

# Academic Integrity in the Age of Artificial Intelligence: Awareness, Practices, and Challenges among Graduate Students

## Gamification Tools and Jigsaw Activities

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### ABSTRACT

The widespread adoption of artificial intelligence (AI) in higher education has raised new challenges for maintaining academic integrity among graduate students. This study investigates graduate students' awareness of AI-related ethical issues, their academic practices, and the challenges they face in upholding integrity. Using a mixed-methods approach, 250 graduate students participated via structured questionnaires, key informant interviews, and focus group discussions. Descriptive statistics summarized levels of awareness and practice, thematic coding identified recurring challenges, and regression analysis examined the relationship between AI access, digital literacy, and integrity outcomes. Findings reveal moderate awareness and practices, with significant challenges including limited digital literacy, unclear institutional guidelines, and peer pressure. The study provides recommendations for institutional policies, targeted training, and AI-informed integrity frameworks to enhance ethical scholarship.

**Keywords:** Academic Integrity, Artificial Intelligence, Graduate Students, Ethical Practices, Digital Literacy, Higher Education

### Introduction

Artificial intelligence (AI) has become an integral part of higher education, offering tools for automated assessment, content generation, and adaptive learning [1]. While these technologies enhance efficiency and learning opportunities, they also pose significant ethical challenges, such as plagiarism, contract cheating, and misuse of AI-generated content [2]. Graduate students, in particular, face high academic demands, making adherence to traditional integrity standards more complex [3].

Understanding students' awareness, practices, and challenges is essential to developing interventions that uphold academic integrity in AI-rich learning environments. This study explores how AI integration affects ethical practices among graduate students and identifies strategies for fostering responsible academic behavior.

### Research Problem

Despite AI's potential to enhance learning, graduate students exhibit varying levels of awareness and ethical practices, resulting

in potential violations of academic integrity. Institutional guidelines often fail to address AI-specific challenges, leaving students underprepared to navigate ethical dilemmas in AI-enabled academic work.

### Objectives of the Study

1. Assess graduate students' awareness of AI-related academic integrity issues.
2. Examine ethical practices in the use of AI tools among graduate students.
3. Identify challenges encountered in maintaining academic integrity in AI-rich academic environments.

### Significance of the Study

**Policy:** Supports the development of AI-informed academic integrity policies in graduate programs.

**Faculty:** Informs training programs and ethical guidance initiatives for graduate students.

**Students:** Enhances understanding of responsible AI use and ethical scholarship.

**Research:** Contributes to the literature on AI integration, academic integrity, and higher education ethics.

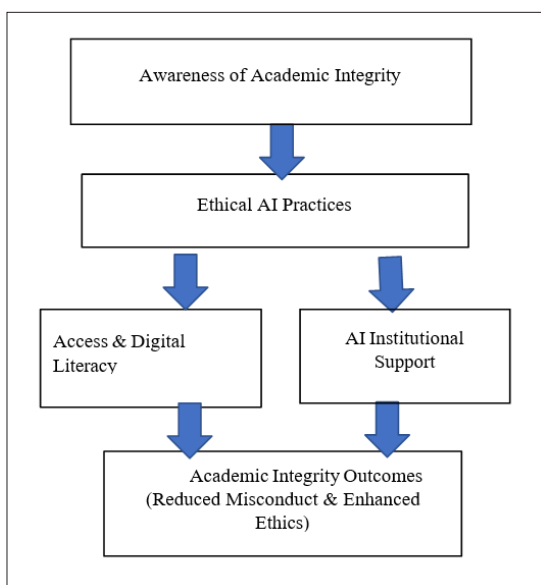
**Theoretical Framework**

**Theory of Planned Behavior (TPB):** Ethical decision-making is influenced by attitudes, subjective norms, and perceived behavioral control [4].

**Self-Regulation Theory:** Students’ self-monitoring, motivation, and planning affect adherence to integrity standards (Zimmerman, 2002).

**Technology Acceptance Model (TAM):** Perceived usefulness and ease of AI tools influence adoption and potential misuse [5].

**Conceptual Framework Diagram (ASCII placeholder)**



Awareness of academic integrity shapes ethical AI practices, moderated by AI access, digital literacy, and institutional support. The framework emphasizes the interplay of individual and institutional factors in promoting ethical scholarship.

**Review of Related Literature (2020–2025)**

**Awareness of Academic Integrity in AI Contexts** Graduate students often lack adequate understanding of AI’s ethical implications, highlighting the need for targeted awareness programs [2,6].

**Ethical Practices with AI** Structured guidance, training, and faculty support improve ethical practices, including proper citation, content verification, and responsible AI usage [1].

**Challenges in Maintaining Integrity** Challenges include unclear institutional policies, peer pressure, limited digital literacy, and novelty of AI tools [3,7].

**Institutional Policy and Support** Effective policies and institutional support mitigate academic misconduct and promote responsible AI use [8].

**Methodology**

**Research Design:** Mixed-methods (quantitative + qualitative)

**Respondents:** 250 graduate students from multiple universities.

**Instruments:** The study utilized multiple research instruments to ensure a comprehensive and balanced collection of both quantitative and qualitative data. A structured questionnaire was

employed to gather quantitative information on participants’ awareness, practices, and use of artificial intelligence in academic settings. To complement this, an interview guide was used to facilitate in-depth discussions with key informants, allowing for a deeper exploration of individual experiences and insights. Additionally, a Focus Group Discussion (FGD) protocol was implemented to capture collective perspectives, encourage interaction among participants, and identify shared themes and patterns related to AI usage and academic practices.

**Data Analysis**

In this study integrated both quantitative and qualitative techniques to provide a comprehensive understanding of academic integrity in the context of AI use. Descriptive statistics, including mean, frequency, and percentage, were employed to summarize participants’ levels of awareness and ethical practices. For qualitative data, thematic coding was applied to identify recurring challenges, patterns, and emerging opportunities from interviews and focus group discussions. Furthermore, regression analysis was conducted to examine the relationships between AI access, digital literacy, and academic integrity outcomes, offering deeper insights into how these variables influence ethical behavior among graduate students [9,10].

**Results**

**Table 1: Awareness of AI and Academic Integrity (n=250)**

Item	Mean	SD	Interpretation
Understanding of plagiarism	3.85	0.72	Moderate
Awareness of AI misuse	3.60	0.81	Moderate
Familiarity with integrity policies	3.25	0.89	Low–Moderate
Confidence in ethical decision-making	3.50	0.78	Moderate

**Table 2: Ethical Practices with AI**

Practice	Mean	SD	Interpretation
Proper citation of AI-generated content	3.40	0.70	Moderate
Avoidance of contract cheating	3.30	0.75	Moderate
Use of AI for legitimate research tasks	3.65	0.68	Moderate–High

**Table 3: Challenges in Maintaining Integrity**

Challenge	Mean	SD	Interpretation
Lack of AI-focused policies	4.10	0.65	High
Peer pressure for grades	3.70	0.80	Moderate
Limited digital literacy	3.55	0.77	Moderate

**Discussion**

Results indicate moderate awareness and ethical practices among graduate students. Key challenges include digital literacy gaps, insufficient policy guidance, and peer pressure. Regression analysis shows awareness significantly predicts ethical practices, while AI access and digital literacy moderate outcomes.

### Summary of Findings

Moderate awareness and practices of academic integrity, Challenges include limited digital literacy and unclear policies, and Awareness and institutional support are critical for ethical AI usage.

### Conclusion

Graduate students demonstrate moderate awareness and ethical practices regarding AI integration. Effective policies, faculty support, and digital literacy initiatives are essential to uphold academic integrity in AI-rich educational environments.

### Recommendations

**Policy:** Develop AI-specific academic integrity guidelines for graduate programs.

**Practice:** Conduct workshops and training sessions on ethical AI use.

**Research:** Monitor the long-term effects of AI adoption on academic integrity.

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