

Institutional policy responses to generative AI in European higher education: a scoping review of published research

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Abstract

The adoption of generative artificial intelligence (GenAI) in higher education has made it increasingly urgent to define institutional responses capable of addressing its pedagogical, ethical, organisational and regulatory implications. Within this context, this study presents a scoping review of published research on policy responses to GenAI in European higher education. The review was conducted through searches in Scopus, Web of Science and ERIC, with inclusion criteria defined according to the SPIDER framework. The final corpus comprises ten studies published between 2024 and 2025, examining policies, guidelines and other institutional documents relating to GenAI. To synthesise the corpus, the review adopts an interpretive framework structured around four lenses: regulatory, pedagogical-integrative, implementation-oriented, and equity-, inclusion- and sustainability-oriented. The findings show that institutional policy responses are predominantly represented as concerned with regulating the use of GenAI, especially in relation to academic integrity, transparency, accountability, and permitted and non-permitted uses. At the same time, the included studies also frame GenAI as a resource to be integrated, albeit cautiously, into teaching, learning, assessment and AI literacy development. Overall, the review shows that the governance of GenAI in European universities is represented as still evolving and marked by uneven levels of policy development and institutional formalisation.

Keywords: artificial intelligence; higher education; educational policy; state of the art review

Introduction¹

The rapid public uptake of generative artificial intelligence since late 2022 has profoundly reshaped debates on teaching, learning, assessment, and academic governance in higher education. In a short time, tools capable of producing text, code, images, and other multimodal outputs have moved from experimental technologies to widely accessible resources, prompting universities to confront not only new pedagogical opportunities but also significant ethical, legal, and organisational challenges (Xiao et al., 2023). Within higher education, GenAI has been associated with potential benefits such as personalised support, feedback generation, curriculum design, and preparation for professional contexts increasingly shaped by AI; at the same time, it has raised concerns relating to academic integrity, transparency, privacy, bias, and inequalities of access (Kamalov et al., 2023). In this context, higher education institutions are increasingly required to develop policy responses capable of guiding uses of GenAI that are at once normatively grounded, pedagogically meaningful, and operationally feasible (Driessens & Pischetola, 2024).

In recent years, several studies have examined the regulation of GenAI use in higher education, but most of them concern countries outside the European Union (EU). Within the European context, a systematic synthesis of published research on institutional policy responses to GenAI in higher education is still lacking.

¹ The article is the result of joint work. A. Dipace wrote Section 1, F. Picasso Section 2, M.C. Di Cataldo Sections 3.1-3.3, and I.D.M. Scierri Sections 3.4 and 4. The conclusions were written jointly by all the authors.

This scoping review therefore aims to synthesise the published literature on institutional policy responses to GenAI in European higher education. It is important to clarify that the review does not analyse institutional policy documents directly, but rather studies that have analysed policies, guidelines, and other institutional documents relating to GenAI. Accordingly, the review focuses on how the literature has described and interpreted the main orientations of institutional responses, the issues most frequently addressed, and the areas that remain less developed. In doing so, it seeks to provide a structured overview of current research on university GenAI policies in Europe, rather than a comprehensive mapping of all institutional GenAI policies across European higher education. Accordingly, the review is guided by the following research question: What is known from the published literature about institutional policy responses to GenAI in European higher education?

To contextualise these institutional responses as represented in the reviewed literature, the next section presents the main conceptual and policy references that have helped shape current debates on GenAI in higher education.

1. Conceptual and policy framework

Recent international and European policy documents stress the urgency of strengthening both student and teacher AI literacy while developing clear institutional, ethical and pedagogical frameworks, guidelines and policies for the responsible adoption of AI in education (Erhardt et al., 2025).

According to Xiao et al. (2023), AI policy in education has developed in three phases. In the first phase, before the spread of generative AI, policies mainly focused on academic integrity and the broader effects of digital technologies on teaching and learning. The second phase began with the release of ChatGPT in late 2022, when institutions responded in different ways, ranging from caution and restrictions to conditional adoption. The third phase marks a move toward more structured and balanced regulation, with clearer rules on integrity, transparency, ethical AI use, and support for rethinking teaching and assessment within a broader educational strategy.

With particular reference to the European context, UNESCO's policy documents (2021, 2023) on AI in education offer a coherent framework that combines general governance principles with a more specific focus on generative AI. The reports reflect on a shift from broad policy guidance to a more focused treatment of emerging AI systems.

The 2021 report offers a broad policy framework for AI in education, centred on governance, inclusion, ethics, and strategic implementation. The 2023 report builds on this foundation by focusing specifically on generative AI, highlighting its human-centred, pedagogically guided, and institutionally validated use.

Following the same philosophy and approach, the Council of Europe report (Holmes et al., 2022) contributes a more explicitly normative and critical lens by interpreting AI in education through the foundational principles of human rights, democracy, and the rule of law.

In parallel, the JRC report (Tuomi, 2018) provides an earlier perspective, highlighting that AI is valuable primarily as intelligence augmentation, especially in personalisation, formative assessment, special needs education, and institutional analytics, but remains limited by data bias, opacity, and the inability to exercise reflective or metacognitive judgment.

Taken together, these documents converge around several core assumptions: AI can enhance learning, teaching, and institutional processes; its adoption must be guided by human oversight, transparency, equity, and data protection; and high-stakes educational decisions should never be fully delegated to automated systems. However, they differ in emphasis, ranging from pedagogical opportunity (UNESCO), to rights-based critique (Council of Europe), to systemic and cognitive analysis (JRC).

This evolving policy landscape finds its most concrete legal consolidation in the European Union Artificial Intelligence Act (Regulation EU 2024/1689), which translates many of these previously articulated ethical concerns into binding obligations. By classifying AI systems used for admissions, student allocation, assessment, and test monitoring as high-risk, prohibiting emotion-recognition systems in educational settings except in narrowly defined cases, requiring human oversight, transparency, AI literacy, and – where applicable – fundamental rights impact assessments, the AI Act represents the strongest normative consolidation to this framework. It therefore moves the debate from principles and recommendations toward enforceable legal standards that are likely to shape future research, institutional practice, and governance.

Taken together, these documents do not provide a single model of AI governance, but a shared framework for current institutional responses to generative AI. Four concerns recur across them: the management of risk and the preservation of human oversight; pedagogical integration; institutional capacity; and the need for equitable, inclusive, and sustainable use. In this review, these concerns guide the interpretation of the literature on policy responses in European higher education.

2. Methods

2.1. Search strategy

This review was conducted following the methodological framework proposed by Arksey and O'Malley (2005), further refined by Levac et al. (2010), and reported in accordance with the PRISMA-ScR guidelines (Tricco et al., 2018).

This study adopted a scoping review design to map and synthesise the literature on institutional policy responses to generative AI in European higher education. The review was guided by the following research question: What is known from the published literature about institutional policy responses to generative AI in European higher education?

Searches were conducted on 30 March 2026 in three databases: Scopus, Web of Science, and ERIC. The search strategy was designed to capture studies addressing generative AI in relation to policies, guidelines, governance, and regulatory responses in higher education institutions located in Europe. Broader terms such as “artificial intelligence” and “AI” were retained in the search string to increase retrieval sensitivity, since in the period 2022–2024 many policies and studies still referred generically to “AI” while in practice addressing generative AI tools and related policy issues. To keep the search focused on generative AI rather than artificial intelligence in general, the final search string combined terms related to generative AI, policy and governance, higher education, and Europe:

((“generative artificial intelligence” OR “generative AI” OR “GenAI” OR “Artificial Intelligence” OR “AI” OR “large language models” OR “LLMs”) AND (regulation* OR legislation* OR policy OR policies OR governance OR framework*) AND (“higher education” OR universit* OR “tertiary education”) AND (Europe* OR “European Union” OR EHEA))

The string was adapted to the syntax of each database. Searches were limited to publications from 2022 onwards up to 30 March 2026, written in English, and restricted to journal articles and review articles.

2.2. Inclusion and exclusion criteria

Eligibility criteria were defined using the SPIDER framework (Cooke et al., 2012) (see Tab. 1). The SPIDER framework was preferred over PICO as it is more appropriate for qualitative and policy-oriented research, allowing the inclusion of document-based and conceptual studies related to generative AI in European higher education.

Table 1. Inclusion and exclusion criteria based on the SPIDER framework.

SPIDER element	Inclusion criteria	Exclusion criteria
S – Sample	European universities (public and private); Higher Education Institutions (HEIs) located within the European Union or the European Higher Education Area (EHEA); University governance bodies; National or European regulatory authorities involved in higher education governance.	Primary and secondary education institutions; Non-university vocational education and training; Corporate or private sector contexts unrelated to higher education; Non-European studies were excluded unless they formed part of a comparative design explicitly including Europe and provided extractable findings for the European context or for specific European countries.
PI – Phenomenon of Interest	Regulations, legislation, and institutional policies governing the use of Generative Artificial Intelligence; Legal frameworks affecting the implementation of generative AI tools in higher education; Institutional guidelines on the use of Large Language Models (LLMs); Governance models and compliance mechanisms related to generative AI; Policy responses to generative AI in teaching, assessment, research, and academic integrity.	Studies addressing Artificial Intelligence in general without specific reference to Generative AI; Purely technical or algorithmic research; Pedagogical studies focusing on classroom use of generative AI without regulatory analysis; Ethical discussions not connected to concrete regulatory or policy frameworks.
D – Design	Qualitative studies (e.g., policy analysis, document analysis, case studies); Quantitative studies examining regulatory implementation; Mixed-methods research; Comparative legal studies; Institutional policy analyses; analytical or conceptual papers with explicit policy analysis.	Editorials, opinion papers, or commentaries without systematic analysis; Purely technical system evaluations; Studies lacking methodological transparency.

E – Evaluation	Analysis of the content and structure of regulatory frameworks; Assessment of governance approaches adopted by universities; Identification of regulatory models (restrictive, permissive, hybrid); Evaluation of the impact of regulations on: Teaching practices, Assessment and academic integrity, Research activities, Institutional governance; Compliance, monitoring, and enforcement mechanisms.	Studies focused exclusively on learning outcomes without regulatory reference; Evaluations limited to technical performance of AI systems; General discussions without policy or governance analysis.
R – Research type	Journal articles and review articles; Empirical research studies; Legal and policy analysis studies; Publications written in English; between 2022-2026.	Books, book chapters, bachelor's/master's/doctoral theses, conference proceedings.

2.3. Study selection

The database search yielded 112 records in Scopus, 51 in ERIC, and 101 in Web of Science, for a total of 264 records. All records were exported and deduplicated before screening. After the removal of 148 duplicate records, 116 unique records were retained for title and abstract screening.

The study selection process involved three researchers and was based on researcher triangulation. Screening decisions were compared and discussed collectively, and any uncertainty or disagreement about eligibility was resolved through consensus, with reference to the SPIDER-based inclusion and exclusion criteria.

The 116 records were screened at title and abstract level against the eligibility criteria. At this stage, 99 records were excluded because they did not meet one or more of the SPIDER-based criteria: Sample, mainly because they did not focus on European higher education; Phenomenon of interest, because they did not address generative AI or institutional policy, governance, guidelines, or regulatory responses; Design or Evaluation, because they did not provide a relevant policy or governance analysis; or Research type, because they did not meet the publication-type criteria. Seventeen reports were sought for retrieval. One report could not be retrieved; therefore, 16 reports were assessed for eligibility at full-text level.

Backward and forward citation searching was then used as a supplementary search strategy to identify relevant studies not retrieved through the database search. This procedure led to the identification of 14 additional reports, which were retrieved and assessed at full-text level using the same eligibility criteria.

Overall, 30 full-text reports were assessed for eligibility. Of these, 20 were excluded because they did not meet one or more of the SPIDER-based criteria. The final corpus comprised 10 studies (see Fig. 1).

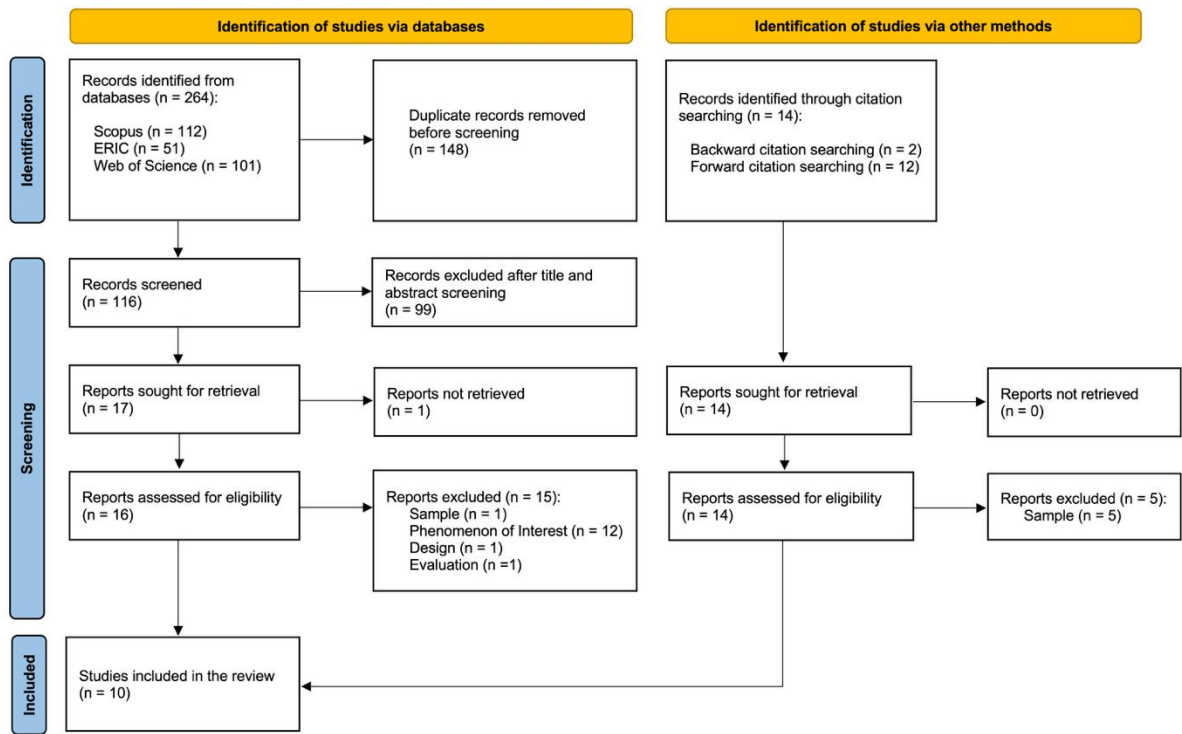


Fig. 1 PRISMA flow diagram

2.4. Interpretive framework for the synthesis

To synthesise the included literature, the review used Chan's (2023) framework², read in conjunction with UNESCO's recommendations (2021, 2023), as a conceptual point of departure rather than as a fixed coding scheme. Building on and reworking these references, the review developed an original four-lens interpretive grid adapted to the specific focus on institutional GenAI policy responses in European higher education. The resulting interpretive grid was structured around four analytical lenses: regulatory, pedagogical-integrative, implementation-oriented, and equity-, inclusion-, and sustainability-oriented.

The synthesis followed a primarily deductive, framework-informed approach: the four lenses were defined before the full synthesis and were then applied to the included studies in order to examine how institutional policy responses to GenAI were described and interpreted in the emerging European literature. The unit of analysis was not the institutional policy document itself, but the way in which each included study reported, analysed, and interpreted policies, guidelines, and other institutional documents relating to GenAI. Each study was read with attention to the policy dimensions foregrounded by the authors, the issues identified as central or marginal, and the forms of institutional response described. The four lenses were not treated as mutually exclusive categories: the same study could contribute to more than one lens when it addressed multiple dimensions of institutional policy responses. The lenses were therefore used as analytical dimensions for organising and comparing the findings of the included studies, rather than as rigid classificatory codes.

The *regulatory lens* captured institutional responses that frame GenAI primarily as a matter of rules, control, legitimacy of use, and risk management. This included references to academic integrity, acceptable and unacceptable uses, transparency, accountability, privacy, copyright, authorship, compliance with institutional or legal requirements, and procedures for managing misconduct or inappropriate use.

The *pedagogical-integrative lens* identified responses that treat GenAI not only as a risk to be mitigated, but also as a resource to be meaningfully integrated into teaching, learning and assessment. This lens included references to the redesign of assessment, the use of GenAI to support learning, feedback, curriculum development, students' critical engagement with AI, AI literacy, and the development of future-oriented academic and professional competences.

The *implementation-oriented lens* focused on the conditions through which policy orientations are translated into practice. It captured references to operational guidance, access to approved or institutionally supported tools, staff training, student guidance, technical support, coordination mechanisms, clarification of responsibilities, assessment redesign procedures, monitoring, and mechanisms for updating policies over time.

Finally, the *equity-, inclusion-, and sustainability-oriented lens* examined whether and how the reviewed studies reported attention to fair, inclusive, and sustainable uses of AI. This included references to bias, discrimination, inequalities in access to GenAI tools, the needs of students from disadvantaged backgrounds, accessibility, digital divides, participation, and the broader environmental or sustainability implications of AI adoption.

Data extraction and analytical charting were conducted by one researcher. To enhance consistency and transparency, each lens was operationalised through thematic indicators, the included studies were read repeatedly, and extracted findings were systematically compared across the corpus. Given the interpretive nature of the synthesis, the aim was not to establish inter-rater agreement, but to apply a transparent and traceable analytical grid to the policy analyses reported in the included studies. During synthesis, extracted findings were charted under the four lenses in order to identify dominant orientations, secondary dimensions, and areas that remained weakly developed across the corpus. This procedure made it possible to produce a secondary synthesis of the policy analyses reported in the included studies.

To clarify how the four lenses were operationalised, Table 2 reports the operational definition of each lens and the main indicators used to analyse and synthesise the included studies. The indicators were used as sensitising criteria rather than as mutually exclusive codes, since a single study could contribute to more than one interpretive lens.

² Chan (2023) proposes an AI Ecological Education Policy Framework that conceptualises AI integration in higher education through three interrelated dimensions – pedagogical, governance, and operational – each linked to specific concerns, responsibilities, and policy actions.

Table 2. Operationalisation of the interpretive lenses

Interpretive lens	Operational definition	Thematic indicators
<i>Regulatory</i>	Captures how the included studies describe institutional responses that frame GenAI as an object of regulation, control, legitimacy of use, and risk management.	Academic integrity, acceptable and unacceptable uses, transparency, accountability, privacy, copyright, authorship, compliance, misconduct.
<i>Pedagogical-integrative</i>	Captures how the included studies describe institutional responses that frame GenAI as a resource to be integrated into teaching, learning, assessment, and AI literacy development.	Teaching and learning integration, assessment redesign, feedback, curriculum development, critical engagement with AI, AI literacy, future-oriented academic and professional competences.
<i>Implementation-oriented</i>	Captures how the included studies describe the translation of policy principles into concrete institutional conditions, supports, and practices.	Operational guidance, access to approved tools, staff training, student guidance, technical support, allocation of responsibilities, monitoring, policy review.
<i>Equity-, inclusion-, and sustainability-oriented</i>	Captures how the included studies report attention to fair, accessible, inclusive, and sustainable conditions for GenAI adoption.	Bias, discrimination, inequalities in access, accessibility, digital divide, disadvantaged students, participation, environmental and sustainability implications.

3. Findings and discussion

3.1. Characteristics of the included studies

As shown in Table 3, the corpus included 10 journal articles published between 2024 and 2025. The evidence base was predominantly document-based and policy-oriented, as the studies mainly examined institutional policies, guidelines, and related documents concerning generative AI in higher education. Geographically, the corpus was firmly anchored in Europe. Seven studies focused on single-country European contexts, with a marked concentration on Sweden and the United Kingdom, alongside studies focusing on Germany and Denmark. Two further studies adopted a broader European comparative perspective, while one examined a cross-national sample extending beyond Europe, including the United Kingdom, Canada, and the United States. Methodologically, the corpus was dominated by qualitative, document-based approaches, especially content analysis, document analysis, thematic analysis, comparative policy analysis, and problematisation analysis.

Table 3. Descriptive summary of the included studies

Author(s) (Year)	Geographical focus	Data / policy material	Method / approach
Christ-Brendemühl (2025)	Germany	67 university guidelines on generative AI	Content analysis
Atkinson-Toal and Guo (2024)	United Kingdom	AI policies from all 24 Russell Group universities	Systematic content analysis
Wilson (2025)	United Kingdom	Institutional policies and guidance from 48 UK universities (all 24 Russell Group and 24 non-Russell Group)	Documentary and comparative policy analysis
Orfanidis (2025)	United Kingdom, Canada, USA	36 publicly accessible university policy sources (12 per country)	Thematic analysis with an ethical-comparative lens
Driessens and Pischetola (2024)	Denmark	Policies and guidelines from 8 Danish universities	Problematisation analysis

Sporrong et al. (2025)	Sweden	37 policy documents from 14 of 18 Swedish universities	Problematisation analysis and thematic analysis
Erhardt et al. (2025)	Sweden	GenAI-related documents and website information from 36 of 49 Swedish HEIs.	Content analysis
Humble (2025)	Sweden	9 official AI policy and guideline documents from Swedish universities and university colleges	Document analysis and thematic analysis
Spilbergs et al. (2025)	Baltic Sea Region / Europe	Guidelines from 13 Baltic universities and 36 top-ranked European universities	Analytical and policy-oriented study
Stracke et al. (2025)	Europe (8 countries)	15 AI policies from universities, university consortia, and government agencies in Austria, Germany, Italy, Greece, Albania, Bosnia and Herzegovina, the United Kingdom, and Spain	Case study and content analysis

3.2. Overview of the included studies across national contexts

The included studies highlight, across national contexts, institutional responses to GenAI in European higher education that are still emerging, characterised by marked variability in the degree of policy formalisation, institutional capacity, policy maturity, and the breadth of issues addressed.

In the German context, Christ-Brendemühl (2025) highlights a heterogeneous policy landscape marked by openness, caution, and ambivalence towards GenAI. Among the 67 guidelines analysed, 56.7% adopt a predominantly favourable stance, emphasising the transformative potential of GenAI for teaching and research and arguing that its opportunities outweigh its risks. A further 10.4% adopt a balanced position, recognising both opportunities and challenges, while 13.4% primarily emphasise risks; the remaining guidelines do not express a clearly defined orientation. Overall, this points to a still unsettled institutional response to GenAI in German higher education.

The UK context, more widely represented in the corpus, likewise appears stratified. Atkinson-Toal and Guo (2024) show that, despite drawing on the five shared principles of the Russell Group³, universities differ significantly in terms of policy completeness, implementation mechanisms, and AI literacy initiatives. Undisclosed use of AI-generated content is generally considered a form of academic misconduct, yet the degree of acceptance of AI in assessed work varies considerably. Disparities also persist in support for AI literacy, alongside gaps in accessibility and in the recognition of AI's potential for students with learning needs.

Extending the analysis beyond the Russell Group, Wilson (2025) confirms that UK universities tend to adopt non-prohibitive but cautious approaches, aimed at balancing innovation, academic integrity, and the redesign of assessment. Comparisons with non-Russell Group institutions suggest that the main differences lie less in policy content than in institutional capacity to formalise and render policies explicit: some institutions present relatively comprehensive frameworks, others provide only minimal guidance focused on plagiarism and sanctions, while a non-negligible number publish no documentation at all.

From a comparative ethical perspective across the United Kingdom, Canada, and the United States, Orfanidis (2025) highlights that UK policies tend to be more open to GenAI and more student-oriented, positioning students as active agents in using the technology to support learning within frameworks emphasising transparency, responsibility, and prudent use, whereas the other contexts display more restrictive or mixed configurations.

In the Danish context, Driessens and Pischetola (2024) analyse policies from eight universities and identify convergence around three key concerns: assessment integrity, data legality, and output reliability. GenAI is framed as a potential tool for cheating and plagiarism, as a source of challenges related to privacy, copyright, GDPR, and data opacity, and as a technology whose outputs may contain errors and biases, thus requiring critical literacy and verification skills. At the same time, the study highlights a key limitation: policies focus primarily on symbolic, epistemological, and normative dimensions, while the materiality of GenAI and its environmental and socio-economic implications, such as human labour, energy costs, extractive economic models, and structural inequalities, remain largely underexplored.

³ The Russell Group (RG) is an association of 24 research-intensive British universities, often ranked among the top institutions. The RG has published five principles on the use of AI, which underpin many institutional AI policies. These principles include: supporting AI literacy among staff and students; integrating AI into the learning experience; ensuring ethical use in teaching and assessment; safeguarding academic integrity; and sharing good practices in its use (Russell Group, 2023).

In the Swedish context, Sporrøng et al. (2025), analysing 37 documents from 14 of the 18 Swedish universities, identify a governance approach centred on educator responsibility, the redesign of assessment practices, and the management of ambiguity in acceptable uses of GenAI. Erhardt et al. (2025) likewise show that policy formalisation remains limited and uneven across universities, university colleges, and independent institutions, with formal guidelines still relatively scarce, particularly in the former two categories. Across these studies, policy content prioritises transparency, responsibility, the prevention of academic misconduct, and information governance, especially in relation to sensitive data, copyright, and GDPR, whereas ethical and social dimensions remain more marginal. In a similar vein, Humble (2025) finds that policies assign GenAI a central role in teaching, assessment, and preparation for future work, while emphasising instructors' responsibility to inform students, justify decisions regarding the use or prohibition of GenAI, ensure equitable access to required tools, and promote transparency and individual accountability. Overall, the Swedish landscape appears primarily oriented towards regulating the use of GenAI in assessment contexts and clarifying responsibilities, limits, and conditions of use, while broader reflections on sustainability and wider implications remain less developed.

Beyond individual national cases, Spilbergs et al. (2025) provide insight into the Baltic context from a comparative European perspective. Analysing 13 Baltic universities alongside 36 leading European universities in the QS World University Ranking 2025, the authors show that the use of GenAI is explicitly permitted in all Baltic institutions and in 34 of the 36 European universities considered. At the same time, all Baltic universities and 97% of the European institutions specify limitations and conditions of use; prior instructor approval is required in 92% and 86% of cases, respectively. Moreover, 92% of the guidelines clarify the purposes for which GenAI may be used and require documentation of generated outputs, while all Baltic universities and 94% of European institutions include provisions to support the integration of GenAI into teaching and assessment practices.

Finally, Stracke et al. (2025), analysing policies from universities, university consortia, and governmental agencies across eight European countries, depict a fragmented landscape, with limited and heterogeneous documents at different levels of maturity. Policies focus primarily on teachers and students, while education managers and policy-makers receive less attention. Differences also emerge between institutional, consortial, and governmental policies: the first mainly regulate local teaching practices, often delegating responsibility to teachers and students; the second address systemic issues more clearly; the third tend to remain general and only partially focused on higher education. The role attributed to students also varies, ranging from relatively passive recipients of institutional guidance to more proactive actors expected to use GenAI responsibly in support of learning and writing. Some policies include recommendations for teachers, emphasising shared ethical guidelines, consent for AI use, and inter-institutional cooperation. By contrast, the integration between the use of AI in education and the development of AI literacy remains limited.

3.3. Synthesis through the four interpretive lenses

The included studies show that institutional responses to GenAI in European higher education are not evenly distributed across the four interpretive lenses. Overall, regulatory orientations clearly predominate, often accompanied by pedagogical-integrative orientations, whereas the implementation-oriented dimension appears more variable and less evenly developed; the equity-, inclusion-, and sustainability-related dimension remains comparatively marginal. The four lenses, however, should not be understood as rigidly separate categories: in many cases, policies combine multiple orientations, suggesting that universities are not only seeking to regulate the risks associated with GenAI, but also, to varying degrees, to integrate it into educational processes and embed its use in more concrete institutional arrangements.

Regulatory orientation

The regulatory orientation is the most prominent across the corpus as a whole. In most studies, institutional responses to GenAI are framed primarily in terms of academic integrity, acceptable and unacceptable uses, transparency, accountability, privacy, and the proper use of the technology. This pattern emerges with particular clarity across several national contexts, where policies focus on preventing plagiarism, cheating, and undisclosed AI use, while also clarifying the conditions under which GenAI may be legitimately used in academic work. Overall, universities rarely resort to outright bans and more often define boundaries, conditions, and responsibilities associated with use. Even in more permissive cases, GenAI continues to be treated as a potential source of academic misconduct and of uncertainty regarding the quality and reliability of outputs, especially in assessment contexts. Comparative European studies similarly show that openness to the use of GenAI is generally accompanied by explicit restrictions, conditions of use, disclosure requirements, and references to ethical principles, data protection, privacy, transparency, and institutional responsibility. Taken together, these studies suggest that current institutional responses to GenAI in European higher education are shaped primarily by attempts to preserve academic standards and regulate the legitimate use of the technology, rather than by a transformative reconfiguration of educational practices.

Pedagogical-integrative orientation

Alongside this strong regulatory emphasis, many studies also point to a pedagogical-integrative orientation, albeit with varying degrees of explicitness and institutional maturity. From this perspective, GenAI is treated not only as a risk to be contained, but also as a resource to be integrated critically and responsibly into teaching, learning, and assessment processes, with attention also to the development of AI literacy and the preparation of students for professional contexts increasingly shaped by AI. This orientation emerges with particular clarity in the UK literature, where policies tend to promote non-prohibitive but guided approaches, encouraging students to use GenAI openly and responsibly while also prompting staff to rethink assessment formats and educational aims. Similar elements also appear in Germany and Sweden, where some policies link GenAI to AI literacy, future-oriented competences, responsible use, and preparation for future professional contexts. Overall, however, this orientation rarely appears independently of regulatory concerns: more often, pedagogical integration is cautious, conditional, and closely tied to the need to preserve academic integrity and critical judgement.

Implementation-oriented dimension

The implementation-oriented dimension is also present in the corpus, although less consistently and uniformly than the regulatory one. It concerns the conditions that make policies concretely actionable, such as tools, support, training, and the review of practices. Traces of this orientation emerge in references to the redesign of assessment formats, guidance for staff, materials for students, approved tools, and the differentiation of responsibilities among institutional actors. Overall, the studies show that policies address not only norms and principles, but also practical aspects relating to acceptable uses, the redesign of examinations, curriculum reorganisation, the choice of institutionally controlled tools, and the definition of support structures and responsibilities. At the same time, considerable variation emerges in the degree of formalisation and institutional development: alongside universities with relatively comprehensive guidelines, others provide documentation that is limited, fragmented, or weakly structured. Taken together, these studies indicate that European higher education institutions are beginning to move from a still relatively abstract policy positioning towards more concrete institutional arrangements, but that such implementation-oriented efforts remain highly uneven in scope, visibility, and level of maturity.

Equity-, inclusion-, and sustainability-related dimension

The equity-, inclusion-, and sustainability-related dimension is the least developed across the corpus as a whole. Although some policy documents and analyses refer to fairness, equality, inclusion, or accessibility, these issues generally remain secondary and are treated primarily within ethical-regulatory frameworks, rather than as part of an explicit reflection on AI use that is equitable, attentive to difference, and sustainable. Overall, the studies show that issues such as the materiality of GenAI adoption, environmental costs, the systemic implications of its use, access divides, bias, and the possible benefits for students with learning needs are mentioned only episodically and in a weakly structured way. Even in broader comparative frameworks, inclusion, asymmetries of access, and sustainability remain relatively peripheral.

Overall, when read through the four interpretive lenses, the included studies show that institutional responses to GenAI in European higher education have so far developed mainly along two principal lines: the regulation of use through integrity, transparency, and responsibility, and a gradual yet cautious opening to the integration of GenAI into teaching, learning, and assessment. More variable is the organisational translation of these orientations into concrete institutional arrangements, while attention to equity, inclusion, and sustainability remains marginal.

3.4. Implications for GenAI governance in European higher education

The predominance of regulatory concerns can be interpreted as a sign of an early and still consolidating phase of GenAI governance in European higher education. In the reviewed literature, institutional responses are mainly represented as attempts to reduce uncertainty, protect academic standards, and define the boundaries of legitimate use in a rapidly changing technological environment. The emphasis on academic integrity, transparency, accountability, privacy, copyright, and acceptable uses therefore appears not only as a set of procedural concerns, but also as an initial form of institutional stabilisation. At this stage, the reviewed literature suggests that institutions are still engaged in establishing the basic normative conditions under which the use of GenAI can be considered legitimate, visible, and accountable.

This regulatory predominance also suggests that GenAI governance is still largely shaped by a risk-management logic. The reviewed studies show that universities rarely adopt purely prohibitive positions, but that their openness to GenAI is generally conditional and closely linked to disclosure requirements, assessment integrity, and the prevention of

misconduct. This indicates a transitional phase in which institutions are beginning to move beyond emergency responses and absolute restrictions, while not yet having fully developed coherent pedagogical and organisational frameworks for the integration of GenAI. In this sense, the prevalence of the regulatory dimension and the weaker development of the implementation-, equity-, inclusion-, and sustainability-oriented dimensions reveal an uneven level of governance maturity.

From this perspective, the findings relating to the implementation-oriented dimension are particularly important. The existence of policies or guidelines does not, in itself, indicate mature governance. What matters is the extent to which principles are translated into institutional conditions that make responsible use possible: staff professional development, student guidance, access to approved tools, assessment redesign, clarification of responsibilities, technical support, and mechanisms for the periodic review of policies. The uneven attention paid to these dimensions suggests that the institutions examined in the reviewed literature are often still in a phase of transition from policy formulation to policy enactment. GenAI governance therefore appears to depend not only on the definition of rules, but also on the organisational capacity to support their interpretation and application in situated educational practices.

The marginality of issues relating to equity, inclusion, and sustainability further indicates that the current policy debate remains only partially developed. When these issues are mentioned, they often appear as secondary ethical concerns rather than as central dimensions of institutional responsibility. Yet questions of access, bias and forms of discrimination, accessibility, structural disadvantage, and environmental sustainability are crucial for understanding who can benefit from GenAI, under what conditions, and with what possible consequences. The reviewed literature therefore suggests that a more mature approach to governance should connect regulatory compliance with pedagogical purposes, implementation capacity, and broader concerns of equity and sustainability.

Finally, differences across national and institutional contexts should not be interpreted only as fragmentation or lack of coherence. They may also reflect different regulatory environments, governance traditions, levels of institutional autonomy, and stages of policy development within European higher education. The concentration of available studies in a limited number of national contexts also means that the current literature offers only a partial view of this landscape. Nevertheless, the unevenness identified across the corpus points to an ongoing process of institutional experimentation, in which the universities examined in the included studies are attempting to adapt general principles of responsible AI use to specific legal, organisational, cultural, and pedagogical conditions. Future research should therefore examine not only the formal content of institutional policies, but also the contextual factors that shape their development, implementation, and revision over time.

From an operational perspective, these findings suggest that institutional GenAI governance should not be reduced solely to the production of rules or statements on permitted uses. Although regulatory clarity remains necessary, more mature policy responses would require regulation to be connected with pedagogical design, implementation capacity, and equity-oriented safeguards. This would involve accompanying policies with staff professional development, clear guidance for students, institutionally supported tools, procedures for assessment redesign, mechanisms for periodic review, and explicit attention to access, bias, accessibility, and sustainability. In this sense, the reviewed literature points to the need for governance frameworks that are not only compliant and risk-aware, but also pedagogically grounded, organisationally supported, and socially responsible.

Conclusion

Across recent international and European policy documents, a clear priority emerges: the need to strengthen institutional, ethical, and pedagogical frameworks to support the responsible use of AI in education (Erhardt et al., 2025; UNESCO, 2021, 2023). This scoping review examined the emerging published literature on institutional policy responses to generative artificial intelligence in European higher education. Overall, the included studies indicate that this field of research remains at an early stage and is characterised by an uneven geographical distribution, with a marked concentration in a limited number of national contexts, particularly the United Kingdom and Sweden, alongside contributions relating to Germany, Denmark, and broader European comparisons. This unevenness limits the extent to which the findings can be read as representative of European higher education as a whole. Nevertheless, the available published literature makes it possible to identify recurring patterns in how institutional responses to GenAI have so far been described and interpreted.

When viewed through the four interpretive lenses adopted in this review, the literature reveals a clear predominance of regulatory responses. In the reviewed studies, institutional policies are described as focusing primarily on academic integrity, the definition of acceptable and unacceptable uses, transparency, accountability, privacy, copyright, and the management of the educational and legal risks associated with GenAI. Alongside this, a pedagogical-integrative orientation also emerges, although it is less developed and less firmly established. In several cases, GenAI is interpreted not only as a source of risk to be governed, but also as a resource to be integrated, in a cautious and critical manner, into teaching, learning, assessment, and the development of AI literacy.

By contrast, the implementation-oriented dimension appears more variable and unevenly developed in the literature reviewed. The included studies report significant differences in the extent to which institutions are able to translate general principles into concrete conditions for implementation, such as staff training, operational guidance, access to approved tools, the redesign of assessment, the clarification of responsibilities, and mechanisms for policy review. Finally, the equity-, inclusion-, and sustainability-related dimension remains the least visible across the corpus as a whole. Issues concerning accessibility, inequalities in access, bias, structural disadvantage, and the sustainability implications of AI adoption are addressed only intermittently and are rarely articulated in the literature as systematic policy concerns.

Taken together, these findings suggest that, within the published literature examined, the governance of GenAI in European higher education is represented as being shaped primarily through efforts to regulate legitimate uses and preserve academic standards, while only gradually opening up to more explicit forms of pedagogical integration. At the same time, the review indicates that issues relating to implementation capacity, as well as to equitable, inclusive, and sustainable conditions of AI adoption, remain comparatively underdeveloped in the current literature.

This review has some limitations. First, the corpus is relatively small and geographically uneven and therefore cannot be considered representative of the European Higher Education Area as a whole. Second, the review included only English-language journal articles, which may have excluded relevant evidence published in other languages. Third, the exclusion of grey literature, institutional documents, internal guidelines, and policy texts published outside peer-reviewed journals may have substantially limited the comprehensiveness of the review, especially given that many university responses to GenAI are likely to circulate in these formats. Finally, since this review is based on published studies that provide secondary analyses of policies, guidelines, and institutional documents, rather than on a direct examination of those documents, the findings should be interpreted as a synthesis of how institutional policy responses have been represented in the currently available published research, not as a comprehensive account of the full European policy landscape.

From a policy perspective, the findings suggest the need to move beyond predominantly reactive responses centred on academic misconduct towards more coherent frameworks capable of clarifying how GenAI may also be used in pedagogically meaningful and ethically responsible ways. They also underscore the importance of strengthening the conditions for implementation, including staff professional development, guidance for students, access to institutionally supported tools, and the periodic review of policies. Finally, the review highlights the need for future research to pay greater attention not only to the formal content of policies, but also to their concrete enactment and to the broader issues of equity, inclusion, and sustainability, which, based on the published literature reviewed, appear to remain marginal in current institutional responses to GenAI.

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