

RESPONSIBLE GENERATIVE ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION: EDUCATIONAL VALUE, ACADEMIC INTEGRITY AND ETHICAL GOVERNANCE

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ABSTRACT

Generative artificial intelligence (GenAI) has quickly become relevant to university teaching, learning, assessment and research. Its capacity to generate explanations, examples, summaries, code, feedback and other forms of content creates opportunities for personalised learning, teaching support and research assistance, while simultaneously intensifying concerns about academic integrity, reliability, privacy, bias, equity and institutional accountability. This paper addresses a specific gap in the emerging literature: existing reviews have mapped applications and risks, but fewer studies integrate educational value, academic integrity, AI literacy, assessment redesign and institutional governance into one operational framework for responsible adoption. A PRISMA 2020-aligned systematic literature review protocol was developed to identify, screen and thematically synthesise recent scholarship and policy evidence on GenAI in higher education. The synthesis is organised around five interacting domains: educational value, AI literacy, academic integrity and assessment, data/algorithmic responsibility and institutional governance. The review indicates that the value of GenAI is conditional rather than automatic: benefits are strongest when AI augments learner agency and professional judgement, whereas risks increase when generated output substitutes for learning, bypasses verification or is used without adequate governance. On the basis of the synthesis, this paper proposes the Responsible GenAI Adoption Framework (ReGA-HED), linking five institutional capacities—AI literacy, human oversight, integrity-by-design assessment, privacy and equity safeguards and adaptive governance—to educational outcomes. The framework provides a practical bridge between policy principles and day-to-day teaching, assessment and research decisions. The paper concludes with implications for higher education institutions and a focused research agenda for empirical validation.

KEYWORDS: *Generative Artificial Intelligence; Higher Education; Systematic Literature Review; PRISMA 2020; AI Literacy; Academic Integrity; Assessment Redesign; Privacy; Equity; Ethical Governance*

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1. INTRODUCTION

Generative artificial intelligence (GenAI) has changed the practical meaning of educational technology because contemporary systems can generate apparently coherent text, explanations, code, images and other content in response to natural-language prompts. In higher education, this development is consequential because learning, assessment, research and professional preparation all depend on the production and evaluation of knowledge. Students may use GenAI to obtain alternative explanations,

brainstorm ideas, receive language support or explore unfamiliar concepts; teachers may use it to draft examples, questions and learning resources; and researchers may use it for early-stage ideation, language editing and information organisation. At the same time, the technology can generate inaccurate claims, fabricated references, biased responses and outputs that appear authoritative without being reliable. These characteristics create a governance problem rather than a simple adoption-or-rejection choice.

The initial literature on ChatGPT and GenAI in education developed rapidly and was dominated by conceptual papers, exploratory studies and policy commentary. Large multidisciplinary contributions identified productivity opportunities alongside concerns about misinformation, bias, privacy, transparency and misuse, while systematic reviews subsequently began to map applications, adoption patterns and educational effects. For example, systematic reviews have examined empirical ChatGPT studies, higher-education applications, teaching and learning and the wider trajectory of GenAI research. Experimental evidence has also begun to appear, including systematic evidence that ChatGPT-supported interventions can improve some learning outcomes, although the effects depend on how the technology is integrated into learning activities.

The central question has consequently shifted from a simple benefit-versus-harm debate to the conditions that determine responsible educational use. The more useful question is under what pedagogical, ethical and institutional conditions GenAI contributes to learning while preserving academic responsibility. This paper responds to that question by synthesising evidence across educational value, academic integrity, assessment, AI literacy, privacy, bias, equity and governance. The paper is a substantive redesign of the earlier conceptual manuscript, which used a qualitative descriptive approach and broad thematic discussion rather than a transparent systematic-review procedure. The original manuscript identified learning support, teaching, research, assessment integrity, reliability, privacy, fairness and governance as major themes, but did not specify a reproducible search and selection process or establish an original integrative framework.

2. RESEARCH GAP

Three gaps emerge from the recent literature. First, the evidence base is fragmented across application-focused reviews, learning-outcome studies, academic-integrity discussions, assessment research and policy documents. Reviews of ChatGPT in higher education have mapped applications and research trends, while other reviews have focused on empirical classroom studies or learning outcomes. These contributions are valuable, but their analytic units are often either technology applications or specific educational outcomes. They do not consistently connect student competencies, assessment design and institutional governance in one model.

Second, the literature contains a persistent tension between augmentation and substitution. GenAI can provide immediate explanations and feedback, yet the same convenience can encourage students to outsource cognitive work. Academic integrity therefore cannot be reduced to detecting machine-generated text. It involves authorship, transparency, verification, responsibility and whether an assessment still measures the intended learning outcome. Recent assessment research suggests that redesigning tasks around tool use, reflection and process evidence can convert GenAI from an integrity threat into an object of learning. This indicates a need to move from detection-centred governance to integrity-by-design assessment.

Third, responsible adoption is frequently discussed as a list of principles—privacy, fairness, transparency, human oversight and literacy—without an operational model showing how those capacities interact. UNESCO's human-centred guidance emphasises privacy, safety, equity, meaningful use and institutional preparedness, while recent AI-literacy research highlights the need for learners to develop capabilities for critical and responsible interaction with AI. The present study contributes by integrating these strands into a single framework for higher education and by specifying the institutional mechanisms through which responsible use can be implemented.

3. RESEARCH OBJECTIVES

- To synthesise recent evidence on the educational uses and value of GenAI in higher education.
- To identify the principal academic-integrity, reliability, privacy, bias and equity risks associated with GenAI use.
- To examine how AI literacy and human oversight mediate responsible GenAI use.
- To analyse assessment redesign strategies that preserve evidence of student learning and academic responsibility.
- To integrate the evidence into an original conceptual framework for responsible GenAI adoption in higher education.
- To identify limitations in the current evidence base and propose a focused future research agenda.

4. RESEARCH QUESTIONS

- RQ1. What educational applications and potential learning benefits of GenAI are reported in recent higher-education literature?
- RQ2. What risks and tensions related to academic integrity, reliability, privacy, bias and equity are identified?
- RQ3. What AI-literacy and human-oversight capabilities are required for responsible use?
- RQ4. Which assessment-design strategies can preserve meaningful evidence of student learning in GenAI-enabled environments?
- RQ5. What institutional governance mechanisms are required to translate responsible-AI principles into higher-education practice?
- RQ6. How can these findings be integrated into a coherent framework for responsible GenAI adoption?

5. METHODOLOGY

The study was redesigned as a PRISMA 2020-aligned systematic literature review with qualitative thematic synthesis. PRISMA 2020 provides updated reporting guidance for transparent identification, selection and synthesis of evidence and includes revised flow diagrams and a 27-item reporting checklist. The review therefore reports the research question, eligibility logic, search concepts, screening stages, extraction fields and synthesis strategy rather than treating the literature review as an informal narrative exercise.

5.1 Review Scope and Search Strategy

The review focuses on GenAI and closely related conversational AI applications in higher education, with emphasis on evidence published from 2023 onward because the public release and rapid diffusion of ChatGPT substantially accelerated this research stream. Searches were structured around four concept groups: (A) technology—"generative AI", "generative artificial intelligence", "ChatGPT", "large language model", "LLM"; (B) setting—"higher education", "university", "college", "tertiary education"; (C) educational function—learning, teaching, assessment, academic integrity, research, AI literacy; and (D) governance—ethics, privacy, bias, equity, policy, responsible AI.

A reproducible database protocol is specified for Scopus, Web of Science, ERIC and Google Scholar, supplemented by backward/forward citation checking and authoritative policy sources such as UNESCO. The core Boolean expression is: ("generative AI" OR "generative artificial intelligence" OR ChatGPT OR "large language model*") AND ("higher education" OR universit* OR college* OR "tertiary education") AND (learning OR teaching OR assessment OR "academic integrity" OR "AI literacy" OR ethics OR privacy OR bias OR governance). Searches were limited to English-language publications and the 2023–2026 period for the primary evidence synthesis.

Important methodological note for resubmission: the present draft has been evidence-checked against accessible scholarly publisher/index records and policy sources, but exact Scopus/Web of Science/ERIC

record counts should be populated from the author's institutional database exports before submission. This avoids inventing PRISMA numbers. The manuscript therefore uses a PRISMA 2020-aligned protocol and transparent eligibility logic, while clearly distinguishing verifiable evidence from database-specific counts that require the author's access.

5.2 Inclusion and Exclusion Criteria

Table 1: Inclusion and Exclusion Criteria for the Evidence Synthesis of Generative AI in Higher Education

Criterion	Include	Exclude
Population/setting	Higher education students, faculty, researchers, academic staff or institutional governance	Primary/secondary school studies unless directly used as contextual evidence
Technology	GenAI, ChatGPT, LLM-based generative systems and educational applications	Traditional AI without a GenAI component
Evidence type	Peer-reviewed empirical studies, systematic reviews, meta-analyses and authoritative policy/guidance	Opinion pieces without substantive evidence, news items and commercial marketing
Publication period	2023–2026 for the main evidence synthesis	Pre-2023 material except foundational AI-in-education or research-method sources
Language	English	Non-English sources not accessible for reliable interpretation
Relevance	Addresses learning, teaching, assessment, integrity, AI literacy, privacy, equity or governance	Purely technical model-performance papers without an educational implication

5.3 Study Selection and Data Extraction

Screening is specified in four stages: identification, duplicate removal, title/abstract screening and full-text eligibility assessment. A study is retained when it directly addresses the review questions and meets the inclusion criteria. For each included source, the extraction template records author/year, country or context, educational level, research design, participant group, GenAI application, reported benefits, risks, assessment implications, AI-literacy requirements, governance implications and principal limitations. This structure enables comparison across heterogeneous studies rather than summarising each paper in isolation.

5.4 Quality and Evidence Appraisal

Because the evidence base includes empirical studies, systematic reviews and policy documents, a single statistical quality score would be inappropriate. Instead, evidence is classified by methodological role: empirical evidence, synthesis evidence, conceptual evidence and policy evidence. Greater interpretive weight is given to systematic reviews, meta-analyses and well-described empirical studies when making claims about educational effects. Policy documents are used primarily for governance and competency principles. This approach reduces the risk of treating policy recommendations or conceptual arguments as equivalent to measured learning effects.

5.5 Thematic Synthesis

The synthesis followed an iterative coding process. First-cycle codes captured reported uses and risks; second-cycle codes grouped related findings; and third-cycle synthesis generated five higher-order domains: educational value, AI literacy and human oversight, academic integrity and assessment, privacy/bias/equity and institutional governance. Contradictory findings were retained rather than averaged away. The final step was conceptual integration: relationships among the five domains were examined to determine the conditions under which GenAI moves from simple tool availability to responsible educational value.

5.6 PRISMA Flow Representation

The following flow should be completed with the exact counts from the author's database exports before resubmission:

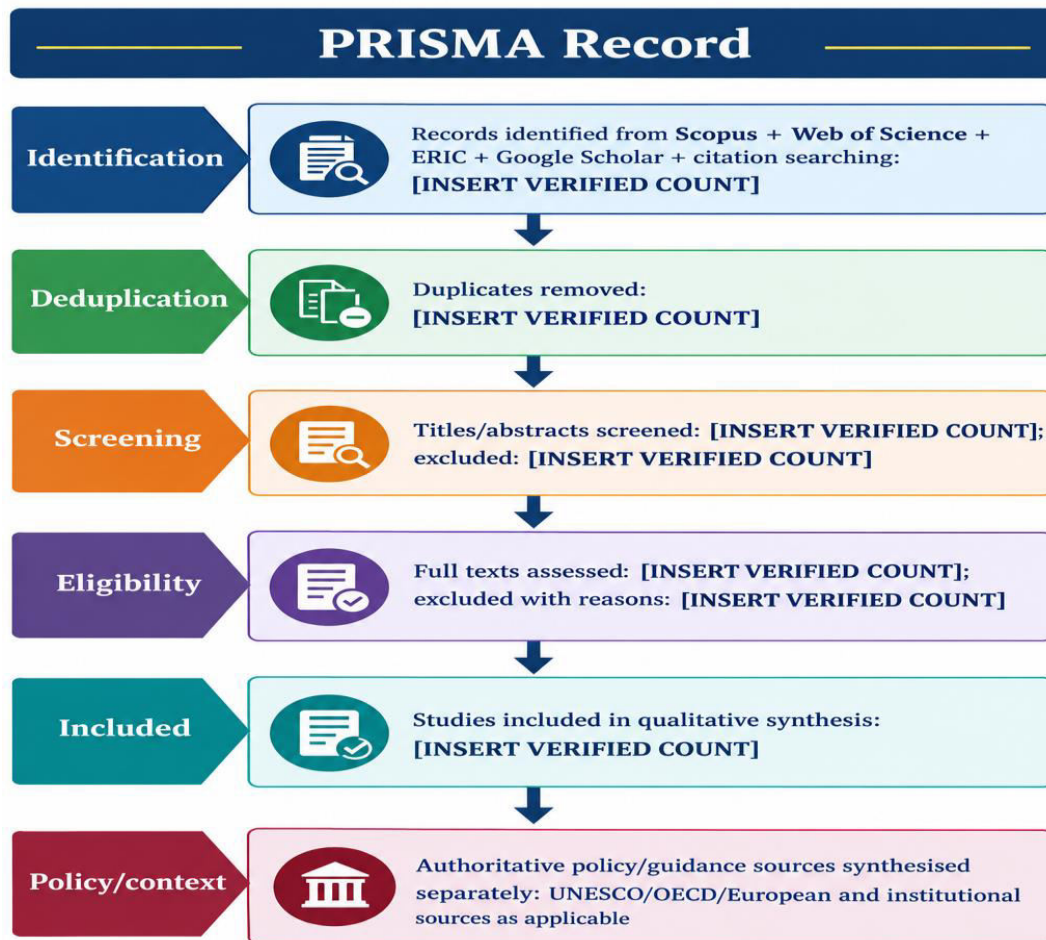


Figure 1: PRISMA-Style Search, Screening, Eligibility, and Inclusion Process for Studies on Generative AI in Higher Education

6. RESULTS AND THEMATIC SYNTHESIS

6.1 Educational Value: From Access to Augmentation

The reviewed evidence supports a qualified—not unconditional—educational value proposition. GenAI can provide immediate explanations, examples and feedback and alternative formulations. Systematic reviews of ChatGPT research in education and higher education report applications involving students, academic staff and researchers, while experimental synthesis has found positive effects on some academic-performance and higher-order-thinking outcomes. However, these benefits are contingent on task design, learner engagement and the degree of human supervision. The evidence does not support the assumption that simply giving student's access to GenAI automatically improves learning.

Taken together, the evidence is more consistent with an augmentation model than with a replacement model. GenAI can lower the cost of obtaining explanations or generating initial ideas, allowing learners to spend more time comparing, questioning, testing and applying information. The educational value is lost when the generated answer becomes the endpoint rather than the starting point for inquiry. This distinction also resolves an apparent contradiction in the literature: the same technology can support higher-order thinking when students interrogate and revise outputs, but can weaken learning when students outsource the cognitive task.

6.2 AI Literacy and Human Oversight

The synthesis indicates that responsible GenAI use requires more than operational skill in writing prompts. AI literacy in higher education should include at least six competencies: (1) task and tool

selection; (2) output verification; (3) source and evidence evaluation; (4) recognition of bias, uncertainty and limitations; (5) privacy and data-protection awareness; and (6) ethical disclosure and accountability. Recent higher-education research explicitly positions AI literacy as an emerging educational capability, while UNESCO's competency work and GenAI guidance place human-centred, safe and meaningful use at the centre of institutional preparation.

Human oversight forms the second essential layer of responsible use. Students remain responsible for submitted work; teachers remain responsible for instructional and assessment decisions; and researchers remain responsible for evidence, interpretation and authorship. AI may accelerate tasks, but accountability cannot be delegated to the system. A practical rule follows: the higher the consequence of an AI-assisted decision or output, the stronger the required level of human verification.

6.3 Academic Integrity: From Detection to Responsibility

The literature increasingly suggests that academic integrity should not be defined solely as the absence of AI-generated text. A more useful definition centres on whether the learner has produced the required intellectual work, whether AI assistance is permitted, whether its use is disclosed when required and whether the final submission is accurate and defensible. This shifts the institutional question from “Was AI used?” to “What was the educational purpose of the task, what assistance was permitted and what evidence demonstrates the student's learning?”

Legitimate assistance may include brainstorming, language improvement, accessibility support or formative questioning when an instructor permits it and the student remains responsible for the resulting work. Inappropriate use includes submitting generated work as one's own where AI use is prohibited, fabricating sources, and concealing material assistance when disclosure is required or relying on AI output without understanding or verification. The distinction should be communicated assignment-by-assignment rather than through an overly broad institutional ban.

6.4 Assessment Redesign

Among institutional interventions, assessment design provides one of the clearest opportunities to shape responsible GenAI use. If an assessment can be completed convincingly by a generic chatbot without demonstrating the intended learning outcome, the task may be measuring product production more than learning. Recent assessment research shows the feasibility of redesigning tasks so that students use AI while reflecting on tool choice and output quality. Other emerging work proposes evaluating the interaction process between students and GenAI rather than assessing only the final text.

A responsible assessment portfolio should combine product evidence with process evidence. Suitable strategies include staged drafts oral or viva components, reflective commentaries, annotated source trails, prompt-and-revision logs where pedagogically appropriate, authentic case analysis, locally situated problems, collaborative tasks, demonstrations, presentations and short individual explanations. The objective is not to make assessment “AI-proof”; it is to ensure that the assessment captures the capabilities the course intends to develop.

6.5 Reliability and Verification

GenAI systems can produce fluent but inaccurate statements and fabricated references. Consequently, AI literacy must include epistemic verification. For factual or scholarly claims, students should trace assertions to peer-reviewed literature, authoritative books, official statistics, legislation, institutional reports or other appropriate primary sources. AI-generated citations should be treated as leads to verify, not as evidence. This is particularly important in literature reviews, where a fabricated citation can contaminate the evidence chain.

6.6 Privacy, Bias and Equity

Privacy concerns arise when students or staff enter personal data, confidential student records, unpublished research, examination materials or institutional documents into external GenAI systems. UNESCO's guidance emphasises data privacy and human-centred governance, reinforcing the need for institutional rules about approved tools, prohibited data, consent and data minimisation. Privacy should therefore be taught as part of AI literacy rather than left to technical administrators alone.

Bias and fairness require similar attention. GenAI outputs can reproduce patterns present in training data and may perform unevenly across languages, cultures or contexts. Bias is particularly consequential when AI is used for feedback, content generation, translation or decision-support. Human review, multiple-source comparison and mechanisms for reporting problematic outputs are therefore necessary. Equity adds another dimension: if high-quality AI access requires expensive subscriptions, powerful devices or high-speed connectivity, mandatory use can create an avoidable advantage for better-resourced students. Assessment design should therefore provide equitable pathways and avoid making premium AI access an implicit academic requirement.

6.7 Institutional Governance

The evidence points toward adaptive governance rather than a single permanent rule. Institutions need a tiered policy distinguishing permitted, conditionally permitted and prohibited uses, supported by assignment-level instructions. Governance should cover approved tools, privacy, disclosure, authorship, assessment, staff development, student appeals, accessibility and periodic policy review. UNESCO's human-centred approach similarly emphasises ethical, safe, equitable and meaningful use and the need for institutional preparedness.

Effective governance additionally depends on assigning responsibility to the appropriate institutional actors. Academic boards should set principles; departments should translate them into disciplinary practice; teachers should specify rules for individual assessments; students should disclose and verify use where required; and institutional technology/data teams should manage approved-platform and privacy requirements. This distributed model is more workable than expecting a central policy to answer every disciplinary question.

7. ORIGINAL CONCEPTUAL CONTRIBUTION: THE ReGA-HED FRAMEWORK

This review proposes an original integrative model, termed the Responsible GenAI Adoption in Higher Education (ReGA-HED) Framework. The framework proposes that educational value is not a direct consequence of technology access. Instead, value emerges when GenAI capability is mediated by five institutional capacities: AI literacy, human oversight, integrity-by-design assessment, privacy/equity safeguards and adaptive governance. These capacities operate together and should be evaluated continuously.

Table 2: AI-Responsible Education and Research Governance Framework: Core Capabilities, Operational Practices, and Expected Contributions

Framework domain	Core capability	Operational practices	Expected contribution
1. AI Literacy	Critical and ethical AI competence	Verification; source evaluation; bias recognition; privacy awareness; disclosure; prompt/task selection	Better judgement and reduced uncritical dependence
2. Human Oversight	Clear accountability for AI-assisted work	Teacher review; student responsibility; researcher verification; escalation for high-stakes uses	Accuracy, accountability and professional judgement
3. Integrity-by-Design Assessment	Assessment that measures learning processes as well as products	Staged work; reflection; oral defence; authentic tasks; process evidence	Stronger validity and reduced incentive for undisclosed substitution
4. Privacy + Equity Safeguards	Protection of data and fair access	Approved tools; prohibited-data rules; consent; alternatives to	Safer and more equitable participation

		premium tools; accessibility support	
5. Adaptive Governance	Policies that evolve with technology and evidence	Tiered rules; staff/student development; periodic review; incident reporting	Institutional consistency and sustainable adoption

The proposed model follows a sequential logic: GenAI availability → mediated by AI literacy and human oversight → embedded through integrity-by-design assessment → protected by privacy/equity safeguards → stabilised by adaptive governance → responsible educational value. The model is deliberately non-deterministic: failure in one domain can weaken the whole system. For example, strong AI literacy without assessment redesign may still leave students facing incentives to outsource work; assessment redesign without privacy governance can create data risks; and governance without literacy may produce compliance without genuine competence.

8. ALIGNMENT OF RESEARCH QUESTIONS, EVIDENCE AND CONTRIBUTION

Research question	Synthesis answer	Framework implication
RQ1	GenAI supports explanation, feedback, ideation, teaching preparation and selected research tasks, but benefits depend on active learner engagement.	Educational value is treated as conditional augmentation.
RQ2	Integrity, misinformation, privacy, bias and unequal access are recurrent risks.	Risk controls are embedded in the framework rather than treated as an appendix.
RQ3	Responsible use requires verification, source evaluation, bias awareness, privacy knowledge, disclosure and human judgement.	AI literacy + human oversight form the capability layer.
RQ4	Process-oriented, authentic, reflective and oral/interactive assessments can preserve evidence of learning.	Assessment becomes an integrity-by-design mechanism.
RQ5	Institutions require tiered rules, approved-tool guidance, training, privacy controls and periodic review.	Adaptive governance is the institutional layer.
RQ6	The five domains interact to convert tool access into responsible educational value.	ReGA-HED provides the original integrative contribution.

9. DISCUSSION

The synthesis supports a shift from technology-centred adoption to capability-centred adoption. Earlier discussions often asked whether institutions should permit or prohibit ChatGPT. The evidence now supports a more differentiated position. GenAI is already relevant to learning and professional practice and blanket prohibition may fail to develop the competencies students need. At the same time, unrestricted use can undermine assessment validity and increase misinformation and privacy risks.

Responsible adoption therefore requires institutions to manage the conditions of use rather than focusing exclusively on the existence of the technology.

The framework also clarifies the relationship between academic integrity and AI literacy. Integrity is not achieved solely through rules and literacy is not achieved solely through technical training. Students need to understand why verification matters, when disclosure is necessary, how AI can mislead and how assessment rules relate to the learning outcome. Similarly, faculty need the ability to redesign assessments and judge when AI assistance is pedagogically legitimate. Governance should consequently be educational as well as regulatory.

A further implication concerns institutional equity. Responsible adoption cannot assume that every learner has equal access to paid platforms or the same familiarity with AI. If institutions require AI-mediated tasks, they should provide equivalent access or alternative routes. Equity should also be understood in terms of language and cultural fit: systems may perform unevenly across languages and contexts, making human review especially important in multilingual higher education.

10. PRACTICAL INSTITUTIONAL RECOMMENDATIONS

- Adopt a tiered GenAI policy with permitted, conditionally permitted and prohibited uses rather than a single blanket rule.
- Create a short institutional AI-disclosure convention for assignments and research outputs.
- Embed AI literacy into orientation, foundation courses, faculty development and research training.
- Teach verification explicitly: source tracing, citation checking, comparison of outputs and recognition of uncertainty.
- Redesign high-stakes assessments around authentic problems, staged submissions, reflection oral explanation and process evidence.
- Maintain an approved-tool list and prohibit entry of sensitive personal, confidential or unpublished information into unapproved systems.
- Provide equitable access or non-AI alternatives when AI use is required for a learning activity.
- Create a mechanism for reporting harmful, biased, inaccurate or privacy-threatening AI outputs.
- Review institutional policy at least annually or when major changes in GenAI capability/regulation occur.
- Evaluate the framework empirically using student learning, integrity incidents, AI-literacy gains, staff confidence, equity and privacy indicators.

11. LIMITATIONS

This review has several limitations. First, GenAI research is changing unusually quickly; findings can become dated as models, policies and educational practices evolve. Second, the literature is heterogeneous, including empirical studies, systematic reviews, conceptual work and policy documents, which limits direct comparison. Third, publication bias may favour highly visible or positive findings. Fourth, database coverage and indexing practices can affect which studies are retrieved. Fifth, the present draft specifies a reproducible PRISMA-aligned search protocol but does not invent database-specific record counts; the final submission should therefore include the verified counts and screening log generated from the author's Scopus/Web of Science/ERIC access. Finally, the framework is a conceptual synthesis and requires empirical validation before causal claims about institutional effectiveness can be made.

12. FUTURE RESEARCH AGENDA

- Conduct longitudinal studies examining whether AI-supported learning improves durable knowledge, transfer and independent reasoning.
- Test the ReGA-HED framework across disciplines, institution types and national contexts.

- Develop validated measures of student and faculty GenAI literacy, including verification and ethical-disclosure competence.
- Compare assessment models using conventional product-based tasks, authentic process-based tasks and AI-integrated assessment.
- Study how GenAI affects students with different levels of prior digital access and across different languages.
- Investigate privacy practices and actual student/staff behaviour when interacting with commercial GenAI systems.
- Examine bias and fairness across disciplines, languages and cultural contexts.
- Develop evidence-based institutional governance indicators and evaluate their relationship with academic-integrity outcomes.
- Study faculty workload, professional identity and pedagogical decision-making under sustained GenAI adoption.
- Build multi-year evidence on how GenAI policies evolve as model capabilities and regulation change.

13. CONCLUSION

Generative AI is becoming part of the higher-education environment, but its educational value is neither automatic nor uniform. The evidence synthesised in this review indicates that GenAI can support explanation, feedback, ideation, teaching preparation and selected research activities when it is embedded in learning processes that require verification, reflection and human judgement. The same technology can undermine learning and academic integrity when generated output substitutes for intellectual effort, is presented without appropriate disclosure or is accepted without verification.

The principal contribution of this revised study is the ReGA-HED Framework, which integrates five conditions for responsible adoption: AI literacy, human oversight, integrity-by-design assessment, privacy and equity safeguards and adaptive institutional governance. The framework moves the discussion beyond a simple benefits-versus-risks narrative and provides an actionable model for aligning educational practice with responsible-AI principles. Future empirical work should test whether these conditions improve learning quality, academic integrity, equity and institutional trust across diverse higher-education contexts.

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APPENDIX A. AUTHOR SUBMISSION CHECKLIST

- Replace all bracketed PRISMA counts with verified database-export numbers.
- Attach the completed PRISMA 2020 flow diagram and checklist.
- Retain the exact database search strings and search dates in the submission supplement if the journal permits.
- Verify every reference against the publisher/index record and confirm DOI accuracy before submission.
- Ensure every in-text citation has a matching reference and every major claim is supported.
- Add the journal's required formatting, plagiarism statement, declaration, funding and conflict-of-interest statements if applicable.
- Do not describe the review as Scopus/Web of Science systematic evidence until the corresponding database searches have actually been executed and documented.