

Generative AI Governance in Higher Education (Systematic Literature Review)

Mohammed Abdullah Al Mutawtah

PhD in E-Research and Technology Enhanced Learning, Lancaster University, England

Email: mabdalmutawtah83@hotmail.com

Abstract:

Received:

6 May 2026

First Decision:

15 May 2026

Revised:

28 May 2026

Revised:

9 June 2026

Accepted:

21 June 2026

Published:

5 July 2026

Copyright © 2026

by Mohammed
Abdullah Al
Mutawtah and
AJRSP. This is an
open-access article
distributed under the
terms of the Creative
Commons
Attribution license
(CC BY NC).



This study aimed to provide a comprehensive review of generative AI governance in higher education during the period 2022–2026, in light of the rapid expansion of the use of big language models and content generation applications within universities. The study adopted a comprehensive scope review methodology, guided by the SALSA framework for the research, evaluation, synthesis, and analysis phases, and by PRISMA-ScR guidelines for documenting the review procedures. The study analyzed peer-reviewed scientific literature, sectoral, institutional, and regulatory frameworks, and selected university policies, with particular attention to the Arab context and research and regulatory gaps. The results showed that generative AI governance is not limited to addressing issues of cheating and plagiarism, but encompasses interconnected dimensions, most notably: academic integrity, privacy, transparency, disclosure, fairness, capacity building, human oversight, risk management, and assessment redesign. The study also indicated that the global trend is moving toward responsible and conditional use rather than outright prohibition or unregulated adoption. The study concluded that effective governance requires combining research evidence, sectoral frameworks, and institutional policies, while translating general principles into clear procedures at the university and course levels. It also revealed the need for more specialized policies that address privacy, linguistic equity, data protection, and the transparency. The study recommends developing flexible university guidelines, disclosure models, data use controls, ongoing training programs, and periodic review mechanisms that ensure a balance between innovation, quality of learning, and academic integrity.

Keywords: AI governance, generative AI, higher education, academic integrity, university policies, risk management, comprehensive review.

1. Introduction:

1.1. Background of the Study:

Since the end of 2022, higher education has witnessed a qualitative shift in its relationship with artificial intelligence (AI) technologies, particularly following the widespread adoption of generative AI applications based on large linguistic models, such as ChatGPT. These applications are now capable of producing academic texts, summarizing sources, generating research ideas, formulating questions, providing feedback, and assisting in programming, translation, and linguistic analysis. These capabilities have transformed generative AI from a mere educational support tool into a new actor influencing teaching, learning, assessment, scientific research, and knowledge management systems within higher education institutions (Kasneci et al., 2023; Lo, 2023).

Recent literature indicates that the use of artificial intelligence (AI) in higher education was already on the rise before the advent of generative AI tools. However, the subsequent rise of ChatGPT has reshaped the educational, ethical, and institutional debate with greater urgency. A review by Crompton and Burke (2023) showed that AI applications in higher education expanded into assessment, prediction, intelligent assistance, intelligent learning systems, and student learning management. However, generative AI added a new dimension beyond data analysis or decision support to content creation itself, presenting universities with complex challenges related to the quality of learning, the authenticity of academic achievement, the reliability of outputs, data protection, and equitable access to digital tools.

Therefore, the debate is no longer limited to the question: How can generative artificial intelligence be employed in education? The more important question has become: How can it be governed within higher education institutions in a way that balances innovation and responsibility? The literature indicates that these technologies offer promising educational opportunities, such as supporting personalized learning, facilitating access to knowledge, assisting faculty in preparing educational materials, and expanding research and academic writing capabilities. Conversely, they raise serious challenges related to information hallucinations, bias, privacy violations, reduced transparency, diminished critical thinking, and the potential for misuse in cheating, plagiarism, or the production of inauthentic academic work (Cotton et al., 2024; Kasneci et al., 2023; Lo, 2023).

This has led universities to move from a phase of rapid or partial response to one of needing to build more mature governance frameworks. Some institutions initially resorted to prohibition or restriction, while others adopted more open policies based on responsible and conditional use. Studies analyzing university policies reveal that the majority of universities that have issued guidelines on generative AI

tend to adopt an “open and cautious” stance; they allow its use in specific educational contexts but link it to controls related to academic integrity, privacy, the accuracy of outputs, disclosure of use, and the development of assessment methods (Wang et al., 2024). Furthermore, a study by Jin et al. (2025), which analyzed the policies of higher education institutions in six global regions, shows that university policies are increasingly focusing on academic integrity, improving teaching and learning practices, equitable access, and building AI competencies among students and faculty.

In the same vein, governance is no longer solely an internal institutional matter but has become linked to broader international and regulatory frameworks. UNESCO, in its guidelines on generative artificial intelligence in education and research, emphasized the need to adopt a humanistic perspective centered on learner protection, data privacy, human oversight, capacity building, and the development of coherent policies to regulate the use of these technologies in education and research (Miao & Holmes, 2023). UNESCO’s Recommendation on the Ethics of Artificial Intelligence also provides a global normative foundation based on human rights, human dignity, transparency, equity, and human oversight (UNESCO, 2022). In the regulatory context, the European AI Act represents a prominent model of risk-based regulation, classifying certain uses of AI in education and training as high-sensitivity areas when they relate to admission, assessment, or the determination of educational pathways (European Parliament and Council of the European Union, 2024). NIST’s framework for managing generative AI risks also provides a practical perspective for higher education institutions by focusing on governance, risk mapping, measurement, and management across the lifecycle of AI systems (NIST, 2024).

Consequently, the governance of generative AI in higher education emerges as an emerging research field where educational, ethical, legal, technical, and institutional dimensions intersect. Governance here is not limited to establishing a general usage policy, but encompasses building an integrated system that defines responsibilities, oversight mechanisms, disclosure standards, acceptable usage limits, data protection procedures, evaluation controls, stakeholder training requirements, and mechanisms for periodic policy review. This is confirmed by the study by Crompton et al. (2026), which, based on a global Delphi study, developed a framework for the governance of generative AI in higher education comprising eight key areas: academic integrity, ethical and responsible use, privacy and protection, equitable access, generative AI literacy, integration strategy, human oversight and accountability, and institutional support and infrastructure.

1.2. Problem Statement:

Despite the increasing number of studies addressing the use of generative artificial intelligence (GI) in higher education, the governance aspect still suffers from conceptual and methodological

fragmentation. Much of the literature has focused on educational opportunities or the challenges of academic integrity, while a comprehensive governance approach remains less developed, particularly regarding linking university policies to international frameworks, analyzing stakeholder roles, identifying accountability mechanisms, and building models applicable to different university environments. This gap is even more pronounced in non-Western contexts, including the Arab context, where the Arabic literature on generative AI governance in higher education remains limited compared to the rapid pace of technological and institutional transformation.

The main challenge is that generative artificial intelligence has entered the university environment at a pace that has outpaced many institutions' ability to develop clear and up-to-date policies. This situation has created a gap between the actual use of these tools by students, researchers, and faculty members, and the universities' capacity to regulate this use according to principles of academic integrity, data protection, fairness, transparency, and accountability. Furthermore, simply resorting to bans or relying on automated text detection tools is not a sufficient governance solution, as the problem runs deeper than just plagiarism control. It involves redefining learning, assessment, academic writing, the boundaries of acceptable assistance, and the institution's responsibility to guide responsible use.

Accordingly, this study stems from the need for a comprehensive and systematic review of the scientific literature, regulatory frameworks, and institutional policies related to the governance of generative artificial intelligence in higher education during the period from 2022 to 2026, with the aim of building an integrated analytical understanding of the governance dimensions, revealing research and regulatory gaps, and proposing a conceptual framework that can contribute to guiding higher education institutions, especially in Arab environments, towards adopting more consistent and responsible policies.

1.3. Research Questions:

This study seeks to answer the following main question:

What are the dimensions of generative AI governance in higher education as reflected in peer-reviewed scientific literature, regulatory frameworks, and institutional policies published during the period 2022–2026?

The following sub-questions stem from this main question:

1. What theoretical approaches have addressed generative AI governance in higher education?
2. Which governance dimensions are most prominent in previous studies, such as academic integrity, privacy, transparency, accountability, equity, and capacity building?
3. How have sectoral, institutional, and regulatory frameworks addressed generative AI issues related to education and research?

4. How have universities globally responded to the use of generative AI through institutional policies and guidelines?
5. What is the position of Arabic literature and contexts within the global debate on generative AI governance in higher education?
6. What research and regulatory gaps does this comprehensive review reveal?

1.4. Study Objectives:

This study aims to provide a comprehensive review of generative AI governance in higher education by analyzing relevant peer-reviewed literature, regulatory frameworks, and institutional policies during the period 2022–2026. The following sub-objectives stem from this overarching goal:

1. Identifying the main theories related to generative AI governance in higher education.
2. Classifying recurring governance dimensions in the literature, including academic integrity, data governance, privacy, transparency, accountability, fairness, and human oversight.
3. Analysis of the sectoral, institutional and regulatory frameworks related to the governance of generative artificial intelligence in higher education.
4. Examining university response patterns through institutional policies and guidelines related to generative AI.
5. Highlighting research and regulatory gaps, particularly in the Arab context.

1.5. Significance of the Study

The theoretical significance of this study stems from the novelty and multifaceted nature of its subject matter. It contributes to developing a structured academic understanding of the governance of generative artificial intelligence (AI) in higher education, a field still in its formative stages.

The study also bridges the gap between the literature on AI in education, digital governance, AI ethics, and higher education policies. This allows for a move beyond a piecemeal approach that focuses solely on cheating or plagiarism, towards a more comprehensive perspective that considers the university as an integrated governance system.

The practical significance lies in the study's potential to provide a knowledge base for university decision-makers, higher education regulatory bodies, quality assurance and accreditation centers, and academic leaders. This will enable them to develop clear policies for the use of generative AI.

Furthermore, it can help faculty members understand the boundaries of responsible use, support the design of more authentic assessments, and guide students towards more conscious and ethical practices. This study is of increasing importance in the Arab context in light of the need for governance

frameworks that take into account linguistic, cultural and organizational specificities, while benefiting from global experiences and international standards.

1.6. Study Limitations

This study adheres to specific thematic, temporal, linguistic, and methodological boundaries.

- Thematically, it focuses on the governance of generative artificial intelligence (GI) in higher education, addressing AI in general only insofar as it contributes to the conceptual framework. It does not concentrate on purely technical aspects related to model building or algorithms, but rather on the dimensions of governance, policies, risks, and institutional use.
- Temporally, the study covers literature published between 2022 and 2026, a period that witnessed the most significant shift in the use of generative AI tools in higher education. Some references prior to 2022 may be used within the theoretical framework only if they establish the concept of governance or AI ethics, without being included in the main analytical sample.
- Linguistically, the study relies on literature published in both Arabic and English. In terms of methodological boundaries, the study adopts a comprehensive zoning review methodology, guided by the SALSA framework in the search, evaluation, synthesis, and analysis phases, and by PRISMA-ScR guidelines in documenting search, screening, inclusion, and exclusion procedures.

1.7. Study Terminology

In this study, generative artificial intelligence (GAI) refers to a class of AI systems capable of generating new content in response to inputs or commands. This includes text, images, code, summaries, questions, feedback, and other outputs relevant to education and research.

Generative AI governance refers to the system of principles, policies, procedures, and institutional mechanisms that regulate the use of GAI tools within higher education institutions. This ensures responsible use and protects academic integrity, privacy, fairness, transparency, accountability, human oversight, and the quality of education and assessment.

In this study, higher education refers to universities, colleges, and post-secondary education institutions that offer academic, professional, or research programs. This includes teaching, learning, assessment, supervision, scientific research, and related academic and administrative services. A comprehensive scope review means a review methodology that aims to map the literature, frameworks and policies related to an emerging or multidimensional topic, classify its axes and identify research and organizational gaps, without being limited to measuring the impact of a specific intervention or testing a narrow hypothesis.

2. Conceptual and Theoretical Framework:

2.1. Introduction:

The conceptual and theoretical framework of this study serves as the basis for situating generative AI governance within higher education as a complex issue that extends beyond the technical use of tools to encompass the organization of the relationship between humans, institutions, algorithms, and academic knowledge. Higher education does not treat generative AI as a neutral digital application, but rather as a socio-cognitive technology that influences the production, evaluation, dissemination, and attribution of knowledge, as well as the roles of students, faculty, and university administrations. Therefore, understanding this phenomenon requires constructing a framework that integrates the concepts of generative AI, AI governance, educational ethics, and academic quality and integrity policies.

2.2. Theoretical Foundations Explaining the Governance of Generative Artificial Intelligence in Higher Education

The theoretical framework of this study is constructed by integrating five theoretical lenses that help explain and analyze the phenomenon.

1- Socio-technical systems theory provides an important entry point for understanding generative artificial intelligence in universities. Technology does not operate in a vacuum, but rather within social, organizational, and cultural contexts that determine how it is used and its effects. From this perspective, the issue is not simply the existence of a tool like ChatGPT, but rather the way in which roles are redistributed among students, professors, the curriculum, and the technological system. Bearman et al. (2023) demonstrated that the discourse on artificial intelligence in higher education is linked to a socio-technical transformation and a reshaping of power and agency in academic work, where humans are no longer the sole actors in the production and organization of knowledge.

2- The responsible innovation approach provides a basis for analyzing the balance between leveraging the potential of generative AI and mitigating its negative impacts. This approach does not reject innovation, but rather stipulates that it must be values-driven, reflective, participatory, responsive, and proactive. In higher education, this means that universities should not adopt generative AI tools simply because they are available or popular, but because they serve clear educational objectives, are subject to ethical and institutional evaluation, and consider their implications for learning, equity, and privacy.

3- Risk-based governance provides a suitable framework for classifying generative AI uses according to their sensitivity. Not all uses are created equal; using a tool to generate initial examples differs from using it to assess students, make admission decisions, or analyze personal data. Therefore, a university

can permit some low-risk uses, impose conditions on medium-risk uses, and prohibit or restrict high-risk uses. This logic is consistent with the NIST AI RMF and the European Artificial Intelligence Act, which link controls to the degree of risk and the nature of the impact (European Parliament and Council of the European Union, 2024; NIST, 2023).

4- Stakeholder theory is useful in analyzing the distribution of responsibilities within the university. The governance of generative AI is not solely the responsibility of senior management; it also involves students, faculty members, researchers, IT units, teaching and learning centers, ethics committees, quality assurance centers, libraries, legal advisors, and technology providers. Each stakeholder has a different interest and responsibility. Students are responsible for disclosure and ethical use, faculty members for designing clear tasks and assessments, the institution for policy, training, and safeguards, and the technology provider for transparency, security, and data protection.

5- The diffusion theory of innovations provides a framework for understanding the varying responses of universities to generative AI. Some universities may adopt the technology rapidly, while others hesitate or impose strict limitations. Jin et al. (2025) used this theory to analyze generative AI adoption policies in global universities, focusing on innovation characteristics such as relevance, testability, and observability, as well as communication channels and institutional roles. This is relevant to the current study because it demonstrates that governance is not merely a regulatory document, but rather an institutional adoption process influenced by the university's culture, capabilities, resources, and discourse surrounding the technology.

2.3. Governance Dimensions of Generative AI in Higher Education

Based on international literature and frameworks, eight key governance dimensions have been identified as forming the conceptual framework for this study.

The first dimension is academic integrity. This includes issues of cheating, plagiarism, originality, disclosure of the use of AI tools, and the limits of acceptable assistance in assignments and research. Cotton et al. (2024) noted that tools such as ChatGPT pose direct challenges to academic integrity because they enable students to produce work that appears original without necessarily reflecting their actual learning. However, governance measures should not be limited to detecting cheating; they should also include redesigning the grading system, clarifying expectations, and training students in ethical use.

The second-dimension concerns data governance and privacy. Many generative AI tools operate through external platforms, and users may inadvertently enter personal, research, or institutional data into these tools without understanding its implications. Therefore, governance should include clear

rules regarding permissible and prohibited data, consent mechanisms, student data protection, and compliance with relevant national and international laws.

The third dimension is transparency and disclosure. This means that students and faculty members should know when and how the tool may be used, that its use in academic work should be disclosed when appropriate, and that policies should be clear and unambiguous. Transparency also requires clarifying the limits of automated transcription tools and ensuring they are not used punitively without fair verification, given the potential for error and bias.

The fourth dimension is accountability and human oversight. Reliance on generative artificial intelligence does not eliminate human responsibility for academic or research decisions. Therefore, decisions regarding evaluation, admission, formal feedback, research supervision, and scientific publication should remain subject to responsible human oversight. International frameworks emphasize that human oversight is a fundamental principle for ensuring the safe and equitable use of artificial intelligence (UNESCO, 2022).

The fifth dimension is equity and inclusion. This includes ensuring that generative AI does not widen the gap between students who have access to advanced, paid tools and those who do not, or between speakers of languages strongly supported in models and speakers of underrepresented languages. In the Arab context, this dimension is particularly important due to language issues, the quality of Arabic content, differences in digital infrastructure, and varying policies among universities.

The sixth dimension is capacity building and AI literacy. Governance is not successful simply by issuing policies; it requires empowering users to understand the potential, limitations, and risks of AI. UNESCO's AI competency frameworks for teachers and students emphasize the importance of building knowledge, skills, and values that enable the safe, ethical, and responsible use of AI (Miao & Cukurova, 2024; UNESCO, 2024).

The seventh dimension is assessment governance and the quality of learning. Generative AI requires a re-evaluation of tasks that measure rote memorization or superficial text production, and a shift towards more authentic, contextual, cumulative, oral, reflective, and process-based assessments. The question is no longer simply: Did the student use the tool? But rather: Did the student achieve the learning outcomes? And was the use of the tool a legitimate part of the learning process or a replacement for it?

The eighth dimension is institutional support and infrastructure. This includes governance committees, support units, guidance manuals, ongoing training, consultation channels, disclosure models, updated policies, and mechanisms for periodic evaluation.

Crompton et al. (2026) developed a framework encompassing eight key areas for generative AI governance in higher education, including academic integrity, ethical and responsible use, privacy, equitable access, generative AI literacy, integration strategy, human oversight and accountability, and institutional support and infrastructure.

Based on the foregoing, the study's subsequent analysis relies on governance dimensions as a general conceptual framework to facilitate the interpretation of previous studies and sectoral, institutional, and organizational frameworks. These dimensions are not used to rigidly categorize all sources, but rather to guide comparative analysis and identify areas of agreement, disagreement, and research and organizational gaps in the governance of generative artificial intelligence in higher education.

3. Methodology:

3.1. Study Design:

This study adopted the Scoping Comprehensive Review methodology as the most suitable design for studying the governance of generative artificial intelligence in higher education. This is due to the novelty of the topic, its multifaceted educational, ethical, organizational, and technical dimensions, and the diverse sources of knowledge related to it, including peer-reviewed academic studies, international frameworks, university policies, and institutional guidelines. Scoping is particularly appropriate for emerging topics that require mapping knowledge, identifying key concepts, classifying trends, and uncovering research and organizational gaps, rather than measuring the impact of a specific intervention as in traditional systematic reviews or meta-analyses (Arksey & O'Malley, 2005; Peters et al., 2020; Tricco et al., 2018).

The study was guided by the SALSA framework, which includes four interrelated phases: Search, Appraisal, Synthesis, and Analysis, to organize the review procedures and ensure their methodological consistency (Grant & Booth, 2009). It was also guided by the PRISMA-ScR guidelines for reporting on scope reviews, which enhances the transparency of the presentation of search, screening, inclusion, and exclusion procedures (Tricco et al., 2018).

3.2. Scope of the Review:

The review covered the period from 2022 to 2026, a period that witnessed the wider adoption of generative AI tools in higher education, particularly following the emergence of ChatGPT and the shift in academic discourse from experimental use to policy and governance issues.

The review included published sources in both Arabic and English, focusing on higher education, universities, scientific research, assessment, and institutional policies. The search, screening, and analysis procedures were structured around the study's problem, objectives, and questions as presented

in the introduction, without extending the review to general education or the purely technical aspects of model building.

3.3. Data Sources and Research Strategy:

The study relied on two types of sources: peer-reviewed academic sources and reliable organizational or institutional sources. Academic sources included global databases such as Scopus, Web of Science, ERIC, ScienceDirect, SpringerLink, Taylor & Francis Online, and Wiley Online Library, in addition to Google Scholar as an auxiliary source for citation tracking. Arabic sources included databases such as Dar Al-Manzoma, Al-Manhal, Shamaa, peer-reviewed Arabic educational journals, and repositories of Arab universities.

The review also included documents issued by reliable international, organizational, and institutional bodies, such as UNESCO, the OECD, the European Commission, and NIST, in addition to publicly published university policies and some relevant Arab and regional frameworks or initiatives. These documents were included because they represent an essential part of the governance topic, as governance is not only reflected in peer-reviewed articles but is also embodied in policies, guidelines, organizational frameworks, and institutional usage protocols.

The study employed a bilingual search strategy, utilizing English keywords such as: Generative AI governance, GenAI in higher education, ChatGPT policy, AI governance in universities, responsible AI, AI ethics in higher education, academic integrity and generative AI, generative AI guidelines, and AI risk management in education. Arabic keywords were also used.

The AND and OR operators were employed according to the requirements of each database, in addition to backward and forward tracing of pivotal sources to ensure that influential studies were not overlooked.

3.4. Inclusion and Exclusion Criteria

References that met the following criteria were included:

- They were published between 2022 and 2026 and addressed generative AI, ChatGPT, or large language models.
- They were related to higher education, universities, or scientific research and addressed at least one dimension of governance, such as academic integrity, privacy, transparency, accountability, fairness, institutional policies, risk management, or capacity building.
- They were published in a peer-reviewed scientific journal or by an international organization, regulatory body, university, or reputable government entity.

References that addressed AI in general without a clear focus on generative AI or higher education, purely technical studies that did not include an educational or governance dimension, unreviewed journalistic articles or personal opinions, duplicate studies, and sources whose full text was unavailable or that did not provide data that could be analyzed within the review objectives were excluded.

3.5. Screening and Source Selection Procedures:

The source selection process was conducted in three stages:

- 1- Records were collected from databases and institutional sources, and duplicates were removed.
- 2- Titles and abstracts were examined to determine their initial relevance to the study topic.
- 3- The full texts of the shortlisted sources were read, and the final inclusion and exclusion criteria were applied.

The search and screening process will be presented in the final version of the study using a flowchart according to PRISMA-ScR guidelines. This flowchart will show the number of records identified, the number of records after duplicate removal, the number of sources excluded after title and abstract examination, the number of full texts assessed for eligibility, and the number of sources included in the final analysis. Final figures are not included in this stage until after the actual database search has been conducted to avoid using unreliable numbers. The final number of sources suitable for analysis ranged from 49, including 20 peer-reviewed studies and reviews, and 19 sectoral, institutional, regulatory frameworks, and selected university policies.

3.6. Data Extraction and Analysis

A form was designed to extract data from the sources included in the review, aiming to standardize the reading and analysis of the scientific and regulatory material. The form included bibliographic, methodological, and analytical fields appropriate to the nature of the study sources, whether they were peer-reviewed scientific studies, sectoral, institutional, and regulatory frameworks, or university policies and institutional guidelines.

For peer-reviewed studies, the form extracted the study title, author's name, publication year, country or geographic area, study objectives, methodology, and key findings and recommendations. For sectoral, institutional, and regulatory frameworks, the form extracted the document or framework name, issuing body, scope, regulatory or advisory nature, and the governance principles or requirements it provides for higher education. For university policies and guidelines, the form extracted the university name, the policy or guide title, the document nature, scope of application, and the rules or guidelines related to the use of generative artificial intelligence in teaching, assessment, and research.

The extracted data was used to classify and thematically analyze sources according to key review axes, include academic integrity, privacy and data governance, transparency and disclosure, equity and accessibility, assessment and quality of learning, capacity building, and institutional responsibility and risk management. The results were then analyzed using a thematic synthetic analysis, comparing studies, frameworks, and policies to identify areas of agreement, disagreement, and research and organizational gaps. These findings were then linked to the study's objectives and questions, as well as to the governance dimensions outlined in the theoretical framework.

3.7. Review Reliability and Limitations

To enhance the review's reliability, the study utilized multiple databases, employed diverse keywords in both Arabic and English, distinguished between peer-reviewed studies and institutional documents during analysis, and applied predefined inclusion and exclusion criteria. Furthermore, it utilized citation tracking for pivotal sources. The study also adhered to APA7 academic citation standards and distinguished between research evidence and regulatory or normative sources.

However, the review has several limitations. The field's novelty and rapid evolution may lead to the emergence of new studies or policies after the research is completed. Additionally, some university policies may not be publicly available, potentially limiting the global representation of institutional responses. Moreover, the Arabic literature on generative AI governance in higher education may be relatively limited, making the analysis of the Arab context more likely to identify research gaps and opportunities than to offer broad, definitive generalizations.

4. Analysis of previous studies and international frameworks related to the governance of generative artificial intelligence in higher education

4.1. Previous studies

4.1.1. Introduction:

Previous studies on generative AI in higher education reveal a clear expansion in research approaches since 2022. The literature has shifted from an initial focus on the potential and immediate risks of tools like ChatGPT to a more nuanced treatment of issues such as academic integrity, institutional policies, assessment, privacy, equity, capacity building, and accountability. It is noteworthy that peer-reviewed studies have not always addressed governance as an explicit concept, but rather have explored its core elements by analyzing uses, risks, policies, student and faculty perceptions, and ethical and regulatory challenges.

Accordingly, Table (1) presents an analytical matrix of twenty peer-reviewed studies directly or closely related to the governance of generative artificial intelligence in higher education. These studies

are categorized according to thematic axes reflecting key literature trends: educational opportunities and the research landscape; academic integrity, ethics, and bias; institutional policies and university governance; assessment, originality, and teaching; and adoption, capacity building, and the Arab context. This categorization helps move beyond the traditional descriptive presentation of previous studies toward an analytical reading that reveals the contribution each study makes to understanding the governance of generative artificial intelligence in higher education.

Table 1. Analysis of previous studies according to the dimensions of generative AI governance in higher education

No	Title and author/s name	Country/Region	Objectives and Methodology	Key findings and recommendations
First axis: Educational opportunities and research field map				
1	Kasneci et al. (2023). <i>ChatGPT for Good? On Opportunities and Challenges of Large Language Models for Education.</i>	International	It aimed to analyze the opportunities and challenges of large-scale language models in education, and used a multidisciplinary analytical study.	The study demonstrated that LLMs offer opportunities for personalized learning, feedback, writing, and cognitive support, but also raise challenges related to bias, hallucinations, over-reliance, and the need for critical thinking skills. The study supports the necessity of guiding their use with clear educational and ethical policies.
2	Lo (2023). <i>What Is the Impact of ChatGPT on Education? A Rapid Review of the Literature</i>	International	To provide a quick review of the impact of ChatGPT in education, a quick literature review was used.	The study showed that ChatGPT has educational potential in supporting learning and writing, but it poses risks related to accuracy, integrity, and over-reliance. It recommended caution in its integration and the development of clear guidelines for educational use.

3	Crompton & Burke (2023). <i>Artificial Intelligence in Higher Education: The State of the Field.</i>	International	The study aimed to analyze the state of artificial intelligence in higher education and trends in its use, and employed a literature review.	The study showed that AI applications in higher education have expanded into assessment, prediction, intelligent assistance, and adaptive learning. Its findings support the need for institutional policies that consider the transition from analytical to generative AI.
4	Dai et al. (2026). <i>Generative AI in Higher Education: A Bibliometric Review of Emerging Trends, Power Dynamics, and Global Research Landscapes.</i>	International	The study aimed to create a bibliometric map of GenAI literature in higher education during 2022–2025, and the study used a bibliometric analysis of thousands of articles from Web of Science.	The study revealed a rapid growth in research output, the dominance of certain countries and institutions in published knowledge, and the emergence of topics related to integrity, ethics, politics, and justice. It underscores the need for broader geographical and contextual representation in governance research.
The second axis: academic integrity, ethics, and bias				
5	Cotton et al. (2024). <i>Chatting and Cheating: Ensuring Academic Integrity in the Era of ChatGPT.</i>	UK/Higher Education	The study aimed to analyze the impact of ChatGPT on academic integrity, and used a critical analytical study.	The study confirmed that ChatGPT poses direct challenges to academic integrity due to its ability to produce seemingly authentic texts. It recommended not only relying on detection tools but also redesigning the academic calendar, clarifying usage limits, and fostering a culture of integrity.

6	Bittle & El-Gayar (2025). <i>Generative AI and Academic Integrity in Higher Education: A Systematic Review and Research Agenda.</i>	International	The study aimed to review the impact of GenAI on academic integrity in higher education, and the study used a systematic review.	The study concluded that GenAI offers educational opportunities but increases the risk of academic dishonesty. It recommended clear policies, student education, the adoption of authentic assessment methods, and avoiding complete reliance on automated transcription tools.
7	Li et al. (2024). <i>Ethical Implications of ChatGPT in Higher Education: A Scoping Review.</i>	International/ Multilingual	The study aimed to explore the ethical challenges of using ChatGPT in higher education, and employed a scoping review.	The study found that the most prominent ethical issues are academic integrity, assessment, and data protection. It recommended further empirical research and the development of clear ethical policies for the use of ChatGPT in universities.
8	Li et al. (2025). <i>Potential Societal Biases of ChatGPT in Higher Education: A Scoping Review.</i>	International/ Multilingual	The study aimed to analyze potential societal biases associated with the use of ChatGPT in higher education, and the study used a scoping review.	The study highlighted the limited in-depth treatment of biases in higher education literature, the dominance of English-speaking contexts, and the weakness of studies in the humanities and social sciences. It supports the need for governance that considers linguistic and cultural equity.
Third axis: Institutional policies and university governance				
9	Wang et al. (2024). <i>Generative AI in Higher</i>	US	The study aimed to analyze the policies and guidelines of the	The study showed that most universities adopt an open yet cautious stance toward GenAI,

	<i>Education: Seeing ChatGPT Through Universities' Policies, Resources, and Guidelines.</i>		top 100 American universities regarding GenAI. The study used university policy and document analysis.	focusing on ethics, privacy, and the accuracy of the results. It recommended specialized policies, the management of sensitive information, and the development of assessment methods.
10	Jin et al. (2025). <i>Generative AI in Higher Education: A Global Perspective of Institutional Adoption Policies and Guidelines.</i>	International	The study aimed to analyze GenAI adoption policies in global universities from the perspective of innovation diffusion, and the study used institutional policy analysis using innovation diffusion theory.	The study showed that policies focus on academic integrity, teaching and learning, equity, and building AI competencies. It also highlighted the need for more comprehensive frameworks to address privacy, equitable access, and the roles of stakeholders.
11	Crompton et al. (2026). <i>Governing Generative AI in Higher Education: A Global Delphi Study on Policy and Practice.</i>	International	The study aimed to develop a global framework for GenAI governance in higher education, and the study used a global Delphi study with the participation of experts from 22 countries/regions and six continents.	The study concluded with a framework of eight areas: academic integrity, ethical and responsible use, privacy, equitable access, GenAI literacy, integration strategy, human oversight and accountability, and institutional support and infrastructure.
12	Dotan et al. (2024).	US	The study aimed to develop a responsible	The study emphasized that GenAI governance at the

	<i>Responsible Adoption of Generative AI in Higher Education: Developing a “Points to Consider” Approach Based on Faculty Perspectives.</i>		approach to adopting GenAI in higher education based on faculty perceptions, and the study used a participatory qualitative/process study and focus groups.	university should prioritize shared academic governance, academic freedom, and teaching and research objectives, rather than imposing a rigid, centralized model. It also provided benchmarks to help universities adopt this approach responsibly.
The fourth axis: Evaluation, authenticity, and teaching				
13	Luo (2024). <i>A Critical Review of GenAI Policies in Higher Education Assessment: A Call to Reconsider the “Originality” of Students’ Work.</i>	International universities	The study aimed to critically analyze GenAI policies related to university calendar and authenticity, and the study used a policy analysis of 20 universities using the WPR framework.	The study revealed that many policies portray GenAI as a threat to authenticity and called for a rethinking of the concept of authenticity in the digital environment. It recommended more authentic assessments and a clearer definition of acceptable assistance.
14	Lee et al. (2024). <i>The Impact of Generative AI on Higher Education Learning and Teaching: A Study of Educators’ Perspectives.</i>	Australia	The study aimed to explore faculty members' perceptions of the impact of GenAI on teaching and learning, and it used a mixed methodology: surveys and interviews.	The study revealed academics' concerns about GenAI's impact on integrity and assessment, despite their awareness of its educational potential. It recommended providing institutional support and training for academics on responsible pedagogical integration.

15	Belkina et al. (2025). <i>Implementing Generative AI (GenAI) in Higher Education: A Systematic Review of Case Studies.</i>	International	The study aimed to review experimental case studies that incorporated GenAI into university teaching and learning, and the study used a systematic review of experimental case studies.	The study showed that integrating GenAI can support learning, feedback, and educational efficiency, but it needs conscious educational design, clear guidelines, and a balance between innovation and integrity.
Fifth axis: Adoption, capacity building, and the Arab context				
16	Chan & Hu (2023). <i>Students' Voices on Generative AI: Perceptions, Benefits, and Challenges in Higher Education.</i>	Hong Kong	The study aimed to explore university students' perceptions of GenAI, its benefits and challenges, and the study used a survey of university students.	The study revealed positive trends toward GenAI in learning, while also highlighting concerns regarding accuracy, privacy, ethics, and its impact on personal and professional growth. Its findings support student involvement in policymaking.
17	Baek et al. (2024). <i>ChatGPT Seems Too Good to Be True": College Students' Use and Perceptions of Generative AI.</i>	US	The study aimed to examine university students' use of and perceptions of ChatGPT, and the study used a quantitative survey on 1001 university students.	The results showed that ChatGPT usage is influenced by age, specialization, type of institution, and institutional policies. The study recommended providing guidance to students and developing policies that take into account the different usage patterns among different groups.

18	Barus et al. (2025) <i>Shaping Generative AI Governance in Higher Education: Insights from Student Perception.</i>	Indonesia	The study aimed to explore students' perceptions of GenAI governance in higher education, and the study used a mixed approach with a sequential interpretive design.	The study showed that students support the integration of GenAI, but they demand clear guidelines, ethical training, and mechanisms to prevent misuse. It recommended involving students in developing governance policies.
19	Al-Mamary et al. (2025). <i>Empowering ChatGPT Adoption in Higher Education.</i>	Saudi Arabia	The study aimed to analyze university students' intention to adopt ChatGPT, and the study used a quantitative approach based on the theories of self-determination and the technology-to-performance chain.	The study showed that ChatGPT adoption is influenced by psychological and technical factors such as autonomy, competence, and the suitability of the technology for performance. Its findings support the importance of building student competencies and providing clear institutional guidance.
20	Assad & Alomari (2026). <i>A Systematic Literature Review of ChatGPT Adoption in Arab Higher Education.</i>	Arab context	The study aimed to review the adoption of ChatGPT in Arab higher education, and the study used a systematic review of 40 articles published between 2023 and 2025.	The study revealed that Arabic literature focuses on personal learning, skills development, enhancing learning experiences, writing, and translation, but suffers from limited theoretical frameworks and geographical representation. This underscores the need for more Arabic studies focused on governance.

4.1.2 Analytical Review of Previous Studies

Table (1) shows that previous studies on generative artificial intelligence in higher education are distributed among foundational studies, methodological reviews, policy studies, and field studies. These studies reveal that GenAI governance cannot be limited to the issue of academic integrity alone, although integrity was the most prominent approach in the early literature. Studies such as Cotton et al. (2024) and Bittle and El-Gayar (2025) showed that text generation tools pose direct challenges to the originality of academic work, but at the same time, they emphasized that detection tools alone are insufficient, and that a governance solution requires redesigning assessment, clarifying the limits of use, and building a responsible academic culture.

Studies also show that institutional policies have become a prominent focus in GenAI literature. Wang et al. (2024) and Jin et al. (2025) revealed that universities are gradually adopting an open yet cautious approach, permitting conditional use and linking it to disclosure, privacy, output accuracy, fairness, and capacity building. This means that university governance is no longer based on a simplistic "prohibit" or "allow" dichotomy, but rather on flexible and gradual regulation that considers the diversity of disciplines, courses, and risks.

Assessment studies, particularly Luo (2024), confirm that generative AI necessitates a re-evaluation of the concept of academic authenticity. Authenticity no longer means the complete absence of digital tools, but rather the student's ability to employ these tools openly, critically, and responsibly, demonstrating understanding, verification, and self-contribution. Thus, assessment governance serves as a link between academic integrity and the quality of learning.

Studies on adoption and student and faculty perceptions reveal that successful governance depends not only on written policies but also on users' awareness, trust, and understanding of the ethical and educational boundaries of the tool. This underscores the importance of involving students and faculty in policy development, providing institutional training, and developing AI competencies. This point is particularly relevant in the Arab context, as Assad and Alomari's (2026) review indicates that the Arabic literature still requires further research that moves beyond analyzing usage and perceptions to developing institutional governance models that consider linguistic, cultural, and organizational specificities.

Accordingly, previous studies reveal two key gaps: first, the need for an integrated governance model that links integrity, privacy, fairness, evaluation, capacity building, and accountability within a single framework; and second, the need to adapt this model to Arab contexts, ensuring it is not directly transferred from Western universities or international frameworks but rather reconstructed to reflect

the Arabic language, university organizational structures, national legislation, and levels of digital readiness.

4.2. Sectoral, Institutional, and Regulatory Frameworks for Governing Generative Artificial Intelligence in Higher Education

4.2.1 Introduction

In addition to peer-reviewed studies, sectoral, institutional, and regulatory frameworks are a crucial resource for understanding generative AI governance in higher education. These frameworks encompass not only binding laws but also policy frameworks, quality assurance guidelines, responsible use principles, assessment and academic integrity guidelines, and institutional university policies. This broad definition of “regulatory frameworks” is appropriate for higher education, as many influential directives for universities are issued as sectoral or institutional guidelines, not solely as binding legislation.

These frameworks were analyzed according to the fields defined in the data extraction methodology: document or framework name, issuing authority, scope, regulatory or advisory nature, and the governance principles or requirements they provide for higher education. Table (2) presents a selected sample of frameworks that are specialized or closely related to higher education, while general frameworks are kept in a decentralized, supporting location.

Table (2) Analysis of Institutional and Regulatory Frameworks Relevant to the Governance of Generative Artificial Intelligence in Higher Education

No	Frame/Document Name	Entity/Scope	organizational nature	Implications of higher education
1	<i>Guidance for Generative AI in Education and Research</i>	UNESCO/ International	An international guiding framework specializing in education and research	It directs educational and research institutions to adopt a responsible use of generative artificial intelligence, with a focus on protecting learners and researchers, human oversight, capacity building, and institutional policies.
2	Maintaining Quality and	QAA – Quality Assurance	Sectoral guidelines for quality	It provides guidance to universities and colleges on managing the use of GenAI while maintaining quality

	Standards in the ChatGPT Era	Agency for Higher Education. UK	assurance and academic standards	and academic standards, and links governance to issues of assessment, integrity, and standards.
3	<i>Reconsidering Assessment for the ChatGPT Era</i>	QAA – Quality Assurance Agency for Higher Education. UK	Sectoral guidelines for calendar reform	Directing higher education institutions to review their assessment practices in light of GenAI tools, and to move towards more authentic and sustainable assessments.
4	Assessment Reform for the Age of Artificial Intelligence	TEQSA – Tertiary Education Quality and Standards Agency. Australia	Framework/Guidelines from the Higher Education Quality Regulatory Authority	It provides guidance to the higher education sector on how to leverage the opportunities of generative artificial intelligence and manage its risks in assessment, thereby supporting learning assurance and academic integrity.
5	Generative AI in Higher Education Teaching & Learning: Policy Framework	Higher Education Authority. Ireland	National Policy Framework for Higher Education	It provides a common reference for higher education institutions in dealing with GenAI opportunities and challenges in teaching, learning and assessment, while respecting institutional autonomy and academic freedom.
6	Generative Artificial Intelligence: Guidelines for Educators	QQI / National Academic Integrity Network. Ireland	Educational guidelines and academic integrity	It helps teachers in higher education understand acceptable and unacceptable uses of GenAI, and links the use of the tool to academic integrity and assessment.

7	Principles on the Use of Generative AI Tools in Education	Russell Group. UK	Sectoral principles issued by the Association of Universities	Developed by Russell Group universities and artificial intelligence experts, it emphasizes AI literacy, equipping staff to support students, adapting teaching and assessment, and maintaining academic integrity.
8	Guidelines for the Responsible Use of AI in External Quality Assurance	ENQA – European Association for Quality Assurance in Higher Education. European	Guidelines for external quality assurance agencies.	It focuses on the responsible use of artificial intelligence in quality assurance, with principles of transparency, data protection, fairness, human oversight, training, and continuous review.
9	Australian Framework for Artificial Intelligence in Higher Education	Australian Centre for Student Equity and Success. Australia	Sectoral framework for higher education	The use of artificial intelligence in higher education is linked to issues of equity, ethical innovation, integrity, quality of learning, and student experience.
10	Policy Framework and Guidelines on GenAI in Education.	University of Amsterdam. Netherlands	Institutional University Policy Framework	It describes the university's policy on GenAI in education, providing a central framework and guidelines for responsible and transparent use, with an emphasis on scientific integrity and periodic policy updates.
11	Policy Framework Generative Artificial Intelligence	Maastricht University. Netherlands	Institutional University Policy Framework	It explains the university's position and vision regarding the use of GenAI in education, research and institutional operations, and provides guidelines for responsible use.

12	Framework for Generative AI in Education	Vrije Universiteit Amsterdam. Netherlands	Institutional University Policy Framework	It guides colleges in developing their own policies for the use of GenAI in education, and links institutional use to accountability and consistency across academic units.
13	<i>Policy on the Use of Artificial Intelligence (AI) in Student Assessment</i>	Swansea University. UK	Official university policy for evaluation	Principles for the responsible use of artificial intelligence applications, including GenAI, are defined in student assessment, with an emphasis on ethics, transparency, fairness, and maintaining academic standards.
14	Regulation (EU) 2024/1689: Artificial Intelligence Act	European Parliament and Council of the European Union. EU	Binding general legal framework	It is not specific to higher education, but it is important because it classifies some uses of artificial intelligence in education and training as high-risk when they affect admission, assessment, or educational pathways.
15	Artificial Intelligence Risk Management Framework: Generative Artificial Intelligence Profile	NIST US	Supportive general risk management framework	It is not intended for higher education, but it offers practical tools for identifying, measuring, and managing GenAI risks, and can be employed in universities when evaluating tools, protecting data, and managing sensitive uses.
16	National Framework for Artificial Intelligence in Digital Learning (AIDL) in the	National eLearning Center – NeLC. KSA	A national framework for digital education, including higher education	It offers a national framework for adopting AI in digital learning, encompassing nine dimensions: leadership, curriculum and content design, teaching and learning, assessment and performance

	Kingdom of Saudi Arabia			monitoring, ethics and responsible use, technology standards, data security and privacy, student support, professional development, and continuous evaluation and improvement. This framework assists universities in developing institutional AI policies aligned with digital education, data protection, and responsible use.
17	Policies for the Use of Artificial Intelligence in Education and Scientific Research	Imam Abdulrahman Bin Faisal University. KSA	Institutional university policy for education and scientific research	The policy provides an institutional framework for the use of AI in education and research, guiding faculty, students, and researchers toward responsible use. It establishes governance requirements related to academic integrity, ethical use, safeguarding the quality of learning, and adherence to institutional controls when employing AI tools in educational and research activities.
18	Generative AI Use Policy	Princess Nourah bint Abdulrahman University. KSA	institutional university policy	The policy guides faculty, researchers, students, and administrative staff toward the responsible and informed use of generative artificial intelligence. Governance requirements include: ethical use, protection of academic integrity, support for teaching, learning, and research, risk mitigation, and alignment with SDAIA and NeLC guidelines.

19	Generative AI Usage by the Students Policy	United Arab Emirates University. UAE	University policy for students	The policy provides guidelines for the use of GenAI in academic work, focusing on academic integrity, ethical considerations, data privacy, information security, and compliance with laws and regulations. It also emphasizes that the use of GenAI should support learning and the achievement of course and program outcomes, not replace student effort or critical thinking.
----	--	--------------------------------------	--------------------------------	---

4.2.2. Analytical of Institutional and Regulatory Frameworks

Table 2. illustrates that the regulatory frameworks for generative AI in higher education extend beyond general legal frameworks to encompass a wide range of sectoral and institutional frameworks. The importance of sectoral frameworks, such as QAA, TEQSA, HEA, and ENQA, lies in their direct link between GenAI governance and quality assurance, academic standards, assessment, and integrity issues central to university operations. Furthermore, the Russell Group Principles and QQI/NAIN guidelines reveal that governance in higher education is moving toward regulating responsible use, rather than outright prohibition.

Institutional frameworks, such as those of the University of Amsterdam, Maastricht University, and Swansea University, demonstrate how general principles are translated into practical policies within the university. They define rules of use, scope of application, the roles of students and faculty, and the limits of GenAI use in teaching, assessment, and research. These frameworks represent a crucial level of governance because they demonstrate how institutions move from general discourse on AI to actionable regulatory procedures. Conversely, general frameworks such as the EU AI Act and NIST remain valuable, not because they are specific to higher education, but because they provide a regulatory and operational language for managing risk, human oversight, privacy, and accountability. Therefore, the governance of generative AI in universities should be based on an integration of higher education-specific frameworks and general frameworks for risk management and legal regulation, with priority given to the analysis of sectoral and institutional frameworks directly related to universities.

Gulf and Arab frameworks and policies are of particular importance because they shift the discussion on the governance of generative artificial intelligence (AI) from the level of general global frameworks

to the level of institutional application within Arab universities. In Saudi Arabia, the National Center for E-Learning's AI in Digital Learning framework provides a national reference point that helps educational institutions regulate the use of AI within dimensions that include leadership, teaching and learning, assessment, ethics, data security and privacy, professional development, and continuous improvement. The policies of Princess Nourah bint Abdulrahman University and Imam Abdulrahman bin Faisal University also exemplify the Saudi universities' move towards issuing institutional policies that guide the use of generative AI, or AI in general, in education and scientific research, emphasizing responsible use, academic integrity, quality of learning, and risk mitigation. In the UAE context, the United Arab Emirates University's policy provides an example of guiding students' use of generative AI in academic work, linking governance to academic integrity, privacy, information security, and the achievement of learning outcomes. These models indicate that the Gulf context is beginning to move from adopting general principles of AI ethics to developing university and sectoral policies more closely connected to higher education.

Despite the trend among Arab and Gulf universities to keep pace with regulations for the use of artificial intelligence in higher education, a gap remains in the scarcity of published studies analyzing Arab universities' policies related to generative AI. While global studies have analyzed the policies of American and other international universities, the analysis of Arab policies remains limited, both in terms of the number of universities studied and the depth of governance analysis. The second gap concerns data governance and privacy. Arab universities need clear policies regarding the input of student data, unpublished research materials, and institutional documents into generative AI tools, especially given the varying national data protection laws. The third gap relates to linguistic and cognitive equity. Generative tools do not necessarily perform the same in Arabic and English, and the quality of Arabic content, linguistic and cultural biases, and the representation of Arabic knowledge in large-scale models are all issues that require in-depth governance analysis.

5. Discussion and Recommendations:

The review showed that academic integrity was the most prominent approach in the early literature on generative AI in higher education. Studies such as Cotton et al. (2024) and Bittle and El-Gayar (2025) focused on the risks of cheating, plagiarism, and the production of academic work using text-generating tools. However, the analysis reveals that this approach is insufficient, as generative AI not only threatens integrity but also reshapes the relationship between the student, the learning task, and the knowledge produced. Therefore, the solution lies not only in detection tools but also in redesigning assessment methods, clarifying usage rules, and building a culture of disclosure and accountability.

The study also indicated that global university policies are moving towards a “conditional responsible use” model. Studies by Wang et al. (2024) and Jin et al. (2025) showed that many universities are not inclined towards outright prohibition but rather seek to develop guidelines that combine openness to the potential of the technology with caution regarding its risks. This trend indicates a gradual maturation in institutional discourse, as universities come to realize that completely banning GenAI tools may be unrealistic, while unregulated permission may threaten integrity, privacy, and fairness.

The review also reveals that Institutional and Regulatory frameworks add a crucial dimension not provided by academic studies alone. UNESCO guidelines offer a humanistic and educational perspective on responsible use in education and research, while NIST provides an operational framework for risk management, and the European Artificial Intelligence Law offers a risk-level-based regulatory model. Thus, it is clear that the governance of generative AI in universities must integrate three levels: the ethical, the institutional, and the operational.

5.1. Theoretical Implications

This study presents three main theoretical implications. First, it emphasizes that the governance of generative AI in higher education should be understood as an interdisciplinary field encompassing pedagogy, technology ethics, data governance, risk management, and higher education policy. This means that approaching it solely from an pedagogical or purely technical perspective is insufficient to grasp its complexities.

Second, the study contributes to broadening the concept of academic integrity in the age of generative AI. Integrity no longer simply means preventing plagiarism or detecting cheating; it now includes disclosure, transparency, acceptable limits of assistance, and the design of assessment tasks that measure actual learning. Thus, integrity shifts from being a matter of individual conduct to a shared institutional responsibility.

Third, the study suggests that governance in this field should be adaptive, not rigid. The rapid evolution of GenAI tools renders fixed policies obsolete, and therefore, universities need adaptable models, mechanisms for periodic review, risk registers, and continuous channels for feedback from students and faculty.

5.2. Applied Implications for Higher Education Institutions

The study's findings indicate that universities need to move from broad public policies to practical operational frameworks. An institutional statement on generative AI is insufficient without clear guidelines for its use in courses, disclosure models, data protection controls, training programs, and fair accountability mechanisms.

The findings also demonstrate that faculty members play a crucial role in governance implementation, as they are responsible for translating public policy into course practices. Therefore, training faculty members in designing authentic assessments, explaining the limitations of GenAI use, and guiding students toward critical and responsible use is essential for the success of any institutional policy.

Furthermore, the importance of student participation in governance is highlighted. Students are not merely recipients of instructions; they are the most frequent users of these tools. Consequently, policies developed without understanding student usage patterns, motivations, and concerns may be less effective. Universities should incorporate consultation channels, periodic surveys, and feedback mechanisms to understand the impact of policies on learning and equity.

5.3. Recommendations for Universities

The study also recommends the formation of a permanent committee for generative AI governance. This committee should include representatives from academic administration, information technology, quality assurance, legal affairs, research, faculty, and students. Its responsibilities would include reviewing tools, updating policies, classifying risks, monitoring compliance, and providing support to colleges and programs.

The study recommends developing standardized and flexible disclosure forms for the use of GenAI in assignments, research, and projects. These forms should require students or researchers to clearly state the name of the tool used, its purpose, the nature of the assistance, and how the outputs will be verified. Disclosure should be viewed as an educational and ethical practice, not a punitive measure.

Finally, the study recommends that universities redesign their academic calendars to be more authentic, progressive, and diverse. This includes relying on oral presentations, applied projects, progress calendars, reflective journals, step-by-step discussions, and linking tasks to real-world or local contexts. This approach helps reduce reliance on tasks that can be fully generated by AI.

The study also recommends implementing strict data protection controls, including preventing the entry of sensitive personal, research, or organizational data into uncertified GenAI tools, reviewing the terms of use of these tools, and prioritizing secure enterprise solutions whenever possible.

5.4. Recommendations for Policymakers and Regulatory Bodies:

The study recommends that higher education regulatory bodies to:

- Develop national or regional guidelines for the governance of generative AI in universities, ensuring that each institution does not operate in isolation. These guidelines could include general principles,

policy models, minimum data protection standards, disclosure mechanisms, and guidance for assessment and academic integrity.

- Integrating generative AI governance into quality and accreditation standards. Just as universities are assessed on institutional governance, quality, research, and digital transformation, they should also be evaluated on their ability to responsibly manage generative AI tools.
- Supporting the development of open Arabic resources on the responsible use of generative AI in higher education, including student guides, faculty guides, policy models, and examples of authentic assessments. This would help reduce reliance on foreign resources that may not take into account the linguistic and cultural specificities of Arab universities.

5.5. Recommendations for Researchers:

- Conducting more focused Arab research analyzing published university policies on GenAI, rather than solely focusing on trends and acceptance. Comparative studies between Arab and international universities are also needed on issues of disclosure, data protection, assessment redesign, and building AI competencies.
- Conducting field studies on the impact of using generative AI on the quality of learning, not just on students' attitudes toward it. The important question is not simply whether students use the tool, but how its use affects critical thinking, academic writing, achievement, and cognitive independence.

The study further recommends research on linguistic equity and bias in GenAI outputs in Arabic, including information accuracy, phrasing quality, representation of Arabic knowledge, and cultural biases. This issue is of particular priority for Arab universities seeking to use these tools without compromising the language, identity, and local knowledge.

6. Conclusion:

This study aimed to provide a comprehensive review of generative AI governance in higher education during the period 2022–2026, in light of the rapid transformations universities worldwide have undergone following the widespread adoption of large language models and content generation applications. The study was based on the premise that generative AI is not merely an educational tool or assistive technology, but rather an institutional and epistemological shift affecting the nature of learning, assessment, research, academic integrity, data protection, and the distribution of responsibilities within the university.

Through an analysis of peer-reviewed studies, institutional and regulatory frameworks, and selected university policies, the study revealed that generative AI governance in higher education requires a multidimensional approach. While the literature showed that academic integrity was the most

prominent focus in the early stages of the discussion, a more mature governance approach extends beyond the issue of cheating and plagiarism to broader dimensions, including privacy, transparency, disclosure, equitable access, human oversight, capacity building, risk management, and assessment redesign. The study also showed that international frameworks, such as UNESCO guidelines, the NIST framework, the European Artificial Intelligence Law, provide important references for universities, but they are insufficient on their own unless translated into clear institutional policies, implementation procedures, disclosure models, training programs, and monitoring mechanisms. The selected university policies demonstrate that the global trend is leaning towards “conditional responsible use,” meaning recognizing the potential of generative AI while regulating its use through rules of integrity, privacy, disclosure, and evaluation.

The study further highlighted that the Arab context still requires more research and regulatory efforts in this field. Despite the growing Arab interest in using generative AI in higher education, studies and policies addressing integrated institutional governance remain limited. This underscores the need for Arab models that consider language, academic culture, national legislation, digital sovereignty, and equitable access to AI tools.

In light of this, the study emphasizes that the success of higher education institutions in dealing with generative AI will not be achieved through blanket prohibition or unconditional adoption, but rather through intelligent and evolving governance that balances innovation with responsibility, and leveraging technological potential while protecting human beings, knowledge, and academic integrity. Therefore, generative AI governance should become an integral part of higher education governance in the coming phase, not a temporary response to a transient technological tool.

7. Declarations:

The author declares that no funding was received for this research. The author also declares that there is no conflict of interest regarding the publication of this article. The author confirms sole responsibility for the conception and design of the study, data collection, analysis and interpretation of results, and preparation of the manuscript. Ethical approval and informed consent were not applicable to this study.

8. References:

Al-Mamary, Y. H., Alfalah, A. A., Alshammari, S. H., & Abubakar, A. A. (2025). Empowering ChatGPT adoption in higher education: A comprehensive analysis of university students' intention to adopt artificial intelligence using self-determination and technology-to-performance chain theories. *International Journal of Information Management Data Insights*, 5(1), Article 100324. <https://doi.org/10.1016/j.ijime.2025.100324>

- Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19–32.
<https://doi.org/10.1080/1364557032000119616>
- Assad, A., & Alomari, M. S. (2026). A systematic literature review of ChatGPT adoption in Arab higher education. *Discover Artificial Intelligence*, 6, Article 546.
<https://doi.org/10.1007/s44163-026-01227-x>
- Baek, C., Tate, T., & Warschauer, M. (2024). “ChatGPT seems too good to be true”: College students’ use and perceptions of generative AI. *Computers and Education: Artificial Intelligence*, 7, Article 100294. <https://doi.org/10.1016/j.caeai.2024.100294>
- Barus, O. P., Hidayanto, A. N., Handri, E. Y., Sensuse, D. I., & Yaiprasert, C. (2025). Shaping generative AI governance in higher education: Insights from student perception. *International Journal of Educational Research Open*, 8, Article 100452.
<https://doi.org/10.1016/j.ijedro.2025.100452>
- Bearman, M., Ryan, J., & Ajjawi, R. (2023). Discourses of artificial intelligence in higher education: A critical literature review. *Higher Education*, 86, 369–385. <https://doi.org/10.1007/s10734-022-00937-2>
- Belkina, M., Daniel, S., Nikolic, S., Haque, R., Lyden, S., Neal, P., Grundy, S., & Hassan, G. M. (2025). Implementing generative AI (GenAI) in higher education: A systematic review of case studies. *Computers and Education: Artificial Intelligence*, 8, Article 100407.
<https://doi.org/10.1016/j.caeai.2025.100407>
- Bittle, K., & El-Gayar, O. (2025). Generative AI and academic integrity in higher education: A systematic review and research agenda. *Information*, 16(4), Article 296.
<https://doi.org/10.3390/info16040296>
- Chan, C. K. Y., & Hu, W. (2023). Students’ voices on generative AI: Perceptions, benefits, and challenges in higher education. *International Journal of Educational Technology in Higher Education*, 20, Article 43. <https://doi.org/10.1186/s41239-023-00411-8>
- Cotton, D. R. E., Cotton, P. A., & Shipway, J. R. (2024). Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. *Innovations in Education and Teaching International*, 61(2), 228–239. <https://doi.org/10.1080/14703297.2023.2190148>
- Crompton, H., & Burke, D. (2023). Artificial intelligence in higher education: The state of the field. *International Journal of Educational Technology in Higher Education*, 20, Article 22.
<https://doi.org/10.1186/s41239-023-00392-8>

- Crompton, H., Burke, D., Nickel, C., Bozkurt, A., Miao, F., Sharples, M., Greene, J. A., Parsons, D., Gill-Simmen, L., Edmett, A., Pegrum, M., de Waard, I., Bonk, C. J., Garcia, M. B., Curry, J. H., Lindsey, L. A., Yang, M., Marshall, S., Bali, M., et al. (2026). Governing generative AI in higher education: A global Delphi study on policy and practice. *International Journal of Educational Technology in Higher Education*, 23, Article 21. <https://doi.org/10.1186/s41239-026-00602-z>
- Dai, K., Liu, Y., & Zhang, X. (2026). Generative AI in higher education: A bibliometric review of emerging trends, power dynamics, and global research landscapes. *Computers and Education: Artificial Intelligence*, 10, Article 100544. <https://doi.org/10.1016/j.caeai.2026.100544>
- Dotan, R., Parker, L. S., & Radzilowicz, J. G. (2024). Responsible adoption of generative AI in higher education: Developing a “points to consider” approach based on faculty perspectives. In *Proceedings of the 2024 ACM Conference on Fairness, Accountability, and Transparency* (pp. 1–14). ACM. <https://doi.org/10.1145/3630106.3659023>
- European Association for Quality Assurance in Higher Education. (2025). *Guidelines for the responsible use of AI in external quality assurance*. ENQA. <https://www.enqa.eu/publications/enqa-guidelines-for-the-responsible-use-of-ai-in-external-qa/>
- European Parliament and Council of the European Union. (2024). *Regulation (EU) 2024/1689 laying down harmonised rules on artificial intelligence (Artificial Intelligence Act)*. Official Journal of the European Union. <https://eur-lex.europa.eu/eli/reg/2024/1689/oj>
- Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information & Libraries Journal*, 26(2), 91–108. <https://doi.org/10.1111/j.1471-1842.2009.00848.x>
- Holmes, W., Porayska-Pomsta, K., Holstein, K., Sutherland, E., Baker, T., Shum, S. B., Santos, O. C., Rodrigo, M. T., Cukurova, M., Bittencourt, I. I., & Koedinger, K. R. (2022). Ethics of AI in education: Towards a community-wide framework. *International Journal of Artificial Intelligence in Education*, 32, 504–526. <https://doi.org/10.1007/s40593-021-00239-1>
- Holmes, W., & Tuomi, I. (2022). State of the art and practice in AI in education. *European Journal of Education*, 57(4), 542–570. <https://doi.org/10.1111/ejed.12533>
- Imam Abdulrahman Bin Faisal University. (2025). *Policies for the use of artificial intelligence in education and scientific research*. https://iauelearning.iau.edu.sa/storage/policyandrules/policies_for_the_use_of_artificial_intelligence_education_and_scientific_research_en.pdf

- Jin, Y., Yan, L., Echeverria, V., Gašević, D., & Martinez-Maldonado, R. (2025). Generative AI in higher education: A global perspective of institutional adoption policies and guidelines. *Computers and Education: Artificial Intelligence*, 8, Article 100348. <https://doi.org/10.1016/j.caeai.2024.100348>
- Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., et al. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, Article 102274. <https://doi.org/10.1016/j.lindif.2023.102274>
- Lee, D., Arnold, M., Srivastava, A., Plastow, K., Strelan, P., Ploeckl, F., Lekkas, D., & Palmer, E. (2024). The impact of generative AI on higher education learning and teaching: A study of educators' perspectives. *Computers and Education: Artificial Intelligence*, 6, Article 100221. <https://doi.org/10.1016/j.caeai.2024.100221>
- Li, M., Enkhtur, A., Cheng, F., & Yamamoto, B. A. (2024). Ethical implications of ChatGPT in higher education: A scoping review. *Journal of Interdisciplinary Studies in Education*, 13(1), 55–68. <https://doi.org/10.32674/jise.v13i1.6072>
- Li, M., Enkhtur, A., Yamamoto, B. A., Cheng, F., & Chen, L. (2025). Potential societal biases of ChatGPT in higher education: A scoping review. *Open Praxis*, 17(1), 79–94. <https://doi.org/10.55982/openpraxis.17.1.750>
- Lodge, J. M., Bower, M., Gulson, K., Henderson, M., Slade, C., & Southgate, E. (2025). *Australian framework for artificial intelligence in higher education*. Australian Centre for Student Equity and Success. <https://www.acses.edu.au/publication/australian-framework-for-artificial-intelligence-in-higher-education/>
- Lodge, J. M., Howard, S., Bearman, M., Dawson, P., & Associates. (2023). *Assessment reform for the age of artificial intelligence*. Tertiary Education Quality and Standards Agency. <https://www.teqsa.gov.au/guides-resources/resources/corporate-publications/assessment-reform-age-artificial-intelligence>
- Lo, C. K. (2023). What is the impact of ChatGPT on education? A rapid review of the literature. *Education Sciences*, 13(4), Article 410. <https://doi.org/10.3390/educsci13040410>
- Luo, J. (2024). A critical review of GenAI policies in higher education assessment: A call to reconsider the “originality” of students’ work. *Assessment & Evaluation in Higher Education*, 49(5), 651–664. <https://doi.org/10.1080/02602938.2024.2309963>

Mäntymäki, M., Minkkinen, M., Birkstedt, T., & Viljanen, M. (2022). Defining organizational AI governance. *AI and Ethics*, 2, 603–609. <https://doi.org/10.1007/s43681-022-00143-x>

Miao, F., & Cukurova, M. (2024). *AI competency framework for teachers*. UNESCO.

Miao, F., & Holmes, W. (2023). *Guidance for generative AI in education and research*. UNESCO.

National Academic Integrity Network. (2023). *Generative artificial intelligence: Guidelines for educators*. Quality and Qualifications Ireland. <https://www.qqi.ie/sites/default/files/2023-09/NAIN%20Generative%20AI%20Guidelines%20for%20Educators%202023.pdf>

National Institute of Standards and Technology. (2023). *Artificial Intelligence Risk Management Framework (AI RMF 1.0)* (NIST AI 100-1). U.S. Department of Commerce.

National Institute of Standards and Technology. (2024). *Artificial Intelligence Risk Management Framework: Generative Artificial Intelligence Profile* (NIST AI 600-1). U.S. Department of Commerce. <https://doi.org/10.6028/NIST.AI.600-1>

O’Sullivan, J., Lowry, C., Woods, R., & Conlon, T. (2025). *Generative AI in higher education teaching & learning: Policy framework*. Higher Education Authority.

Peters, M. D. J., Marnie, C., Tricco, A. C., Pollock, D., Munn, Z., Alexander, L., McInerney, P., Godfrey, C. M., & Khalil, H. (2020). Updated methodological guidance for the conduct of scoping reviews. *JBIM Evidence Synthesis*, 18(10), 2119–2126.

Princess Nourah bint Abdulrahman University. (2025). *Generative AI use policy*.

[illegible]

[D9%84%D9%85%D8%AC%D9%84%D8%B3_Generative_AI_Use_Policy_English_August_2025_%281%29%5B1%5D.pdf](#)

Quality Assurance Agency for Higher Education. (2023a). *Maintaining quality and standards in the ChatGPT era: QAA advice on the opportunities and challenges posed by Generative Artificial Intelligence*. <https://www.qaa.ac.uk/docs/qaa/members/maintaining-quality-and-standards-in-the-chatgpt-era.pdf>

Quality Assurance Agency for Higher Education. (2023b). *Reconsidering assessment for the ChatGPT era: QAA advice on developing sustainable assessment strategies*. <https://www.qaa.ac.uk/docs/qaa/members/reconsidering-assessment-for-the-chat-gpt-era.pdf>

Russell Group. (2023). *Russell Group principles on the use of generative AI tools in education*. <https://www.russellgroup.ac.uk/policy/policy-briefings/principles-use-generative-ai-tools-education>

Swansea University. (n.d.). *Policy on the use of artificial intelligence (AI) in student assessment*. Retrieved July 7, 2026, from <https://hwb.swansea.ac.uk/academic-life/academic-regulations/aqs-policies/policy-on-the-use-of-artificial-intelligence-ai-in-student-assessment/>

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., Lewin, S., et al. (2018). PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, 169(7), 467–473. <https://doi.org/10.7326/M18-0850>

UNESCO. (2022). *Recommendation on the ethics of artificial intelligence*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000381137>

UNESCO. (2024). *AI competency framework for students*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000391105>

United Arab Emirates University. (2025). *Generative AI usage by the students policy*. <https://www.uaeu.ac.ae/en/about/pdfs/policies-2025/generative-ai-policy.pdf>

University of Amsterdam. (n.d.). *Policy framework and guidelines on GenAI in education*. Retrieved July 7, 2026, from <https://www.uva.nl/en/about-the-uva/policy-and-regulations/education/policy-framework-and-guidelines-on-genai-in-education.html>

Vrije Universiteit Amsterdam. (2025, May 13). *New framework for generative AI in education*. <https://vu.nl/en/news/2025/new-framework-for-generative-ai-in-education>

Wang, H., Dang, A., Wu, Z., & Mac, S. (2024). Generative AI in higher education: Seeing ChatGPT through universities' policies, resources, and guidelines. *Computers and Education: Artificial Intelligence*, 7, Article 100326. <https://doi.org/10.1016/j.cacai.2024.100326>

Copyright © 2026 by Mohammed Abdullah Al Mutawtah, and AJRSP. This is an Open-Access Article Distributed under the Terms of the Creative Commons Attribution License (CC BY NC)

Doi: <https://doi.org/10.52132/Ajrsp.e.2026.87.2>