# ETHICAL FRAMEWORK FOR ARTIFICIAL INTELLIGENCE IN PROFESSIONAL PRACTICES OF HIGHER EDUCATION LECTURERS: A SYSTEMATIC REVIEW

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**Article Info:**

**Abstract:**

This systematic literature review examines the ethical frameworks surrounding the adoption of artificial intelligence (AI) in the professional practices of higher education lecturers. As AI becomes increasingly prevalent in academia, it presents ethical challenges, including concerns about academic integrity, data privacy, algorithmic fairness, and its responsible implementation in teaching and research. These issues underscore the need for robust ethical guidelines to support educators in navigating the complexities of AI integration. The study aims to analyze existing ethical frameworks for AI adoption in higher education, identify key challenges and opportunities in AI integration, and develop comprehensive guidelines for responsible AI implementation. The methodology followed the PRISMA guidelines, employing qualitative systematic review through content analysis and thematic synthesis. Advanced searches in Scopus and Web of Science databases identified 34 primary studies that met the inclusion criteria, focusing on peer-reviewed articles published in 2024 about AI ethics in higher education. The findings were divided into three themes: (1) Ethical Concerns and Academic Integrity, (2) Pedagogical Strategies and Educational Impact and (3) Policies and Frameworks for AI Integration. Results indicate a growing need for standardized ethical

frameworks, with 85% of studies emphasizing the importance of balancing innovation with ethical considerations. Conclusions highlight the necessity for adaptable and inclusive frameworks that prioritize accountability, transparency, and equity in AI use within higher education.

**Keywords:**

Artificial Intelligence, Ethical Framework, Higher Education, Lecturer, Professional Practices

## Introduction

Artificial Intelligence (AI) is increasingly reshaping the landscape of higher education, revolutionizing how knowledge is delivered, assessed, and managed (Crompton and Burke 2023; McGrath et al. 2023; Rahiman and Kodikal 2024; Santos and Serpa 2023). From automating administrative tasks to providing personalized learning experiences, AI has become a powerful tool for enhancing efficiency and innovation in educational settings. For higher education lecturers, the integration of AI offers the potential to streamline workloads and create dynamic, student-centered learning environments (Samman, 2024). However, these advancements also bring significant ethical challenges, as lecturers must navigate the implications of AI-driven decisions, such as issues of fairness, accountability, and inclusivity (Gašević, Siemens, and Sadiq 2023; Harry, 2023). The need for an ethical framework becomes even more pressing as lecturers are not only educators but also role models responsible for upholding the core values of education and ensuring that technology serves its intended purpose without compromising these principles (Mumtaz et al. 2024).

Despite the transformative potential of AI, its integration into higher education raises critical concerns that remain inadequately addressed. The rapid pace of AI innovation often outpaces the establishment of ethical guidelines, leaving educators to grapple with complex dilemmas in areas such as data privacy, algorithmic bias, and the equitable allocation of resources (Caliskan 2023; Thiruma Valavan, A. 2023). While the adoption of AI promises to enhance teaching and learning, it also risks perpetuating systemic inequities if not implemented responsibly. Lecturers, who operate at the intersection of technology and pedagogy, face unique challenges in balancing the benefits of AI with its ethical implications (Ng et al. 2023). Without a comprehensive framework to guide their practices, they are left to make decisions in an ethical grey zone, potentially undermining the trust and fairness that are fundamental to education (Baskara, Puri, and Wardhani 2023; Laksani, 2023).

This article aims to address these pressing issues by proposing a robust ethical framework tailored to the professional practices of higher education lecturers. The framework seeks to equip lecturers with actionable principles and strategies to navigate the ethical challenges posed by AI. It emphasizes the importance of aligning AI applications with values such as equity, transparency, and accountability while fostering an inclusive learning environment (Chauncey and McKenna, 2023; Ng et al. 2023). By bridging the gap between theoretical ethics and practical implementation, this article aspires to empower educators to harness AI responsibly and sustainably (Alqahtani and Wafula, 2024). Furthermore, it seeks to contribute to the broader discourse on ethical AI by highlighting the critical role of lecturers in shaping the future of education through technology (Laksani, 2023). Through this approach, the article

underscores the need for a deliberate and principled integration of AI that enhances the educational experience without compromising its foundational values.

## Literature Review

The integration of Artificial Intelligence (AI) in higher education has brought about transformative changes, enhancing personalized learning, research capacities, and administrative efficiency. However, these advancements come with significant ethical concerns that need to be addressed to ensure responsible and equitable use of AI in educational settings. This literature review explores the ethical framework necessary for AI in the professional practices of higher education lecturers, focusing on key themes such as academic integrity, data privacy, algorithmic bias, and the role of public-private partnerships.

One of the primary ethical concerns in the use of AI in higher education is maintaining academic integrity. AI tools, such as generative AI and chatbots, can potentially facilitate plagiarism and academic fraud by generating content that students might misuse (Gallent-Torres et al. 2024; Shabbir and Anwer, 2015). The reliability of AI-generated information and the transparency of sources are critical issues that need to be addressed to uphold academic standards (Gallent-Torres, et al. 2024). Comprehensive ethical guidelines are essential to ensure that AI tools are used responsibly, promoting academic honesty and integrity (Farina and Stevenson, 2024). The use of AI in higher education involves the collection and analysis of vast amounts of data, raising significant privacy concerns. AI systems often handle sensitive student information, which necessitates strict adherence to data protection regulations (Shabbir and Anwer, 2015). Ensuring robust data security measures and clear policies on data usage is crucial to prevent misuse and protect student privacy (Alrayes, Henari, and Ahmed, 2024). The ethical framework must include guidelines for data collection, storage, and sharing to safeguard against potential breaches and misuse (Rahiman and Kodikal, 2024).

Algorithmic bias is another critical ethical issue associated with AI in education. AI systems can perpetuate existing societal biases if not carefully designed and monitored (Alrayes, et al. 2024). This can lead to unfair treatment of students and the dissemination of biased information. To mitigate these risks, it is essential to implement rigorous data curation practices and develop AI models that are transparent and explainable (Alrayes, et al. 2024). Ensuring fairness and equity in AI applications is a fundamental aspect of the ethical framework (Gallent-Torres et al. 2024). AI has the potential to both bridge and widen educational inequalities. While AI can provide personalized learning experiences and support for diverse student needs, it can also exacerbate disparities if access to AI tools is uneven (Awashreh, 2025)(Gallent-Torre et al. 2024). The ethical framework should address issues of accessibility and inclusivity, ensuring that all students have equal opportunities to benefit from AI-enhanced education (Awashreh, 2025). Policies should be in place to promote digital literacy and equitable access to AI technologies (Awashreh, 2025).

The role of public-private partnerships in integrating AI into educational infrastructure is significant. These collaborations can drive innovation and provide resources for AI development and implementation. However, they also raise ethical concerns regarding the influence of private entities on educational practices and policies (Zeer, et al. 2023). The ethical framework should include guidelines for transparent and accountable partnerships, ensuring that educational values and public interests are priorit,ized (Zeer et al. 2023). The integration of AI in higher education presents both opportunities and challenges. Developing a

comprehensive ethical framework is essential to navigate these complexities and ensure that AI is used responsibly and equitably. Key components of this framework include maintaining academic integrity, protecting data privacy, addressing algorithmic bias, promoting educational equity, and managing public-private partnerships. By adhering to these ethical principles, higher education institutions can harness the benefits of AI while safeguarding against potential risks and ethical dilemmas. Further research and collaboration among educators, policymakers, and AI developers are necessary to refine and implement these guidelines effectively.

Figure 1 presents a conceptual mapping of ethical concerns in AI implementation within higher education, synthesized from the literature review
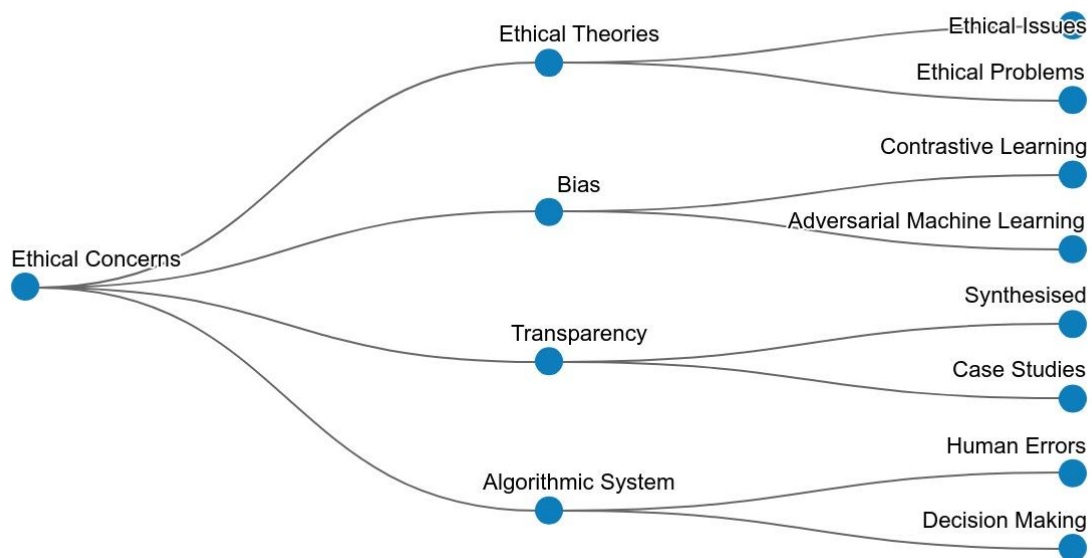


**Figure 1: Conceptual Mapping of ethical Concern**

**Research Question**

Research questions are crucial in a systematic literature review (SLR) because they provide the foundation and direction for the entire review process. They guide the scope and focus of the SLR, helping to determine which studies to include or exclude, ensuring that the review remains relevant and specific to the topic of interest. A well-defined research question ensures that the literature search is exhaustive and systematic, covering all relevant studies that address key aspects of the topic. This minimizes the risk of bias and ensures a complete overview of the existing evidence. Additionally, research questions facilitate the categorization and organization of data from included studies, providing a framework for analyzing findings and synthesizing results to draw meaningful conclusions. They also enhance clarity and focus, avoiding ambiguity and keeping the review concentrated on specific issues, making the findings more actionable and relevant. Furthermore, well-formulated research questions contribute to the transparency and reproducibility of the review, allowing other researchers to follow the same process to verify findings or extend the review to related areas. Ultimately, research questions ensure that the review aligns with the overall objectives of the study, whether it is to identify gaps in the literature, evaluate the effectiveness of interventions, or explore trends in a specific field, making them the backbone of a rigorous, focused, and relevant systematic literature review.

Specifying the Research Questions (RQs) is the most important activity at the planning stage but also the most important part of any SLR, because it drives the entire review methodology (Kitchenham, 2007). Considering that the goal of our SLR is to identify and analyze the state of the art in. The PICo framework is a mnemonic style used to formulate research questions, particularly in qualitative research proposed by (Lockwood, Munn, and Porritt, 2015) was applied in this study. PICo stands for Population, Interest, and Context. Here's what each component means:

1. Population (P): This refers to the group or participants of interest in the study. It specifies who the research is focused on, such as a specific demographic, patient group, or community.
2. Interest (I): This represents the focus or phenomenon of interest in the study. It could be a particular experience, behavior, intervention, or issue that the research aims to explore or understand.
3. Context (Co): This defines the setting, environment, or specific context in which the population and interest are situated. It might refer to geographical location, cultural or social settings, or any other relevant backdrop for the research.

Using the PICo framework helps in structuring research questions clearly and systematically by breaking down the key elements of the study into these three components. This approach ensures that the research is focused and the questions are well-defined, making it easier to search for relevant literature or design a study. This study achieved two research question as below;

1. How do higher education lecturers perceive and address ethical concerns related to artificial intelligence in maintaining academic integrity within their professional practices?

2. What are the challenges and best practices for higher education lecturers in adopting and implementing policies and frameworks for integrating artificial intelligence into their professional roles?

**Material and Methods**
This study employed a qualitative systematic review approach to examine ethical frameworks for AI adoption in higher education. The choice of qualitative methodology was driven by the complex nature of ethical considerations in AI implementation, which requires in-depth interpretative analysis rather than quantitative measurements. This approach allows for rich exploration of diverse perspectives and experiences across different institutional contexts, particularly crucial given the emergent nature of AI ethics in education.

The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework, as outlined by Page et al., (Page, et al. 2021), is a widely recognized standard for conducting systematic literature reviews, ensuring transparency, thoroughness, and consistency throughout the process. By adhering to PRISMA guidelines, researchers can enhance the accuracy and rigor of their analyses, as the framework provides clear instructions for systematically identifying, screening, and including studies in a review. PRISMA also emphasizes the importance of randomized studies, recognizing their ability to reduce bias and provide robust evidence for analysis. This study utilized the Web of Science and Scopus databases due to their extensive coverage and reliability.

The PRISMA methodology consists of four critical stages: identification, screening, eligibility, and data abstraction. In the identification stage, relevant studies are located through systematic database searches. The screening phase involves applying predefined criteria to exclude irrelevant or low-quality research. In the eligibility phase, the remaining studies are closely examined to ensure they meet the inclusion criteria. Finally, data abstraction involves extracting and synthesizing key data from the selected studies, enabling the development of meaningful and reliable conclusions. This structured approach ensures that systematic reviews are conducted with precision and integrity, producing trustworthy outcomes to inform future research and practice.

*Identification*

The systematic literature review began by developing a comprehensive search strategy. After identifying primary keywords, we expanded our search terminology using reference materials including dictionaries, thesauri, and encyclopaedias, while also consulting previous studies in the field. We then constructed specific search strings for two major academic databases: Web of Science and Scopus (detailed in Table 1). Our systematic database search yielded 862 potentially relevant publications for analysis.

**Table 1: The Search String**

| | | |
|---|---|---|
| Source: Scopus WOS | Scopus | TITLE-ABS-KEY (("Artificial Intelligence" OR robotic) AND ethic* AND ("Higher Education" OR university OR institute) AND (lecturer OR teacher OR academic OR professor)) AND (LIMIT-TO (PUBYEAR, 2024)) AND (LIMIT-TO (SUBJAREA, "SOCI") OR LIMIT-TO (SUBJAREA, "ARTS")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE, "English")) AND (LIMIT-TO (SRCTYPE, "j")) AND (LIMIT-TO (PUBSTAGE , "final")) |
| | | Date of Access: Dicember 2024 |
| | WoS | ("Artificial Intelligence" OR robotic) AND ethic* AND ("Higher Education" OR university OR institute) AND (lecturer OR teacher OR academic OR professor) (Topic) and Education Educational Research or Arts Humanities Other Topics or Social Sciences Other Topics (Research Areas) and 2024 (Publication Years) and Article (Document Types) and English (Languages) and Education Educational Research (Research Areas) |
| | | Date of Access: Dicember  2024 |

*Screening*

The screening protocol incorporated a systematic filtration process to evaluate the alignment between identified publications and the established research objectives, utilizing the Ethical Framework for Artificial Intelligence as the analytical framework. The initial deduplication process preceded the screening phase, resulting in the exclusion of 669 publications, yielding 193 manuscripts for detailed evaluation against predefined eligibility criteria (delineated in Table 2). Primary literature was established as the fundamental source of empirical evidence. The inclusion criteria specified peer-reviewed, English-language articles published in 2024, with systematic exclusion of non-English manuscripts, conference proceedings, monographs,

literature reviews in press, and duplicate entries. The subsequent deduplication process resulted in the elimination of 32 additional publications.

**Table 2: The Selection Criterion Is Searching**

| Criterion | Inclusion | Exclusion |
|---|---|---|
| **Language** | English | Non-English |
| **Time line** | 2024 | >2023 |
| **Literature type** | Journal (Article) | Conference, Book, Review |
| **Publication Stage** | Final | In Press |
| **Subject Area** | Social Sciences, Arts and Humanities, Education | Beside Social Sciences, Arts and Humanities, Education |

*Eligibility*
In the third step, referred to as the eligibility phase, 161 articles were initially selected for review. At this stage, the titles and key content of each article were thoroughly evaluated to ensure they met the inclusion criteria and aligned with the research objectives. Consequently, 127 articles were excluded because they were either outside the relevant field, had insignificant titles, contained abstracts unrelated to the study's objectives, lacked full-text access, or were not based on empirical evidence. Ultimately, 34 articles were retained for the subsequent review.

*Data Abstraction and Analysis*
An integrative analysis was employed in this study as part of the assessment strategy to examine and synthesize various research designs, primarily using quantitative methods. The primary objective was to identify key topics and subtopics relevant to the study. The process began with data collection, which served as the foundation for theme development. As illustrated in Figure 2, the authors meticulously analyzed a compilation of 34 publications to extract assertions or content pertinent to the study's themes. Subsequently, significant studies related to the Ethical Framework for Artificial Intelligence were evaluated, focusing on methodologies and research findings.

The authors collaborated with co-authors to develop themes grounded in the evidence within the study's context. A log was maintained throughout the data analysis process to document analyses, interpretations, questions, or other reflections pertinent to data interpretation. Finally, the results were compared to identify any inconsistencies in the theme development process. In cases of disagreement between concepts, the authors engaged in discussions to resolve them collaboratively.

**Quality of Appraisal**
According to the guidelines proposed by Kitchenham and Charters (Kitchenham, 2007), once we had selected primary studied *(Primary studies refer to the original research articles, papers, or documents that are directly included in the systematic review after the initial selection process. These studies are considered the primary sources of evidence that are analyzed, assessed for quality, and compared quantitatively or qualitatively to answer the*

*research questions defined for the review.)*, we have to assess the quality of the research they present and quantitatively compare them. In this study we apply quality assessment from Anas Abouzahra et al. (Abouzahra, Sabraoui, and Afdel, 2020) which consist of six QAs for our SLR. The scoring procedure for evaluating each criterion involves three possible ratings: "Yes" (Y) with a score of 1 if the criterion is fully met, "Partly" (P) with a score of 0.5 if the criterion is somewhat met but contains some gaps or shortcomings, and "No" (N) with a score of 0 if the criterion is not met at all.

• QA1. Is the purpose of the study clearly stated?
• QA2. Is the interest and the usefulness of the work clearly presented?
• QA3. Is the study methodology clearly established?
• QA4. Are the concepts of the approach clearly defined?
• QA5. Is the work compared and measured with other similar work?
• QA6. Are the limitations of the work clearly mentioned?

The table outlines a quality assessment (QA) process used to evaluate a study based on specific criteria. Three experts assess the study using the criteria listed, and each criterion is scored as "Yes" (Y), "Partly" (P), or "No" (N). Here's a detailed explanation:

1. **Is the purpose of the study clearly stated?**
   o This criterion checks whether the study's objectives are clearly defined and articulated. A clear purpose helps set the direction and scope of the research.
2. **Is the interest and usefulness of the work clearly presented?**
   o This criterion evaluates whether the study's significance and potential contributions are well-explained. It measures the relevance and impact of the research.
3. **Is the study methodology clearly established?**
   o This assesses whether the research methodology is well-defined and appropriate for achieving the study's objectives. Clarity in methodology is crucial for the study's validity and reproducibility.
4. **Are the concepts of the approach clearly defined?**
   o This criterion looks at whether the theoretical framework and key concepts are clearly articulated. Clear definitions are essential for understanding the study's approach.
5. **Is the work compared and measured with other similar work?**
   o This evaluates whether the study has been benchmarked against existing research. Comparing with other studies helps position the work within the broader academic context and highlights its contributions.
6. **Are the limitations of the work clearly mentioned?**

Each expert independently assesses the study according to these criteria, and the scores are then totaled across all experts to determine the overall mark. For a study to be accepted for the next process, the total mark, derived from summing the scores from all three experts, must exceed 3.0. This threshold ensures that only studies meeting a certain quality standard proceed further.
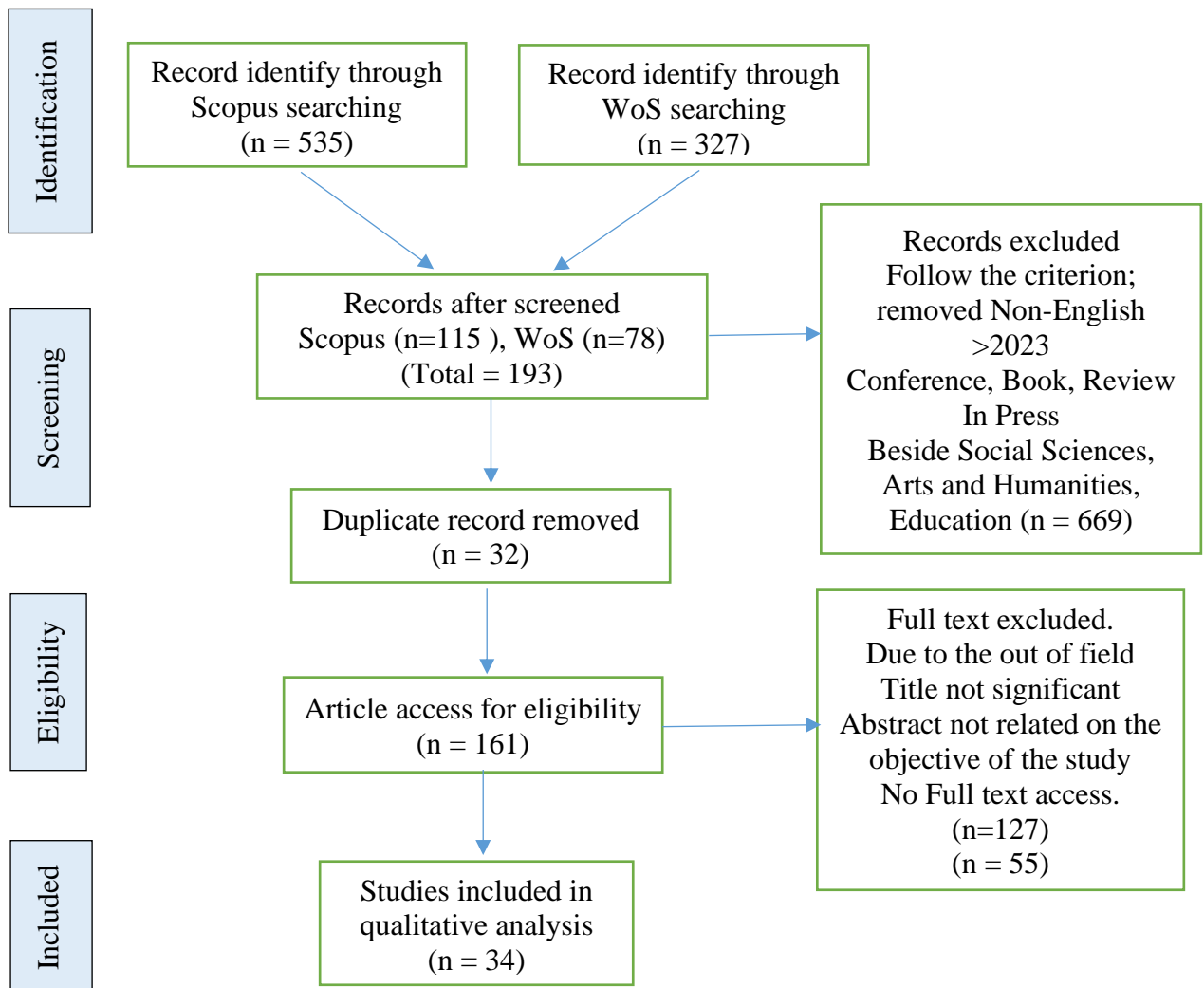
**Figure 2: Flow Diagram of The Proposed Searching Study**

## Result and Finding

Background of selected study: based on quality assessment, table 3 shown the result of assessment performance for selected primary studies.

The analysis of papers PS1 to PS34 using six quality assessment criteria (QA1–QA6) reveals strong methodological and conceptual clarity across the majority of the works. Most papers effectively stated their purpose (QA1) and highlighted the relevance of their research (QA2). Additionally, the methodologies (QA3) and conceptual definitions (QA4) were generally well-articulated, demonstrating a solid theoretical grounding. However, comparative analysis (QA5) and acknowledgment of limitations (QA6) were weaker aspects. Many papers did not sufficiently benchmark their findings against similar works or comprehensively discuss their research constraints. This trend underscores the need for a more critical and contextualized approach to presenting research findings.

The overall scores ranged from 4.0 to 5.5 out of 6, translating to percentages between 66.67% and 91.67%. Papers that performed well, such as PS1 and PS10, stood out for their clarity in

purpose, methodology, and acknowledgment of limitations. Conversely, lower-performing papers often lacked robust comparative insights and a detailed discussion of limitations. Despite these gaps, the collective body of work effectively addresses the ethical and practical dimensions of AI in higher education, offering valuable perspectives. To enhance the impact, future research should focus on thorough comparative analysis and a critical evaluation of limitations to strengthen the academic discourse.

**Table 3: Quality of Assessesment**

| PS | QA1 | QA2 | QA3 | QA4 | QA5 | QA6 | Total Mark | Percentage (%) |
|---|---|---|---|---|---|---|---|---|
| PS1 | 1 | 1 | 1 | 1 | 0.5 | 1 | 5.5 | 91.7 |
| PS2 | 1 | 1 | 0.5 | 1 | 1 | 0.5 | 5 | 83 |
| PS3 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS4 | 1 | 1 | 0.5 | 0.5 | 0.5 | 0.5 | 4 | 66.7 |
| PS5 | 1 | 1 | 0.5 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS6 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 100 |
| PS7 | 1 | 1 | 1 | 1 | 0.5 | 1 | 5.5 | 91.7 |
| PS8 | 1 | 1 | 0.5 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS9 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 100 |
| PS10 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 100 |
| PS11 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS12 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS13 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS14 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS15 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS16 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS17 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS18 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS19 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS20 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS21 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS22 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS23 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS24 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS25 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS26 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS27 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS28 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS29 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS30 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS31 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS32 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS33 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |
| PS34 | 1 | 0.5 | 1 | 1 | 0.5 | 0.5 | 4.5 | 75 |

**Summary:**

- *Highest Score*: The paper by Keane et al. achieved the highest score with 100% due to clear articulation of purpose, usefulness, methodology, defined concepts, comparison with other work, and mention of limitations.

- *Lowest Score*: The paper by Nahrawi et al. scored the lowest (66.67%), as it partly met the criteria for the concepts of approach and comparison with other work, and did not mention the limitations.

The produced themes were eventually tweaked to ensure consistency. The analysis selection was carried out by author and co-authors, to determine and determine the validity of the problems. The expert review phase ensures the clarity, importance, and suitability of each subtheme by establishing the domain validity. The authors also compared the findings to resolve any discrepancies in the theme creation process. Note that if any inconsistencies on the themes arose, the authors address them with one another. Finally, the developed themes were tweaked to ensure their consistency. The expert review phase helped ensure each sub-theme's clarity, importance, and adequacy by establishing domain validity. Adjustments based on the discretion of the author based on feedback and comments by experts have been made.

### Theme 1 Ethical Concerns and Academic Integrity

The integration of artificial intelligence (AI), particularly generative AI (GenAI), in higher education brings forth a range of ethical challenges, including concerns about privacy, bias, and academic integrity. Sobaih (Sobaih, 2024) highlights the risks of pseudoscience stemming from uncredited AI contributions in research, while underscores privacy and algorithmic biases associated with AI tools like ChatGPT (Williams, 2023). Cotton et al. (Cotton, Cotton, and Shipway, 2024) further emphasize challenges related to plagiarism and ethical lapses in content generation. These studies collectively underscore the pressing need for robust ethical guidelines to mitigate the potential misuse of AI in educational and research contexts, ensuring academic integrity is upheld.

Addressing these challenges requires a comprehensive and context-sensitive approach. Several researchers propose frameworks and strategies to safeguard ethical practices in AI usage. (Rasul, et al. 2024) advocate for a holistic academic integrity framework that engages students, educators, and institutions, including policies and training initiatives. Similarly, Hegazy et al. (Hegazy, et al. 2024) recommend intensive awareness programs to increase ethical compliance among postgraduate students, while (2024) (Cherner, Foulger, and Donnelly, 2024) present a generative AI decision tree to aid in ethical decision-making. These strategies collectively aim to create a culture of responsibility, emphasizing the importance of collaborative learning, policy development, and targeted training to adapt to the rapidly evolving educational landscape.

Localized and human-centered frameworks are pivotal for addressing AI's ethical challenges.. (Vetter, et al. 2024) introduce the concept of a "local ethic," advocating for classroom-specific ethical considerations to address the unique dynamics between teachers, students, and AI tools. (Airaj, 2024) further develops this perspective by proposing a human-centered model for equitable and ethical teaching-learning experiences. The need for a nuanced dialogue on AI's broader implications, balancing innovation with ethical concerns (Butson and Spronken-Smith, 2024). Together, these studies emphasize the necessity of adaptive, stakeholder-specific

strategies to navigate the complexities of AI integration in higher education while maintaining academic integrity (Figure 3).
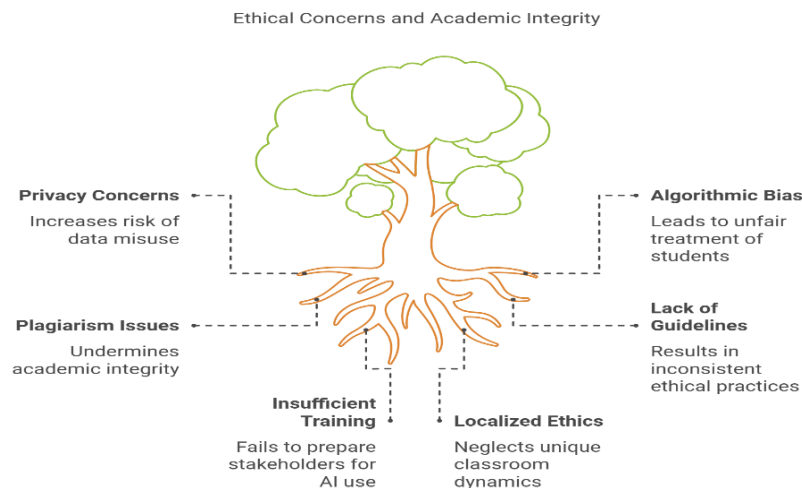


**Figure 3: Theme 1 Ethical Concerns and Academic Integrity**

### Theme 2: Pedagogical Strategies and Educational Impact

The integration of artificial intelligence (AI) in higher education has catalyzed significant shifts in pedagogical strategies and educational impact, as evidenced by various studies. AI applications have been shown to improve personalized learning experiences, address systemic inequities, and enhance the teaching-learning process. For instance, (Garcia Ramos and Wilson-Kennedy, 2024) advocate for equitable AI integration through the Universal Design for Learning (UDL) framework, which seeks to mitigate disparities in STEM education for minoritized groups. Similarly, (Hu, 2024) explores the use of generative AI chatbots in values clarification exercises, demonstrating improved ethical decision-making confidence and self-efficacy among university students. These findings highlight the transformative potential of AI in promoting inclusivity, critical thinking, and equity in educational contexts.

The effective implementation of AI in education also depends on robust institutional strategies and policies. (Wang et al. 2024) emphasize the importance of institutional resources and policy guidelines, such as syllabus templates, workshops, and multifaceted evaluation strategies, to support educators in integrating generative AI tools like ChatGPT. Similarly, (Alqahtani and Wafula, 2024) identify diverse approaches taken by universities, ranging from embracing AI for enhancing teaching efficiency to addressing ethical concerns such as data privacy and academic integrity. (Cacho, 2024) underscores the need for balanced, flexible guidelines that cater to faculty autonomy while maintaining ethical standards in AI usage. These strategies collectively stress the importance of institutional readiness and proactive policy-making to ensure responsible AI integration.

Furthermore, AI's role in shaping educational practices extends to fostering innovation and addressing future challenges. (Magrill and Magrill, 2024) recommend a holistic approach to AI education, emphasizing cross-disciplinary collaboration and ethical considerations to prepare students for an AI-driven world. (Shailendra, Kadel, and Sharma, 2024) propose a framework for adopting generative AI in university curricula, highlighting the need for

comprehensive stakeholder engagement, curriculum redesign, and evaluation mechanisms. (Slimi, Beatriz, and Carballido, 2023) further explore how AI enhances learning by automating administrative tasks and enabling personalized, efficient, and engaging educational experiences. Collectively, these studies underline the necessity for a structured yet adaptive approach to leveraging AI in higher education to meet evolving pedagogical and ethical demands (Figure 4).
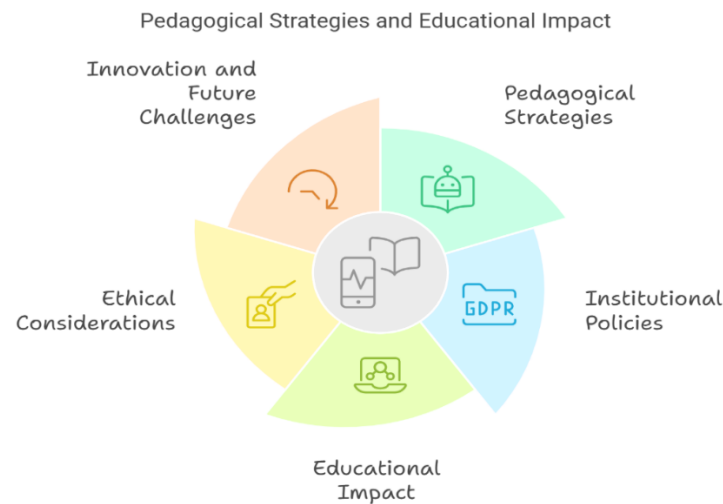


**Figure 4: Theme 2 Pedagogical Strategies and Educational Impact**

### Theme 3: Policies and Frameworks for AI Integration

The integration of artificial intelligence (AI) in higher education necessitates the development of comprehensive policies and frameworks to ensure ethical and effective implementation. Multiple studies emphasize the importance of regulatory guidelines to address concerns such as academic integrity, ethical dilemmas, and cultural implications. (Espinoza Vidaurre, et al. 2024) highlight the need for sustainable educational approaches that incorporate AI literacy while promoting academic integrity in Peru and Chile. Similarly, (Acosta-Enriquez, et al. 2024) stress the necessity of responsible use programs to educate students and faculty on AI tools like ChatGPT, focusing on ethical considerations such as privacy and misinformation.(Isiaku, et al. 2024) further underline the role of policies in mitigating the over-reliance on AI while maximizing its potential for productivity and creativity in academic settings.

Cultural diversity significantly influences perceptions and implementation strategies for AI in education. (Yusuf, Pervin, and Román-González, 2024) emphasize the correlation between cultural dimensions and views on AI's benefits and concerns, advocating for culturally responsive policies that align with local expectations. (Mumtaz, et al. 2024)explore variations in ethical perceptions across cultural clusters, revealing the need for tailored strategies that address regional attitudes towards AI usage. (Elbaz, et al. 2024) also highlights the influence of personal morality and religious ethics on students' attitudes towards AI tools, suggesting that ethical standards must consider cultural and moral contexts to foster responsible AI adoption. Collectively, these studies underscore the importance of culturally sensitive frameworks to navigate the complex landscape of AI in higher education.

Effective frameworks for AI integration must balance innovation with ethical governance. (Kruger-Roux, et al. 2024) advocate for participatory and adaptive policies that address both opportunities and risks associated with generative AI tools. (2024) (Cherner, et al. 2024) propose a decision tree model to guide stakeholders in ethical considerations when adopting AI technologies. (Ghandour, ElDin, and AlHarrasi, 2024) highlights the need for conceptual frameworks to offer precise guidelines for stakeholders, ensuring that AI integration aligns with educational values. (Aad and Hardey, 2024) emphasize the dual nature of generative AI as both a transformative tool and a potential disruptor of traditional pedagogical roles, calling for training and policy development to leverage AI's benefits while safeguarding academic integrity. These frameworks collectively aim to foster innovation while adhering to ethical principles, ensuring a balanced approach to AI integration (Figure 5).
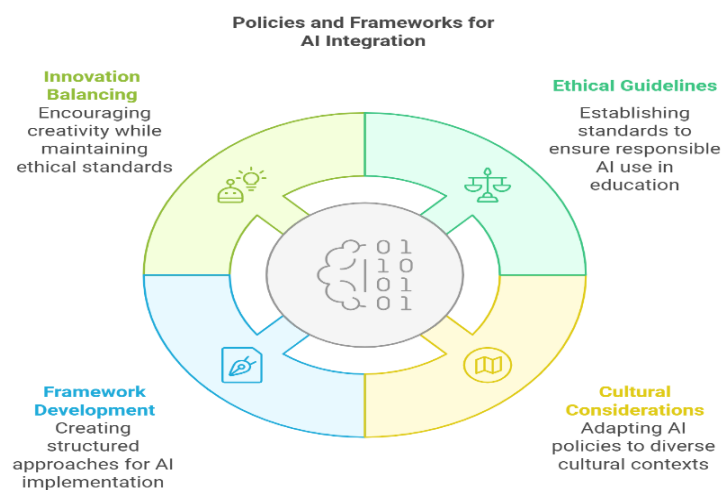


**Figure 5: Theme 3 Policies and Framework for AI Integration**

**Discussion and Conclusion**

*Paragraph issue 1 – T1*
The integration of artificial intelligence, particularly generative AI, in higher education presents significant ethical challenges, including concerns about privacy, algorithmic bias, and academic integrity. Uncredited AI contributions, plagiarism, and ethical lapses in content generation underscore the urgent need for robust guidelines and frameworks to ensure responsible use. Localized and human-centered approaches are essential for addressing these challenges, emphasizing classroom-specific strategies and equitable teaching models to align innovation with ethical standards. Collaborative efforts involving educators, policymakers, and students are critical to fostering a culture of accountability and trust. The successful incorporation of AI in higher education depends on adaptive policies, targeted training, and continuous dialogue to maintain academic integrity while leveraging AI's transformative potential.

*Paragraph issue 2 – T2*
The integration of artificial intelligence in higher education has significantly transformed teaching and learning practices by enhancing personalized learning, addressing inequities, and

fostering inclusivity. AI tools, such as generative chatbots, have improved ethical decision-making, self-efficacy, and critical thinking among students while enabling efficient, tailored educational experiences. Effective implementation requires robust institutional strategies, including comprehensive policies, resource allocation, and adaptive evaluation mechanisms, to address ethical concerns such as data privacy and academic integrity. Flexible frameworks that balance faculty autonomy with ethical standards are vital, alongside collaborative efforts and curriculum redesign to meet evolving demands. This structured yet adaptive approach ensures responsible AI integration, preparing educational institutions to navigate the complexities of an AI-driven future.

*Paragraph issue 3 – T3*
The integration of artificial intelligence in higher education requires comprehensive frameworks to address ethical challenges, including academic integrity, cultural diversity, and responsible usage. Structured policies that promote AI literacy and mitigate risks like misinformation and over-reliance are essential for fostering ethical and effective adoption. Culturally responsive approaches tailored to local values and moral contexts ensure alignment with diverse perceptions of AI's benefits and concerns. Balancing innovation with ethical governance, participatory policies, and decision-making tools is crucial for leveraging AI's transformative potential while maintaining educational integrity. These strategies aim to create an adaptive and accountable framework that aligns AI integration with ethical principles and supports sustainable educational practices.

This systematic review has successfully achieved its three primary objectives. First, in analyzing existing ethical frameworks for AI adoption in higher education, the study identified various approaches ranging from institutional policies to classroom-specific guidelines. Second, the research effectively identified key challenges including academic integrity concerns, privacy issues, and algorithmic bias, while also highlighting opportunities for enhanced learning experiences through responsible AI integration. Third, through synthesizing findings from 34 primary studies, this review has contributed to the development of comprehensive guidelines for responsible AI implementation in academic settings.

Several limitations of this study should be acknowledged. First, the review was limited to articles published in 2024, potentially missing valuable insights from earlier research. Second, the focus on English-language publications may have excluded relevant frameworks developed in other languages and cultural contexts. Third, the rapid evolution of AI technology means that some ethical considerations identified may require ongoing updates as new challenges emerge.

Future research directions should consider longitudinal studies examining the long-term impact of AI ethical frameworks on academic practices, cross-cultural comparative analyses of AI ethics implementation in different educational contexts, investigation of student perspectives on AI ethics in higher education, development of standardized assessment tools for evaluating the effectiveness of ethical frameworks, and exploration of emerging ethical challenges with advanced AI applications in education.

**Conflicts of Interest**
The authors declare that they have no conflicts of interest to report regarding the present study.

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