is used as a support tool with a focus on surface-level academic assistance.

Students primarily use AI tools such as ChatGPT, Gemini, Copilot, and DeepSeek as cognitive assistants to enhance the writing process. The tools are commonly used for brainstorming, clarifying ideas, summarizing articles, and improving grammar and structure. Notably, students emphasize that AI is used to *support*, not replace, their academic work.

S1: "I primarily use it for brainstorming, summarizing articles, and getting structure ideas... I always verify the information from reliable sources."

S7: "I usually write a detailed prompt... I consider this AI tool as a helper and a guide without replacing my work."

S8: "I use AI for restructuring my writing and ensuring that my content follows a coherent scope and sequence."

Though a few participants mentioned using AI for tasks like identifying research gaps or analyzing data, the overall trend was focused on surface-level academic assistance rather than deep analytical engagement.

Theme 2: Perceived benefits of AI are tempered by concerns about overreliance and accuracy.

While participants appreciated the efficiency, clarity, and confidence AI provided in academic writing, many expressed concerns about over-dependence and reduced critical thinking. Several participants also mentioned the potential for AI to provide outdated or inaccurate information.

S2: "The biggest advantage is timesaving... but it also lacks the ability to critically analyze or generate truly original insights."

S3: "It saves me time... But I know more about the context of the responses I collected, so in data analysis I depend on myself."

S10: "I've noticed that the information is outdated sometimes... I might want to make sure it's accurate and not outdated."

RQ2. How do GenAI tools (e.g., ChatGPT) influence academic integrity in thesis writing, and what ethical considerations arise from their use?

Theme 3: Students adopt Self-regulated Strategies to uphold Academic Integrity

Despite the lack of formal training, students showed a strong sense of ethical responsibility. They commonly emphasized verifying AI outputs, paraphrasing responses, and not relying on AI for personal analysis or original argumentation.

S5: "I never copy and paste AI-generated content directly into my thesis without verification."

S9: "I try my best to use AI tools as a helper... then I paraphrase in my own language."

S12: "I always paraphrase AI-generated content to avoid plagiarism... and I use my own words."

S13: "I make sure to review, rephrase, and rewrite the content in my own words to ensure authenticity."

Students were divided on whether AI-generated content should be cited. Some advocated for transparency if the tool contributed directly to content creation, while others argued that AI cannot be ethically cited because it doesn't produce original work.

Theme 4: Lack of Institutional Guidance creates Ethical Ambiguity and Unequal Practice

All participants noted the absence of clear university policies on AI use in thesis writing. While some had informal discussions with supervisors, most relied on personal judgment or external sources (such as what other universities are doing in this regard) to define ethical practices.

S4: "There are no clear guidelines from the university. My supervisor advised me to use AI cautiously."

S12: "No formal guidelines have been provided. Different professors have different opinions."

S14: "My university has not provided clear guidelines yet... In Lebanese universities, AI policies are still vague."

Participants called for specific institutional policies outlining what is considered acceptable use, the percentage of AI-generated content allowed, and the expectations for citation and transparency.

RQ3. What institutional policies or guidelines are needed to regulate the ethical use of AI in academic research.

Theme 5: The future of thesis writing will require balancing technological advancement with human insight

Participants expect AI tools to become more embedded in academic research and thesis writing. While acknowledging this inevitability, they emphasized the importance of maintaining intellectual integrity and human judgment.

S1: "AI will likely become a standard tool in research... but there is a risk of students relying too heavily on AI."

S7: "Maybe they [future students] can focus on the positive and ethical way of using it… not trying to sneak around."

S16: "AI might develop the ability to generate original thoughts… It starts as a tool for assistance but can easily become a crutch."

Students advised their peers to use AI wisely, verifying content and ensuring their work remains rooted in their own understanding and analysis.

Recent studies suggest that students have diverse attitudes toward AI use. While many students are aware that copying AI-generated content without attribution is problematic, fewer understand the restraints of indirect paraphrasing, partial edits, or summarization without citation. Sok and Heng (2024) observed that students often rationalize AI use as a modern form of peer support, particularly when institutional guidance is vague or outdated.

The lack of standardized norms around AI disclosure emerged as a significant challenge in this study. Students often used AI tools without fully understanding the ethical implications, while supervisors lacked clear guidance on how to interpret or manage such usage. Transparency is critical. As recommended by academic

publishers like Springer and Elsevier, AI-generated content should be disclosed, specifying the tool used and the purpose it served (Elsevier, 2023).

Reconceptualizing academic integrity in the AI era means shifting from a punitive framework toward a more developmental and proactive approach (Bretag, 2016). This includes integrating critical discussions on authorship, responsibility, and intellectual ownership in academic writing courses. Afterall, students' integrity decisions are not just personal but socially constructed and culturally mediated.

As for the supervisors, the following themes emerged from the focus group:

Theme 6: There is no consensus among the supervisors regarding the proper or acceptable use of GAI.

P2: "How can we ban something that we are currently using."

P5: "Can we allow students to use AI-generated output if they cite it."

P6: "I guess it is okay to use it for data analysis or citing references."

Theme 7: The ethical use of GAI in research is something worth including in a written policy at the university level.

P4: "What is not ethical without GAI, is also not ethical with the use of GAI."

P8: "Academic integrity, as a concept, shouldn't be affected by the use of any tool."

As for the revision of the available policies, nothing was mentioned regarding the ethical use of GAI during thesis writing or in research work. And when we followed up on this matter, we were told that the draft guidelines have been outlined and will be shared soon.

Findings indicate a systemic lack of training and institutional support for both students and supervisors. Most of the ethical confusion stems from the absence of clear frameworks.

Despite the widespread use of AI, institutional responses remain fragmented. Hughes and Eaton (2022) highlight that most universities have yet to update their academic integrity policies to reflect AI advancements. Many institutions continue to rely on plagiarism detection software like Turnitin, which may not reliably detect AI-generated text. Moreover, there is a lack of formal training for faculty on how to address AI-related integrity issues. This institutional lag has created a policy vacuum, leaving students

and supervisors to navigate ethical decisions independently. Universities should adopt certain disclosure statements for theses and academic submissions. This would not only promote accountability but also help normalize responsible AI use. For example, a student might include a note such as: "Sections of this text were generated with the assistance of ChatGPT for language refinement."

Leading academic organizations, including UNESCO and the International Association of Universities, have begun issuing position papers calling for urgent reforms to integrity policies considering AI's rise (UNESCO, 2023).

Institutions must be accountable for providing explicit guidance and ongoing professional development opportunities.

Training should cover not only technical aspects (how to detect AI-generated content) but also conceptual and ethical dimensions (e.g., when is AI use legitimate vs. deceptive?). As McGee (2024) argues, the ethical use of AI should be incorporated into research methods courses and faculty development programs alike.

A promising approach is the co-creation of policies with stakeholders, including students, to foster shared ownership. Recent work by Kassorla et al. (2024) highlights the effectiveness of student-led AI literacy initiatives in increasing engagement and compliance with academic integrity policies.

Conclusion

This study demonstrates that the use of GenAI in thesis writing is widespread, poorly regulated, and ethically ambiguous. Master students often rely on GenAI tools for legitimate support but lack the guidance to distinguish this from academic misconduct. Supervisors and institutions are similarly underprepared, contributing to inconsistent practices. This mirrors observations in recent research; for example, a global analysis by Jin et al. (2025) found that many universities are adopting GenAI in teaching and research yet still lack comprehensive policies to govern its use. Despite that some universities emphasize academic integrity, the absence of detailed and written frameworks leaves a gap in ensuring consistent and responsible AI use (Jin et al., 2025).

The findings call for urgent institutional action: policies must be updated, AI ethics must be taught, and academic integrity must be redefined for the digital or AI age. Only by

doing so can higher education uphold its foundational values in a world transformed by artificial intelligence. A systematic review by Bittle and El-Gayar (2025) underscores the urgent need for explicit GenAI guidelines to accompany academic work. Their analysis concludes that effective integration of GenAI must be paired with clear usage policies and ethical guidelines. In practice, this means institutions should update their academic integrity policies to define transparent rules for AI usage, provide faculty training on AI tools, and educate students about ethical AI practices (Bittle & El-Gayar, 2025). These measures echo the voices from our participants for clearer direction, highlighting that without formal guidance, learners remain uncertain about acceptable use of AI in doing research.

Ethical standards and academic integrity constitute the soul of empirical research. Without respecting them or abiding by them, there is no meaning for doing research. Afterall, the aim of research is the development of humanity, nations, and countries; something that can't be done without being honest with our selves regarding research work. Artificial Intelligence has obliged us to reaffirm or reassure the importance of relevant fundamental concepts such as authorship, originality, and intellectual property in research work. Thus, establishing a robust ethical framework for GenAI use in higher education is a critical priority. Such a framework would mitigate misuse and maintain trust in thesis writing and research work by outlining boundaries that uphold academic integrity while still allowing for innovation.

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