

Regulatory Frameworks for The Use of Artificial Intelligence in University Research: A Systematic Review

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Abstract

Background:

The rapid diffusion of generative and non-generative artificial intelligence (AI) tools in higher education is transforming how research is designed, conducted, and reported. Universities and publishers are under pressure to protect academic integrity, ensure responsible use of data, and clarify how AI may support, but not replace, human scholarly judgment. Students and researchers increasingly rely on AI for idea generation, coding, translation, and writing support, which intensifies the need for clear and enforceable rules. However, regulatory approaches remain fragmented across institutions and jurisdictions.

Objective:

This study systematically reviews international guidelines, policies, and position statements governing the use of AI in university-based research, with the aim of identifying common principles, gaps, and good-practice models to inform institutional policy development and future research.

Methods:

A systematic review was conducted in accordance with PRISMA. We searched Scopus, Web of Science, ERIC, and Google Scholar, in addition to the official websites of the world's top 200 universities, major research funders, and leading academic publishers. Records published between January 2020 and October 2025 and written in English were eligible if they explicitly addressed AI, including generative AI, in the context of academic research. Two reviewers independently screened titles, abstracts, and full texts, and extracted information on scope, target audience, and regulatory content using a piloted extraction form. A third reviewer resolved disagreements. A narrative, thematic synthesis was performed to group regulatory elements into higher-order domains.

Results:

The search yielded 1,284 unique records, of which 97 documents from 21 countries met the inclusion criteria. These comprised 38 institutional policies, 24 publisher or editorial guidelines, 19 position statements from professional bodies, and 16 empirical or review articles. Three major regulatory domains emerged. (1) *Research integrity and authorship*: 89% of documents explicitly rejected AI tools as eligible authors, and 82% required human researchers to retain full responsibility for research design, data interpretation, and conclusions. More than two-thirds warned against uncritical use of AI-generated text because



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of risks of plagiarism, fabrication, and biased outputs, and 45% recommended the use of plagiarism-detection or verification procedures for AI-assisted content. (2) *Transparency and disclosure*: 76% required explicit disclosure of AI tools used, their versions, and their functions (e.g., language editing, coding assistance, data analysis, or image generation), usually in the methods, acknowledgments, or a dedicated transparency statement. Yet, only 31% provided concrete examples or standardized wording for such disclosures, and only 18% linked non-disclosure to specific sanctions or corrective actions.

(3) *Data governance and institutional risk*: 64% of institutional policies prohibited uploading confidential, identifiable, or proprietary research data into public AI systems, while 41% distinguished between institutionally approved AI services and public consumer tools. Fewer than one in five documents addressed AI use in peer review, supervision of theses, or cross-border data transfers.

Conclusions:

International guidance on AI in university research converges on several core principles—AI tools cannot be listed as authors, human researchers remain accountable for the integrity of their work, AI use must be transparent, and sensitive data must be protected. Nevertheless, most existing regulations are high-level and unevenly implemented, with limited operational detail for day-to-day research practice. Drawing on the synthesis, we propose a policy framework for universities that includes clear definitions and scope; differentiated guidance for students, faculty, and supervisors; workflow-specific rules for AI use from project conception to publication; mandatory documentation and disclosure of AI involvement; staff and student training in AI literacy and ethics; and regular policy review tied to technological and regulatory developments. Such a framework can support responsible integration of AI into academic research while safeguarding research quality, ethical standards, and public trust in university-generated knowledge.

Keywords: Artificial Intelligence, University, Systematic Review