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Article

Developing Policy Guidelines for Generative AI Use in Higher Education: Evidence from the Baltic Sea Region

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Abstract This study examines the primary risks associated with using generative artificial intelligence (GAI) in social science research and proposes a framework for higher education institutions to effectively manage these risks. As universities increasingly integrate GAI into teaching, research, and administration, concerns around intellectual property, academic integrity, data privacy, and ethical use have intensified. This paper explores the adequacy of current legal frameworks in addressing these challenges, drawing on recent legal analyses and institutional practices. Survey data reveal statistically significant differences in perceptions of the need for GAI guidelines based on respondents' age, education level, field of study, research experience, and geographic region. The findings underscore the urgency of developing adaptive, risk-based policies that support responsible integration of GAI while safeguarding academic standards. The study concludes by proposing guiding principles for a dynamic legal framework that balances innovation with accountability. These recommendations aim to support sustainable and ethical GAI adoption in higher education institutions and contribute to the broader discourse on responsible AI governance in academia.

Keywords generative artificial intelligence; legal framework; higher education; academic integrity

1. Introduction

The rapid proliferation of generative artificial intelligence (GAI) tools, exemplified by platforms like ChatGPT and Gemini, etc., has ushered in a transformative era with the potential to reshape various societal domains. The advent of GAI presents a pivotal moment in higher education, poised to alter established learning and teaching paradigms fundamentally. This transformation encompasses diverse facets, including personalizing learning experiences, augmenting administrative efficiency, and cultivating novel pedagogical opportunities [1]. The ability of GAI to provide individualized support and affordable resources to educators and students is particularly noteworthy. However, integrating these technologies is challenging, necessitating careful consideration of ethical implications, academic integrity concerns, and the imperative to cultivate responsible GAI usage. Without carefully considering ethical issues, academic integrity, and the necessity of fostering responsible GAI use, institutions risk compromising the quality of education and students' preparation for an AI-driven world [2].

In response, several higher education institutions and international organizations have begun developing guidelines to manage the integration of GAI in educational contexts. UNESCO, for instance, has issued global guidance emphasizing the need for inclusive, ethical, and sustainable AI use in education [3]. Recently, several studies have been conducted on regulating the use of GAI in higher education [4–9], but most of them are about countries outside the European Union (EU).

In the EU, several countries have included AI-related issues in their information and communication technology (ICT) strategies [10]. However, in education, much more specific and detailed regulation is needed, so each country develops guidelines tailored to its education system, highlighting the educational priorities of each country. Researchers point out that in the study process, AI should aid individual study—it should not replace human thinking and critical analysis abilities. AI should support individual studies and the study process in heterogeneous groups. Students should be responsible for their academic achievements and further development [11].

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Being aware of the research gap, the purpose of this study is to identify the principal risks of the use of GAI in social science studies and research to develop a framework for universities that would allow for the effective management of the risks posed by the GAI in the study and research process, while not unduly limiting the potential positive potential of these technologies.

This study examines the topicality and adequacy of existing legal frameworks governing the use of GAI in higher education institutions. As universities increasingly adopt GAI tools for teaching, research, and administrative functions, questions surrounding intellectual property rights, academic integrity, data privacy, and ethical use have become more pressing. Drawing on recent legal analyses and institutional responses, this study evaluates how current regulations address the unique risks associated with GAI.

2. Literature Review

2.1. Generative AI in Higher Education

GAI has quickly gained prominence in academia and is now widely used in teaching, learning, and research. Since 2023, well-known AI product vendors and startups have offered GAI applications designed for the educational context [12].

Kuka et al. [13] emphasized that the public needs to be educated about working with AI and show the risks that may lurk in uncritical work with AI-generated content. The apparent ease with which texts are created can lead to an uncritical perception of these texts, ignoring credibility and ethical aspects [13]. Gaining insight into the opinions of various institutions and authors reveals that, undoubtedly, the ethical aspect unites them. The extent to which society will ethically treat the use of GAI tools will mitigate the risks posed by GAI. In the coming years, one of the most pressing issues will be educating the public on the responsible and ethical use of GAI tools. With the growing number of regulatory frameworks, it is essential to simultaneously transform society's thinking and cultivate a generation that utilizes GAI as a tool and is aware of its potential threats.

GAI technology is distinguished by its ability to create an individualized curriculum that considers each student's unique needs and learning styles. It provides an opportunity to provide feedback, for example, on the exam results. Using GAI, lecturers can provide personalized attention to each student, thereby improving the quality of education. This approach helps assess students' abilities and reduces human errors in manual analysis, ultimately saving teachers valuable time and energy. It also helps to create short, education-oriented videos and films to improve students' understanding of the content of a particular topic [14].

Subject understanding is achieved when students can both ask and answer questions. Beyond simply transferring information, GAI-driven virtual educators can ask students questions, thereby clarifying any ambiguities that may arise. For example, teaching assistants can be programmed to answer students' questions exhaustively. GAI literacy can be integrated into the curriculum to nurture a new generation of informed and responsible users. Students can study the algorithms that enable GAI to function, engage in discussions about the impact of GAI on society, and develop skills to interact effectively with GAI. In addition, teaching staff should adapt teaching methods to include GAI literacy in preparing students for a future in which GAI is an integral part of their personal and professional lives. By providing learners with GAI literacy, educational institutions can empower students to exploit the full potential of these technologies. This skill includes knowledge of using GAI-based tools and understanding the biases and limitations inherent in such systems. It encourages students to become understanding consumers and creators of GAI-generated content [15]. In general, GAI literacy in educational practice ensures that students are not silent consumers but active participants in the expanded world of GAI. It enables them to leverage the power of GAI while fostering ethical, responsible, and thoughtful use of these powerful tools.

Students who rely too much on GAI's responses instead of actively participating in in-depth discussions with other students and tutors may lose the opportunity to gain knowledge and develop critical thinking skills through meaningful interactions [16]. Critical thinking is essential to higher education, as it contributes to the development of comprehensive, analytical, and independent graduates. If students rely too heavily on GAI-generated solutions, they may not thoroughly engage with the learning material and develop the skills to independently analyze, evaluate, and generate knowledge. Such dependence could lead to underdeveloped graduate qualities that jeopardize educational goals, hinder intellectual growth, and fail to prepare students for the

complex professional world. Such concerns necessitate a careful and thoughtful approach to integrating GAI tools into education, ensuring they expand or complement human intellectual and social skills rather than undermine, contradict, or surpass them [3].

While GAI may seem like a good "teacher" because of its quick responses, it can still create the illusion that students are progressing rapidly and learning everything quickly. In turn, this can lead to an inefficient learning process and an incomplete understanding of the subject matter's content. The cognitive load theory can be applied to analyze how GAI can enhance information presentation or introduce unnecessary load, potentially interfering with the study process [17]. The theory states that the mental effort required to process information affects learning, which is more effective when the information is presented in a way that minimizes cognitive load. Students' memories have limitations, and effective teaching methods should not overload them. Students may get confused and learn less information if the subject's content is presented too quickly. Therefore, the study process is usually organized in two semesters. This structure helps students manage their cognitive load, allowing them to engage with content gradually, deepen their understanding, and build relationships between different topics over time. Deviations from this approach can disrupt the balance of cognitive load and hinder practical learning, regardless of students' efforts [16]. GAI is best aligned with the theory of self-determination. It points out that in cases where students have a moderate knowledge base and a strong desire to learn, interacting with GAI and receiving instant feedback can be more effective than learning from a human teacher [18]. However, it is essential to critically evaluate whether GAI's effectiveness is genuine or merely attractive. The threat this poses to the basic principles of education must be acknowledged. These threats must be carefully assessed and addressed to ensure that GAI integration complies with ethical and pedagogical considerations [16].

The development of GAI tools has raised serious concerns about academic integrity in higher education assessments worldwide [19]. These GAI tools can generate different types of content, including text and code, in seconds. This content is often difficult to distinguish from human-made content, complicating teachers' ability to identify use cases of GAI in student work [20]. It is also worth mentioning that GAI creates content based on large amounts of data, posing privacy and security risks in case that the data is not adequately protected. Higher education institutions must ensure the secure and private retention of data [21].

Previous research has demonstrated that the involvement of students and researchers in policy development is crucial for the effective utilization of technology [22,23]. Additionally, attitudes towards the use of GAI are related to the socio-demographic parameters of users [24,25]. Thus, the hypotheses for this study are defined as follows:

H1: The age of students and researchers influences views on the need for regulation of GAI use.
H2: The gender of students and researchers influences views on the need for regulation of GAI use.
H3: The level of education of students and researchers influences views on the need to regulate GAI use.
H4: The level of study influences the view on the need for regulation of GAI use.
H5: The field of study influences the view on the need for regulation of GAI use.
H6: Research experience influences views on the need for regulation of GAI use.
H7: Residency of users influences views on the need to regulate GAI.

2.2. The Institutional Guidelines of GAI Use in Higher Education

Given GAI's multifaceted challenges and opportunities, higher education institutions must establish comprehensive guidelines to govern the adoption and utilization of GAI. These guidelines should encompass a range of considerations, including ethical principles, academic integrity policies, data privacy protocols, and accessibility standards. Institutions must equip educators with the knowledge and skills to effectively integrate GAI into their teaching practices while mitigating potential risks. It is essential to establish clear expectations for students regarding the responsible use of AI tools, emphasizing the importance of academic honesty, critical thinking, and the ethical use of AI [4].

To effectively harness the transformative potential of GAI in higher education while mitigating its inherent risks, institutions must establish clear guidelines and policies that govern the responsible and ethical use of these technologies. These guidelines aim to address critical issues,

including data privacy, intellectual property rights, and academic integrity, thereby ensuring that AI is introduced in a manner that aligns with the institution's values and mission [26]. Without such guidance, institutions risk eroding academic standards, compromising student privacy, and lasting societal inequalities. Guidelines are needed to promote academic integrity by clarifying acceptable and unacceptable uses of AI tools in academic work. Furthermore, guidelines are needed to address data privacy concerns, outlining how student data will be collected, used, and protected in AI-driven learning environments. Educational institutions must introduce a comprehensive approach to ensure that these technologies are used responsibly, enhancing the quality of education and preparing students for a progressively digital and automated future [1].

The formulation of institutional guidelines is crucial for addressing concerns regarding the ethical use of AI in academic settings [2]. These guidelines should provide a framework for ensuring fairness, transparency, and accountability in the deployment of GAI technologies, while addressing concerns related to bias, privacy, and data security [27]. By establishing clear guidelines, institutions can foster a culture of responsible AI innovation that benefits students and educators, thus ensuring AI is a tool for empowerment and learning rather than a source of academic or ethical compromise [28]. Furthermore, addressing the unique challenges of international students in GAI is crucial [29]. Students face cultural and educational adjustments, as well as language barriers, which can exacerbate the challenges of using GAI ethically and effectively [30]. Institutions must offer targeted support and resources to these students, ensuring equitable access and guidance. Educational resources and workshops are essential for familiarizing students with GAI technologies and their ethical and societal implications, enabling them to make informed decisions when utilizing these technologies in their academic endeavors [31]. Open discussions about social perceptions and emotional responses surrounding GAI use are necessary [32]. Additionally, institutions should consider the operational aspects, such as technical infrastructure, data management, and support services, necessary to enforce and maintain AI effectively.

Moorhouse et al. (2023) [4] analyzed the guidelines for using GAI tools in assessments across top global universities. Their review of the top 50 institutions, as ranked by the Times Higher Education (THE) World University Ranking for 2023, revealed that fewer than half had published AI-related policies on their websites. Their findings emphasized the need for such policies to uphold academic integrity, guide assessment design, and effectively equip educators to engage with students about these emerging tools. They also concluded that instructors require training in applying GAI assessment tools.

Smith et al. (2024) [33] developed a framework to promote the responsible use of GAI in research, drawing insights from two Australian universities. Their model highlights the importance of understanding the context behind policy development, focusing on implementation, and ensuring continuous evaluation and improvement.

Yusuf et al. (2024) [34] conducted a global survey involving students and educators from 76 countries. Over 80% of participants were aware of GAI's role in education, and the majority supported the creation of regulatory policies to guide its integration into the education system [34]. The study emphasizes concerns about academic dishonesty and the need for robust ethical guidelines to ensure the responsible use of GAI. The authors recommend developing policies that are responsive to cultural expectations and promoting the ethical and practical integration of GAI in higher education.

McDonald et al. (2025) [9] reviewed GAI-related policies from more than 100 US universities and found that 63% of these universities encouraged the use of GAI in teaching and learning. These guidelines typically included content creation, sample syllabi, ethical and privacy considerations, and GAI detection tools [9].

Overall, the literature reflects growing awareness and progress in addressing the implications of GAI in higher education. However, a gap remains in research on how EU and Baltic countries' universities formally develop and implement these guidelines. Moreover, existing studies rarely assess whether current policies comprehensively address all relevant aspects of GAI use. This identified gap has led to the formulation of the research question:

RQ: To what extent are instructions on the use of GAI represented in higher education institutions' guidelines?

3. Methodology

3.1. Research Approach

The study employed two approaches: a) a survey of students and teaching staff of universities in the Baltic region countries to collect data for analysis and substantiation of the formulated hypothesis; b) an analysis of guidelines of top European and Baltic countries' universities to answer the research question.

The survey questionnaire items, partially informed by the previous research [35,36], were developed and tested with a small sample from the target population in Autumn 2024. This pilot phase aimed to ensure the questions were clear and to assess the time required to complete the survey. Based on the feedback received, minor adjustments were made to a few items. The survey questionnaire covered items under investigation, specifically for this study: "Is it appropriate to regulate the use of GAI by normative documents?" The answers respondents were asked to provide on a scale: "Yes", "No", or "NA". Background information, including age, education, study level, and experience, was also collected from respondents (see Table 1). A link to the survey was disseminated via multiple channels, encompassing networks with various universities in the Baltic Sea region. The survey questionnaire was open from 2 January to 31 March 2025, securing a sample of 580 respondents. From an initial list of responses, 11 incomplete questionnaires were excluded, resulting in a dataset suitable for in-depth analysis. This convenience sample broadly mirrored the distribution of students and teaching staff in business schools across the Baltic Sea region, with respect to age, gender, education, study level, and field of study.

Table 1. Demographic characteristics of respondents and the share of positive responses on the necessity of GAI guidelines.

	n	**Share (%)**	**Yes (%)**
Age			
<23	192	33.7	54.7
23–27	147	25.8	66.0
28–32	56	9.8	73.2
33–37	33	5.8	66.7
38–42	26	4.6	65.4
43–47	45	7.9	68.9
48–52	21	3.7	81.0
53–57	30	5.3	83.3
58+	19	3.3	84.2
Gender			
Female	339	59.6	64.0
Male	230	40.4	67.0
Education level			
Secondary	227	39.9	59.0
Bachelor's	175	30.8	60.6
Master's	96	16.9	74.0
Doctoral	71	12.5	84.5
Study level			
Bachelor	295	51.8	57.3
Master	104	18.3	65.4
Doctoral	54	9.5	72.2
NA	116	20.4	81.9
Study direction			
Economics and business	468	82.2	65.0
Educational science	32	5.6	87.5
Other	69	12.1	56.5

Table 1. (*Continued*)

Research experience			
0	134	23.6	52.2
1	113	19.9	61,1
2	83	14.6	66.3
3	61	10.7	59.0
4–5	43	7.6	53.5
6–9	34	6.0	91.2
10–15	47	8.3	85.1
15+	53	9.3	86.8
Region			
Latvia	324	56.9	60.2
Denmark	62	10.9	56.5
Lithuania	60	10.5	85.0
Estonia	37	6.5	89.2
Other	86	15.1	66.3

For research question analysis, we selected the top 36 universities in Europe and 13 leading universities from the Baltic states, using Quacquarelli Symonds (QS) World University Ranking 2025 [37]. We then searched all the identified university websites for publicly available guidelines on the use of GAI tools during May 2025. The study employed a quantitative method to examine the contents of the selected universities' GAI guidelines on using these tools and document the GAI output(s) obtained. Table 2 provides a list of items under evaluation.

Table 2. Instructions on the use of GAI presence in the guidelines.

Instructions on the Use of GAI	**Top European**		**Top Baltic**	
	Yes (%)	**No (%)**	**Yes (%)**	**No (%)**
GAI tools usage permitted	94.4	5.6	100.0	0.0
Instances unsuitable for GAI tool usage (limitations)	97.2	2.8	100.0	0.0
Instructor approval for GAI utilization	86.1	13.9	92.3	7.7
Purpose of utilizing GAI tools	91.7	8.3	92.3	7.7
Documentation of GAI tool outputs	91.7	8.3	92.3	7.7
Utilization and adaptation of GAI output	86.1	13.9	92.3	7.7
Strategies for GAI use in classrooms and assessments	94.4	5.6	100.0	0.0

3.2. Data Analysis

The collected survey data analysis encompassed descriptive and inferential statistical methods. Descriptive statistics were employed to analyze respondents' distributions across demographic characteristics, assess the sample's representativeness, and summarize the distribution of responses about the necessity of regulating the use of GAI in studies and research by normative documents. To justify the hypotheses' conclusions, we adopted the Kruskal–Wallis test, which is suitable for categorical and ordinal scale-measured variables without meeting the normality assumption. This approach helps ensure that detected differences reflect genuine patterns in the data rather than artifacts introduced by the analytical method. By choosing a more conservative statistical strategy, we aim to strengthen the validity and trustworthiness of our findings while acknowledging the limitations inherent in the measurement scale.

4. Results

4.1. Descriptive Analysis of Survey Results

The descriptive analysis of responses, as illustrated in Table 1, reveals varied attitude patterns regarding the necessity to regulate the use of GAI by normative documents: a) as the age and experience of respondents in research increases, there is a tendency to increase the proportion of positive ("Yes") answers; b) men are slightly more supportive of the need for regulation than women; c) respondents with a higher level of education are more supportive of the need for

regulation; d) respondents in the studies direction of educational sciences are more supportive than others; and, finally, e) respondents from Estonia and Lithuania are more supportive, compared to the respondents from other countries of the Baltic Sea region.

4.2. Inferential Analysis of Survey Responses on GAI Usage Regulation

Data included in the following Table 3 summarizes the results of the Kruskal–Wallis test, indicating statistically significant differences in respondents' attitudes towards regulating GAI use in studies and research by age, education, study level, study direction, research experience, and residence. Therefore, hypotheses H1, H3, H4, H5, H6, and H7 are supported at a confidence level higher than 95%. The only hypothesis that was not supported was H2: survey results do not provide enough evidence that students' and researchers' genders impact attitudes towards the necessity of GAI use in studies and research regulation.

Table 3. Kruskal–Wallis test results and hypotheses status.

	Kruskal–Wallis Statistic	*p*-value	Hypotheses
Age	20.757	0.0228	H1 supported
Gender	0.345	0.5572	H2 not supported
Education level	19.330	0.0002	H3 supported
Study level	42.694	0.0000	H4 supported
Study direction	9.259	0.0098	H5 supported
Research experience	45.832	0.0000	H6 supported
Residence	33.163	0.0003	H7 supported

4.3. Analysis of Guidelines of Top Universities in Europe and Baltic Countries

Table 2 includes research results that summarize the evaluation of the top 36 universities in Europe and 13 leading universities from the Baltic states as per the guidelines of the GAI. All 13 analyzed universities in Baltic countries and 34 out of 36 top European universities have clearly stated that the use of GAI tools is permitted. All analyzed universities in the Baltic countries, and the absolute majority (97%) of top European universities, also pointed out associated limitations and situations in which employing GAI would not be suitable. Moreover, 92% and 86% of universities mandate obtaining the instructor's approval before using GAI tools. 92% of all analyzed guidelines instruct users on the purpose of utilizing and documenting GAI outputs. All Baltic countries, along with the absolute majority (94%) of the retrieved university guidelines, guide the successful incorporation of these guidelines into studies.

Table 4 includes summaries of the evaluation of the instructions for using GAI regarding ethical and legal issues of the top 36 universities in Europe and 13 leading universities from the Baltic states.

Table 4. Instructions regarding ethical and legal issues in the guidelines on the use of GAI.

Instructions Regarding Ethical and Legal Issues	Top European		Top Baltic	
	Yes (%)	No (%)	Yes (%)	No (%)
Data privacy and security	97.2	2.8	100.0	0.0
Evaluation and verification of GAI outputs	86.1	13.9	92.3	7.7
Referencing and citing of GAI outputs	91.7	8.3	100.0	0.0
Academic integrity and misconduct	97.2	2.8	100.0	0.0
Use of AI detection tools	33.3	66.7	84.6	15.4
Legal compliance	83.3	16.7	92.3	7.7
Reporting mechanisms	52.8	47.2	84.6	15.4

An evaluation of the ethical and legal guidelines for using GAI tools at the top 36 universities in Europe and 13 leading universities in the Baltic states reveals a strong commitment to responsible AI use, with Baltic institutions generally demonstrating more comprehensive coverage. The high percentages across most categories indicate that European and Baltic universities are taking proactive steps to integrate GAI tools ethically and legally. This reflects a growing recognition of AI's transformative potential in education, as well as the need to manage its associated risks.

Baltic institutions consistently scored 100% or near it across most categories, suggesting a more unified or centralized approach to policy development. This could be due to regional collaboration, smaller systems, or more agile governance structures. Only 33.3% of top European universities mention AI detection tools, compared to 84.6% in the Baltic. Similarly, reporting mechanisms were present in 52.8% of European universities, compared to 84.6% in the Baltic universities. There may be a lack of preparedness in some institutions to monitor and respond to misuse or ethical breaches involving GAI.

5. Discussion

There is an undeniable growing need to continuously discuss and analyze the ethical, legal, and social aspects created by AI, ensuring that AI serves people rather than becoming a tool for discrimination and the abuse of power [13]. To promote the use and inclusion of GAI in the study process, it should be made available to society regardless of gender, ethnicity, special educational needs, socio-economic status, or geographical location. It is necessary to identify individuals who do not have or cannot afford access to the internet, thereby creating an environment that provides opportunities to develop digital skills and reduce barriers to equal access to artificial intelligence.

GAI policies should ensure that AI tools are used to support and enhance learning, teaching, and research, and not as a substitute for human interaction and critical thinking. By prioritizing transparency, equity, and accountability, universities can harness the transformative potential of AI while safeguarding academic integrity and promoting ethical practices in this field [21]. Moreover, these policies should promote transparency in data processing and handling, adhering to legal frameworks that protect student privacy and data security [38]. These guidelines should also foster a culture of experimentation and innovation, providing educators and students with resources and support to explore the potential of AI in education while remaining mindful of its limitations and risks [33]. For example, faculty can promote students to critically assess AI-generated content and distinguish between reliable and unreliable sources, thereby developing their critical thinking skills [31]. Additionally, institutions should provide training and resources to help educators effectively integrate AI tools into their teaching practices, ensuring that AI enhances, rather than replaces, human interaction and guidance [39]. Such policies should address the potential for algorithmic bias and ensure that AI systems are fair, inclusive, and do not discriminate against any student group.

5.1. Age and Experience as Drivers of Regulatory Support

Survey results show that support for regulating GAI use increases with age and research experience. Respondents aged 48 and above (94.4%) and those with over 10 years of research experience (85.1–86.8%) expressed the strongest support. This suggests that experienced academics are more attuned to risks such as academic dishonesty, data misuse, and erosion of critical thinking.

Policy implication: Frameworks should reflect the concerns of senior academics by embedding oversight mechanisms, ethical review processes, and transparency protocols. These individuals can serve as policy advocates and mentors in peer-led training initiatives. As Kabanda has emphasized, clearly defined roles and responsibilities for educators and researchers are essential to ensure moral and legal accountability in AI-related actions [40].

5.2. Educational Background and Study Direction

Respondents with doctoral-level education and those in educational sciences were significantly more supportive of regulation. These groups likely recognize the pedagogical risks of uncritical GAI use, including diminished student engagement and compromised assessment integrity.

Policy implication: Policies should be discipline-sensitive. In fields such as educational science, where formative learning and ethical reflection are central, guidelines must emphasize the responsible integration of these concepts. Chan & Hu [31] advocate for teaching students to evaluate AI-generated content critically, reinforcing the importance of human judgment in academic work.

5.3. Regional Differences and Cultural Expectations

Support for regulation was highest in Estonia and Lithuania, suggesting regional readiness for structured governance. These differences may reflect national ICT strategies, public discourse on AI ethics, or institutional maturity.

Policy implication: Policy frameworks should be adaptable to regional contexts. Institutions in Estonia and Lithuania may serve as pilot sites for implementation and evaluation. As Kuka et al. [13] have argued, ethical awareness and public education are critical to mitigating AI-related risks and fostering inclusive adoption.

5.4. Institutional Gaps in Existing Guidelines

Analysis of university guidelines revealed that while most institutions permit the use of GAI and outline limitations, fewer explicitly address documentation standards, instructor approval, and reporting mechanisms. For example, only 86.1% of top European universities and 92.3% of Baltic institutions require instructor approval, and just 91.7% mention documentation of GAI outputs.

Policy implication: These gaps highlight the need for comprehensive and enforceable guidelines. Institutions should mandate:

- Instructor approval for GAI use in coursework and assessments [4].
- Documentation protocols are in place to ensure transparency and traceability [33].
- Reporting mechanisms for suspected misuse or ethical violations [40,41].

Such measures align institutional practice with the expectations of experienced educators and students who value academic integrity and responsible innovation.

5.5. Equity, Access, and Digital Literacy

The survey also revealed disparities in support for regulation based on education level and research experience, suggesting that less experienced users may be less aware of the risks associated with GAI. To promote inclusive adoption, institutions must address digital divides and ensure equitable access to AI tools and resources.

Policy implication: Universities should invest in digital literacy programs and infrastructure to support students from diverse backgrounds. As Gore & Dove [39] have noted, AI should enhance—not replace—human interaction and critical thinking. Policies must ensure that all students, regardless of socioeconomic status, have access to training and resources that empower them to use technology responsibly [39,42,43], respecting referencing for use of GenAI tools, noting those aspects also in international evaluations [44,45].

5.6. Toward a Responsive Policy Framework

Researchers have highlighted the challenges of AI application in interdisciplinary access [46–48], emphasizing the need for innovative approaches in study results assessment [45,49–51], including evaluations and promoting academic staff [52], and reducing burnout [53].

Drawing on these findings and supported by the literature, we propose a policy framework grounded in the following principles:

- Risk-based regulation informed by demographic and disciplinary insights [13,40].
- Transparency and accountability through mandatory documentation, instructor oversight, and ethical review [38,42].
- Ethical literacy and critical thinking are embedded in curricula and supported by faculty development [31,54].
- Regional adaptability to reflect cultural and institutional differences across the Baltic region [34].
- Continuous evaluation and innovation to update guidelines in response to evolving GAI capabilities and user behaviors [33,41].

This framework is not a static set of rules, but a dynamic tool for managing the risks and opportunities associated with GAI in higher education. It reflects the empirical realities uncovered in this study and provides a pathway for institutions to strike a balance between innovation and responsibility. As Michel-Villarreal et al. [42] have emphasized, the integration of ethical AI

requires explainable systems, representative datasets, and interdisciplinary collaboration to ensure fairness, transparency, and long-term sustainability.

6. Conclusions

This study provides empirical evidence for developing a responsive policy framework to guide the ethical and practical use of GAI in higher education. By analyzing survey responses and institutional guidelines, we identified key demographic and experiential factors that shape attitudes toward regulation, as well as structural gaps in existing university policies. These findings inform a set of principles for governance that strike a balance between innovation and accountability.

Educational institutions at various levels of study will play a crucial role in shaping this consciousness/thinking. To effectively teach and influence young people's habits of using AI, it is essential to acknowledge the presence of AI in both study and research processes. First, it will affect and change the study process. It will be necessary to change the methods used in the teaching process; the approach to "student-centered" (individualized) education will grow.

Higher education institutions must ensure researchers, teachers, and learners use GAI tools responsibly, ethically, and critically to approach the accuracy and validity of the outputs. Such frameworks should emphasize the importance of transparency, explainability, and accountability in designing and implementing AI systems, promoting ethical AI practices that prioritize human well-being and societal benefit. Additionally, universities must invest in robust cybersecurity measures to safeguard against potential threats and vulnerabilities related to AI technologies. By establishing clear protocols for data handling, access controls, and threat detection, institutions can minimize the risk of data breaches, unauthorized access, and malicious attacks, securing the integrity and confidentiality of sensitive information. Institutions must also promote critical thinking and digital literacy skills among students and educators, enabling them to evaluate the accuracy, reliability, and potential biases of AI-generated content. This proactive approach will empower individuals to make informed decisions about AI and mitigate the risk of misinformation and manipulation.

Developers of GAI software should consider linguistic and cultural diversity in the process of development process of GAI specifications and ensure the creation and availability of content in multiple languages. Four important rules for the use of generative GAI in education are:

a) Adhering to ethical principles—GAI tools in education should be used ethically, critically evaluating the reliability and accuracy of the results obtained. It is necessary to make sure that references to the source of information are correct, for example, that GAI has chosen the appropriate regulation for the specific topic.
b) To develop guidelines for the use of GAI in the study process, and, if necessary, to train university staff and students in the use of GAI tools.
c) University faculty should critically evaluate works developed using GAI, whether they have been used as inspiration or whether the GAI text is visible or thoroughly copied.
d) Plagiarism prevention—Students can assign the text generated by GAI to be their own. If the text is created using GAI, it should be referenced. Teachers should be assigned tasks that require qualities and skills that GAI does not possess.

The meaningful use of GAI makes the study process more qualitative, easier to perceive, and more diverse. The four main advantages of GAI use in higher education are:

a) Creating interactive business simulations is an important way to use GAI in business studies. It can create realistic and complex business scenarios, allowing students to engage in decision-making processes that reflect real-life business challenges. This hands-on experience is invaluable in teaching students how to navigate the ambiguities and complexities associated with starting and running a business.
b) The ability of GAI to analyze and forecast market trends is a great benefit for business students. It helps them understand market dynamics and consumer behavior, enabling them to develop effective business strategies—an essential skill for entrepreneurs. In addition to market insights, GAI can significantly contribute to generating ideas and innovation. It can propose a wide range of ideas and perspectives, fostering creativity and innovative thinking.

c) Recommendations and examples for successful business strategies, thus improving students' ability to create comprehensive and effective business plans. GAI promotes collaboration-building by connecting students with mentors and industry professionals based on shared interests and goals. This aspect not only promotes learning but also helps to build professional contacts, which is an essential part of business success.
d) Promoting cognitive skills in students—With automated task generation, GAI can stimulate curiosity in students and develop the ability to ask complex and interesting questions. This, in turn, will create an environment for discussion between students and lecturers, enhancing students' ability to argue their points of view and engage in exciting discussions.

Educational institutions can greatly benefit from the immediate introduction of GAI into their curricula. Proficient students can get more tailored and understandable answers from AI systems, improving their problem-solving skills and knowledge acquisition. Additionally, educators can benefit from a deeper understanding of generative AI tools. They can utilize GAI to create an interactive study environment, fostering greater student interest and involvement in the lecture and seminar process.

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Data Availability

The questionnaires have been completed through the following link, from which we have obtained the data: https://latvia.questionpro.com/a/TakeSurvey?tt=lOo/2WdK7tgECHrPeIW9eQ%3D%3D.

Ethics Statement

The BA School of Business and Finance Ethics Committee evaluated the questionnaire. According to the GDPR (General Data Protection Regulation), no ethical approval was necessary for this study.

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Declaration of generative AI and AI-assisted Technologies in the Writing Process

During the preparation of this article, the authors used Grammarly to correct grammar errors and improve the flow of the academic writing style. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article.

Author Contributions

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Conflicts of Interest

The authors have no conflict of interest to declare.

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