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GENAI PROVOKES VIOLATIONS OF ACADEMIC INTEGRITY: MYTH OR REALITY?

Purpose. The purpose of this article is to empirically test whether the use of generative artificial intelligence (GenAI) provokes violations of academic integrity.

Methodology. The study is based on a bibliometric analysis and a cross-national survey of academic stakeholders from the European Union, the United Kingdom, Canada, the United States, and other regions. The total sample comprises 496 respondents. The survey was conducted anonymously via Google Forms and used a five-point Likert scale to assess agreement with the statement that the use of GenAI leads to violations of academic integrity. Cochran’s formula was applied to justify the representativeness of the sample.

Findings. The results indicate a moderately high level of concern among academic communities regarding the impact of GenAI on academic integrity (mean value of 3.42, with a neutral benchmark of 3.0), thereby supporting hypothesis H₁ that GenAI is perceived as a potential threat to academic integrity. Substantial cross-country differences were identified, ranging from relatively low levels of concern in Italy and Poland to high levels in Germany, Switzerland, Lithuania, and Canada. Clear regional and cultural clustering patterns are observed, including heightened caution in German-speaking countries and more pragmatic attitudes in Eastern European countries. These findings highlight the significant influence of national educational traditions, institutional frameworks, and regulatory approaches on perceptions of GenAI-related risks.

Originality. The first cross-national empirical analysis is provided of perceptions regarding the relationship between GenAI use and violations of academic integrity based on a broad international sample. The article offers a systematic perspective on how cultural, regional, and institutional factors shape attitudes towards GenAI in academic environments.

Practical value. The practical value of the study lies in the potential application of its findings in the development of national and institutional policies for integrating GenAI into the educational process. The identified cross-country and regional differences demonstrate the limitations of one-size-fits-all regulatory approaches and underscore the need for culturally sensitive, context-specific strategies. The results may be used by university administrations, academic integrity committees, curriculum developers, and education authorities to design balanced approaches to GenAI use that combine innovation with the preservation of core academic values.

Keywords: *GenAI, academic integrity, survey, violation*

Introduction. The rapid emergence and widespread adoption of generative artificial intelligence (GenAI) technologies have fundamentally challenged traditional paradigms of academic work and scholarly integrity. Tools such as ChatGPT, Claude, and other large language models have democratized access to sophisticated text generation capabilities, creating unprecedented opportunities for legitimate academic enhancement and potential misconduct [1]. This technological revolution has sparked intense debate within academic communities worldwide, with educators, administrators, and policymakers grappling with questions about the authenticity of student work, the evolution of assessment methods, and the very definition of academic integrity in the digital age [2].

The urgency of addressing these concerns cannot be overstated, as educational institutions face mounting

pressure to adapt their policies, detection mechanisms, and pedagogical approaches to accommodate this new reality [3]. While some view GenAI as an existential threat to academic integrity, others argue that these technologies represent a natural evolution of educational tools that, when properly integrated, can enhance rather than undermine scholarly work [4]. The polarized nature of this discourse highlights the need for a nuanced, evidence-based examination of whether GenAI genuinely provokes violations of academic integrity or whether concerns about its impact reflect broader anxieties about technological change in education.

Academic integrity represents a foundational principle of scholarly work, traditionally encompassing honesty, trust, fairness, respect, and responsibility in all academic endeavors [5]. These core values have historically been operationalized through specific behavioral expectations, including the creation of original work, proper attribution of sources, honest representation of one’s contributions, and adherence to established aca-

democratic standards and procedures [6]. The concept has evolved significantly since its formal articulation in the mid-20th century, adapting to technological changes while maintaining its essential commitment to authentic scholarship and ethical conduct [7].

The traditional understanding of academic integrity has been closely tied to individual authorship, original thinking, and demonstrating personal knowledge and skills through various assessment forms [8]. Violations have typically been categorized into distinct types such as plagiarism, cheating, fabrication, falsification, and unauthorized collaboration, with each category reflecting different ways in which students might compromise the authenticity or honesty of their academic work [7]. These categories were developed in an era where the primary sources of academic dishonesty involved copying from books, journals, or other students' work, making detection and prevention relatively straightforward through established pedagogical and technological means.

GenAI fundamentally differs from previous educational technologies' capacity to produce original content that closely mimics human writing, reasoning, and creative expression [9]. Unlike simple information retrieval systems or basic text processing tools, GenAI systems utilize sophisticated neural networks trained on vast datasets to generate contextually appropriate, coherent, and often highly sophisticated responses to complex prompts [10]. These systems can produce academic essays, solve mathematical problems, generate code, create research proposals, and even engage in advanced reasoning across multiple disciplines, making them qualitatively different from any previous technological tool available to students [11].

The mechanisms underlying GenAI operation raise profound questions about the nature of originality and authorship in academic work. When a student inputs a complex prompt and receives a well-structured essay in response, traditional frameworks for determining plagiarism become inadequate, as the text is technically original despite not originating from the student's own knowledge or analytical processes [12]. This challenge is compounded by the fact that GenAI systems can produce multiple unique variations on the same topic, making traditional text-matching detection methods increasingly ineffective [13].

The evolution of concepts such as plagiarism and originality in the digital age has been gradual but significant, beginning with the widespread adoption of internet resources and continuing through technological innovations such as Wikipedia, online essay mills, and sophisticated paraphrasing tools [14]. Each technological advancement has required academic communities to refine their understanding of acceptable practice and develop new strategies for maintaining integrity while acknowledging legitimate uses of available resources [15]. The emergence of GenAI represents perhaps the most significant challenge yet to these evolving frameworks, as it blurs the lines between tool use and content creation in ways that previous technologies did not achieve [16].

Contemporary scholarship increasingly recognizes that academic integrity must be understood as rule compliance and as a complex cultural practice reflecting deeper values about knowledge creation, intellectual de-

velopment, and scholarly community membership [17]. This broader understanding acknowledges that violations often stem from systemic issues, including inadequate instruction, cultural misunderstandings, competitive pressure, and institutional failures, rather than simple moral failings on the part of individual students [18]. Therefore, integrating GenAI into academic environments requires careful consideration not only of technical detection and prevention mechanisms but also of the pedagogical and cultural changes necessary to sustain meaningful learning outcomes while adapting to new technological realities.

Literature review. The discourse on academic integrity has increasingly acknowledged the interplay between educational quality, governance standards, and ethical behavior in academic communities. International organizations play a pivotal role in promoting integrity norms, particularly in contexts of globalization and academic mobility, where harmonization of ethical frameworks becomes essential [19]. Cross-country analyses reveal that governance quality, educational development, and ethical awareness are interlinked drivers of integrity compliance, with variations in cultural and institutional contexts shaping their effectiveness [20]. Individual factors such as the length of educational experience and exposure to robust governance frameworks have been found to enhance understanding and commitment to academic integrity principles [21].

The protection of academic integrity also intersects with the resilience of higher education systems under disruptive conditions. War-related disruptions, including the displacement and appropriation of universities, have challenged institutional capacity to maintain quality standards and uphold integrity norms [22, 23]. Moreover, the forced digitalization of education (often accelerated by crises) has exposed universities to risks such as cybercrime, inadequate verification systems, and insufficient institutional preparedness [24, 25]. The socioeconomic challenges of rebuilding educational and scientific capacity after large-scale disruptions further complicate the integrity landscape, especially when trust in governance and institutional transparency is fragile.

Digitalization and technological transformation have emerged as double-edged phenomena in this context. On the one hand, advanced technologies, such as smart systems in banking and e-governance, demonstrate how innovation can enhance transparency, governance quality, and compliance in both public and private sectors [26, 27]. On the other hand, the rapid adoption of emerging technologies, particularly artificial intelligence, has raised ethical concerns regarding misuse, data security, and undermining trust in professional and academic environments [28–30].

Generative AI has been identified as a transformative force in knowledge management, capable of redefining how information is produced, disseminated, and utilized in academic settings [31]. Large language models are increasingly integrated into research and manuscript preparation, streamlining drafting processes and creating opportunities for unacknowledged assistance that may conflict with existing integrity policies. This dual potential, enhancing productivity while risking ethical breaches, has been a focal point of scholarly debate. Some argue that fears of widespread academic dishon-

esty driven by GenAI are overstated and stem from misconceptions about AI-assisted work, emphasizing the need for clear pedagogical integration and ethical guidelines [32]. Others stress the importance of pre-emptive governance measures to prevent the erosion of trust in academic outputs, given that AI can produce fabricated or unverifiable content if misused.

The relationship between technological capability and ethical decision-making extends beyond academia, with evidence from governance, corporate, and public administration contexts suggesting that robust ethical leadership and regulatory frameworks are crucial in shaping responsible use of advanced tools. The transposition of these insights into higher education implies that institutional leadership, supported by integrity-promoting governance, can mitigate risks of GenAI misuse. Research on business-education and university-industry collaborations further underscores the role of structured partnerships in fostering ethical innovation transfer, which could inform best practices for AI integration in academic work.

Broader digital transformation studies reveal that adoption of advanced digital tools – whether in finance, healthcare, or public service – requires technical infrastructure and the cultivation of user competence, trust, and ethical literacy to prevent misuse. These findings resonate with the academic context, where insufficient digital literacy among students and staff could exacerbate GenAI-related risks. Furthermore, public perceptions of technology – shaped by hope and apprehension – play a significant role in determining whether AI tools are embraced as enablers of innovation or resisted as threats to integrity [30].

The ethical challenges posed by GenAI also mirror concerns in other high-stakes domains, such as biosecurity, law enforcement, and national security, where the integration of autonomous and generative systems necessitates rigorous oversight. In academia, similar vigilance is required to prevent unintentional policy gaps that could allow the unethical use of AI-generated work to go undetected. Moreover, insights from behavioral compliance studies indicate that individual moral standards and the perceived enforcement environment shape the intention to adhere to ethical norms. These insights suggest that integrity in AI use depends on aligning personal and institutional incentives.

Finally, technological misuse in academia must be understood considering global trends towards transparency and anti-corruption, where the same digital tools that can facilitate malpractice can also be deployed for monitoring, detection, and accountability [27]. As with innovations in other sectors, the decisive factor is not the technology itself but the governance structures, cultural attitudes, and regulatory safeguards that shape its application.

Existing research paints a nuanced picture: GenAI is neither an inherent corrupter of academic integrity nor an unequivocal safeguard. Its ethical implications depend on governance, educational culture, user competence, and institutional capacity to enforce integrity norms. While fears of widespread GenAI-driven misconduct may be overstated, the potential for violations remains real in environments lacking robust oversight and clear ethical frameworks.

Comprehensive theoretical analysis reveals a complex landscape where GenAI simultaneously presents opportunities for educational enhancement and risks for academic integrity violations. While the existing literature provides valuable insights into the technological capabilities of GenAI systems and their potential applications in academic contexts, a significant gap remains in understanding how academic stakeholders across national contexts perceive the impact of these technologies on academic integrity.

Research objective, methodology and data. The theoretical framework, established by analyzing academic integrity principles, GenAI technological capabilities, and existing research findings, provides a solid foundation for empirical investigation. However, the literature reveals several critical knowledge gaps that limit our understanding of how GenAI integration affects academic integrity in practice. First, while numerous studies have explored the technical aspects of GenAI systems and their potential applications in education, fewer have systematically examined how academic stakeholders perceive the relationship between GenAI use and academic integrity violations. Second, the existing research predominantly focuses on individual institutional contexts or specific disciplinary areas, lacking the cross-national comparative perspective necessary to understand how cultural, regulatory, and institutional factors influence GenAI perceptions. Third, despite extensive theoretical discussions about the need for balanced approaches to GenAI integration, there remains insufficient empirical evidence about whether academic communities view GenAI as a genuine threat to academic integrity or whether concerns are overstated relative to actual risks.

The purpose of the bibliometric analysis is to systematically examine the evolution, structure, and thematic shifts in scholarly discourse on generative artificial intelligence, ethics, and academic integrity, providing an evidence-based conceptual foundation for the subsequent survey addressing the statement “The use of GenAI leads to violations of academic integrity”. By identifying how and when academic integrity emerged as a distinct research focus alongside ethical considerations, and by tracing changes in emphasis from general ethical concerns to integrity-related risks and regulatory responses, the bibliometric analysis aims to contextualize the survey question within established research trends. This approach ensures that the survey is grounded in the actual dynamics of the scientific literature, clarifies existing ambiguities and contested interpretations surrounding GenAI use, and justifies the need to empirically capture stakeholders’ perceptions of whether and to what extent generative AI is associated with violations of academic integrity.

Analysis tool – VOSviewer, version 1.6.19, ©2009–2023 Nees Jan van Eck and Ludo Waltman.

Query: “artificial intelligence”.

Total number of articles in the Scopus database: 791,363 for the timeframe 1905-ongoing (accessed January 16, 2026).

Period of analysis: 2022–2025.

Areas: social sciences, decision sciences.

Number of articles after the first limitation: 2022 – 9,219; 2023 – 13,366; 2024 – 12,061; 2025 – 29,712.

Dataset for analysis: 2,000 more cited for each year.

Total number of keywords in VOSviewer: 2022 – 11,374; 2023 – 10,400; 2024 – 9,400; 2025 – 10,128.

Keywords for analysis in the first stage – top 200 for each year. Keywords for analysis in the second stage – top 1,000 for each year. Keyword maps in the first stage – Figs. 1–4.

The survey methodology employed in this study addresses the limitations identified in existing research by adopting a cross-national comparative approach that captures perceptions across diverse academic contexts. Rather than focusing on a single institution or country, the survey encompasses respondents from multiple European countries, North America, and other regions, enabling analysis of how cultural, regulatory, and institutional factors influence perceptions of GenAI’s impact on academic integrity. This methodological approach is fundamental given the theoretical insights suggesting that academic integrity is not merely a technical or procedural concern, but a complex cultural practice shaped by national educational traditions, institutional histories, and regulatory frameworks.

Number of participants: 496 (ongoing survey, intermediate result). Form of survey – Google Form. Coverage: EU, US, Canada, UK, other countries. Survey type – anonymous. Survey question: “The use of GenAI leads to violations of academic integrity (please assess the extent of your agreement on a scale from 1 to 5, where 1 – strongly disagree, 5 – strongly agree)”.

Results. Bibliometric analysis. On the first stage of bibliometric analysis, Figs. 1–4 illustrate a clear evolutionary shift in how academic integrity is perceived and problematized over time, closely linked to the emergence and rapid diffusion of generative artificial intelligence.

In 2022, the discourse reflected in Fig. 1 is still situated within a pre-generative-AI paradigm. At that stage, large-scale interest in applying generative AI tools had not yet materialized, as the widespread public release and adoption of such technologies did not begin until December 2022. Consequently, scholarly discussions predominantly focused on ethics in a broad sense, including issues such as technological responsibility, fairness, transparency, and societal impact. Academic integrity as a distinct concept was largely absent or implic-

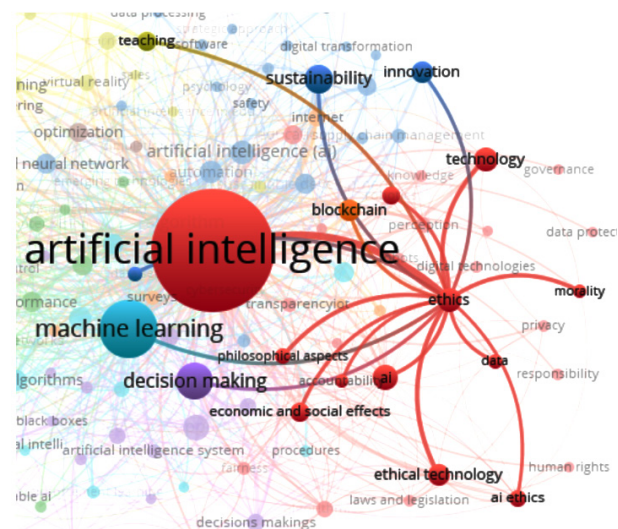


Fig. 1. Cluster “ethics” in a map of keywords for the request “artificial intelligence” (2022)

itly assumed to be stable and unchallenged. Authorship, originality, and accountability were treated as settled norms, with no urgent need to revisit them in light of automated text generation. Fig. 1, therefore, represents a relatively stable ethical framework in which integrity concerns had not yet been explicitly activated by technological disruption.

The situation changes markedly in 2023 (Fig. 2), as reflected in the second figure. Following the rapid and widespread adoption of generative AI beginning in late 2022, academic communities faced entirely new practical realities. For the first time, AI systems became capable of producing fluent, contextually appropriate academic-style texts that could be easily integrated into educational and research practices.

As a result, questions of academic integrity moved from the periphery to the center of scholarly and institutional attention. Importantly, this period marks a conceptual expansion of the discourse: alongside ethics, academic integrity emerges as a separate and urgent problem. While ethical considerations remain relevant, they are no longer sufficient to capture concerns about authorship, plagiarism, originality, and the legitimacy of academic work produced with AI assistance. The dominant tone of this phase is reactive and often alarmist, characterized by uncertainty and anxiety. Academic integrity is framed primarily as being under threat, and responses tend to emphasize control, detection, and prohibition.

Fig. 3 (2024) suggests a transition from initial shock toward a more differentiated and reflective understanding of the problem. By this stage, generative AI is no longer perceived as a temporary anomaly but as a persistent element of academic practice. Academic integrity is now clearly distinguished from broader ethical debates and is beginning to function as an independent analytical and regulatory category. Rather than asking whether AI should be used at all, the discourse increasingly focuses on how it can be used responsibly and transparently. Institutions, publishers, and educators start devel-

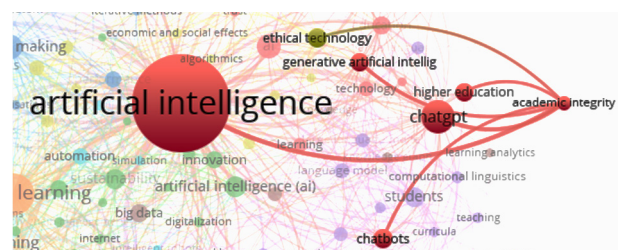


Fig. 2. Cluster “academic integrity” in a map of keywords for the request “artificial intelligence” (2023)

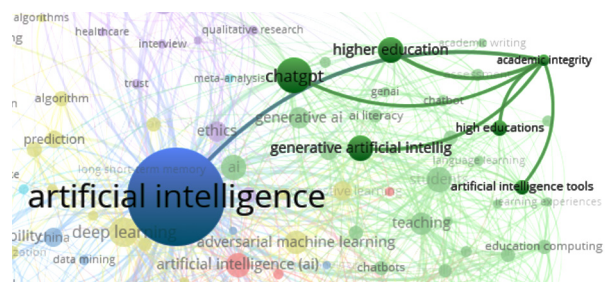


Fig. 3. Cluster “academic integrity” in a map of keywords for the request “artificial intelligence” (2024)

oping guidelines, classifications, and usage policies that acknowledge varying degrees and purposes of AI involvement. The integrity debate becomes more nuanced, shifting away from blanket judgments toward context-sensitive evaluation. This phase reflects an attempt to reconcile long-standing academic values with emerging technological capabilities.

By 2025, as shown in Fig. 4, academic integrity appears to be largely integrated into a new normative framework shaped by the routine presence of generative AI. The discussion no longer treats AI use as inherently problematic but instead emphasizes accountability, disclosure, and informed human oversight. Academic integrity is redefined rather than abandoned, adapting to include new forms of collaboration between humans and intelligent systems. Ethical concerns remain relevant, but they coexist with a mature understanding of integrity that accommodates technological mediation. In this stage, the focus shifts decisively from fear and restriction to governance, literacy, and normalization. The figure for 2025 thus represents a stabilized academic environment in which integrity has been recalibrated to align with contemporary research and educational practices.

Figs. 1–4 depict an evolutionary trajectory from ethical generality to integrity-specific concern, followed by differentiation and eventual integration. The turning point coincides with the surge of interest in generative AI beginning in December 2022, which transformed academic integrity from a largely implicit assumption into a central object of debate and institutional reform.

The evolutionary shift observed between 2022 and 2025 demonstrates that academic integrity has moved from an implicit, largely uncontested norm to a contested, dynamic concept shaped by rapid technological change. This transformation indicates that there is no longer a single, shared understanding of how academic integrity should be interpreted in the context of generative AI, underscoring the need for empirical investigation.

The emergence of academic integrity as a distinct concern beginning in 2023 reveals a period of uncertainty in which assumptions about authorship, originality, and responsibility were fundamentally challenged. While ethical discussions continue, they no longer fully capture the practical dilemmas faced by students, educators, and researchers who actively use GenAI tools. This gap between ethical principles and everyday academic practice suggests that perceptions of integrity violations may vary significantly across individuals and institutions, and these differences cannot be adequately understood without systematically collecting stakeholders' views.

The gradual normalization and regulation of GenAI use observed in 2024 and 2025 does not eliminate the problem of academic integrity but instead reframes it. As GenAI becomes embedded in academic workflows, the boundary between acceptable assistance and misconduct becomes increasingly ambiguous. This ambiguity increases the risk of unintentional violations and divergent interpretations of what constitutes dishonest behavior. A survey focused on whether the use of GenAI leads to violations of academic integrity is therefore essential to capture how these boundaries are currently perceived and negotiated in practice.

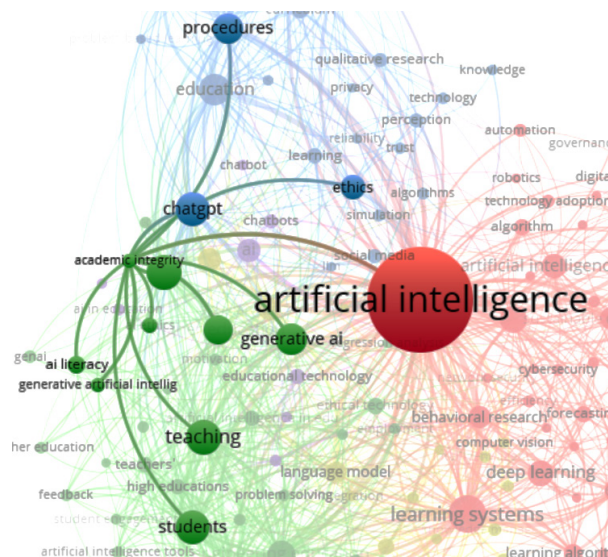


Fig. 4. Cluster “academic integrity” in a map of keywords for the request “artificial intelligence” (2025)

A second stage of bibliometric analysis, the year-by-year evolution of keywords (2022–2025) reflects a clear conceptual and thematic transformation that is entirely consistent with the previously articulated analysis of changing attitudes toward generative AI and academic integrity. In 2022, the keyword set is limited to broad, foundational concepts such as ethics, trust, transparency, reproducibility, and responsibility. These terms indicate a generalized concern with the moral and methodological reliability of digital and computational technologies rather than with concrete academic practices. Notably absent are any references to generative AI, writing, authorship, or academic integrity. This fact confirms that, before the widespread adoption of generative AI, scholarly discourse operated within a stable ethical framework in which integrity-related issues were implicitly assumed rather than explicitly problematized.

A significant expansion and reorientation of keywords occur in 2023, marking a clear turning point. Alongside ethics, academic integrity appears for the first time as a distinct and central concept, signaling a shift from abstract ethical reflection to practice-oriented concerns. The emergence of keywords such as authorship, copyright, plagiarism, and writing reflects growing anxiety about ownership, originality, and textual production in the context of GenAI-assisted work. At the same time, the explicit inclusion of GenAI, taxonomy, and literacy indicates an early attempt to conceptualize and categorize the new phenomenon and to equip academic actors with the skills needed to understand and manage it. Trust and reproducibility remain present, but their meaning becomes more closely tied to AI-mediated academic outputs rather than to technology in general. Overall, the 2023 keyword profile reflects a reactive phase characterized by rapid conceptual proliferation and an urgent need to name and frame newly emerging risks.

In 2024, the keyword set shows signs of consolidation and maturation. While ethics and academic integrity remain central, the focus shifts toward more specific academic practices, as evidenced by the appear-

ance of academic writing and writing skills. This suggests that the discourse has moved beyond merely identifying risks to examining how GenAI affects the development of scholarly competencies and research practices. The continued presence of authorship, copyright, and plagiarism indicates that concerns about ownership and originality persist, but they are now embedded within a more structured discussion of research ethics and literacy. GenAI, taxonomy, and literacy remain stable elements, implying that the field is actively refining conceptual frameworks and educational responses rather than reacting impulsively. This phase aligns with a transition from crisis-driven debate to analytical normalization.

By 2025, the evolution of keywords points to an advanced stage of integration and institutionalization. Academic integrity and academic writing remain prominent, confirming that these issues have become enduring components of discourse rather than temporary reactions to technological novelty. The appearance of policy as a keyword is particularly significant, as it signals a shift from analysis and skill development toward governance and formal regulation. While copyright and reproducibility continue to feature, their coexistence with research ethics and literacy suggests a holistic approach that balances normative principles, methodological rigor, and practical competence. The reduced emphasis on taxonomy implies that core conceptual categories have largely stabilized, allowing attention to move toward implementation and oversight. The 2025 keyword set reflects a mature discourse in which generative AI is fully acknowledged as part of academic life, and academic integrity is treated as a dynamic, regulated construct rather than an abstract ideal.

The integration of GenAI into a new academic norm underscores the importance of evidence-based policy development. Without empirical data on how members of the academic community perceive the relationship between GenAI use and integrity violations, institutional guidelines risk being either overly restrictive or insufficiently protective of core academic values. Conducting a survey on this issue provides a necessary empirical foundation for aligning evolving norms of academic integrity with the realities of GenAI use, ensuring that future regulations are informed by actual experiences rather than assumptions.

Survey results. The first hypothesis of our research (H_1) posits that academic stakeholders will demonstrate moderate to high levels of agreement (mean score > 3.0 on a 5-point Likert scale) with the statement that the use of generative artificial intelligence violates academic integrity. In contrast, the null hypothesis (H_0) posits that academic stakeholders will exhibit neutral attitudes (mean score = 3.0) toward the claim that GenAI use results in academic integrity violations.

If H_1 is supported: evidence that academic communities perceive GenAI as a genuine threat to academic integrity, supporting policy development and intervention strategies.

If H_0 is supported: suggests that concerns about GenAI and academic integrity may be overstated, indicating a need for balanced approaches to GenAI integration.

To calculate a representative sample, we use Cochran's formula

$$n_0 = \frac{Z^2 \cdot p \cdot (1-p)}{E^2};$$

$$n_0 = \frac{1.96^2 \cdot 0.5 \cdot (1-0.5)}{0.05^2} = 384,$$

where n_0 is an initial sample size for large populations (before any adjustments for finite populations); Z is z-value (e.g., 1.96 for 95 % confidence); p is estimated population proportion (use 0.5 if unknown); E is the margin of error ($E = 0.05$).

Characteristics of the respondents are shown in Table.

Based on the survey data, 10 countries had 20 or more respondents, representing 334 participants out of 496 (67.3 % of the sample). This substantial portion provides reliable insights into national perspectives on GenAI and academic integrity violations.

Individual country analysis is shown in Fig. 5 (ranked by concern level – highest to lowest):

1. *Germany* (22 respondents, average: 3.86). German respondents exhibit the highest concern level with an average of 3.86, representing the most cautious perspective among countries with substantial samples. This el-

Table

Characteristics of respondents

Country	Number of responses	Average ranking
Slovakia	41	3.25
Poland	33	3.09
Austria	3	3.67
Spain	5	3.75
Italy	32	3.04
Germany	22	3.86
Switzerland	30	3.73
UK	22	3.48
Norway	4	3.75
Netherlands	7	3.11
Lithuania	45	3.73
Romania	42	3.23
Malta	30	3.84
Slovenia	4	3.50
Croatia	7	3.83
Czech Republic	12	3.17
Bulgaria	11	3.10
Sweden	13	3.31
Latvia	17	3.47
Denmark	1	3.00
Belgium	2	3.00
Cyprus	2	4.50
Hungary	1	4.00
Luxembourg	3	4.33
Portugal	9	3.09
France	5	3.75
Greece	3	3.00
Estonia	1	3.00
Canada	37	3.71
United States	14	3.36
Other	38	3.31

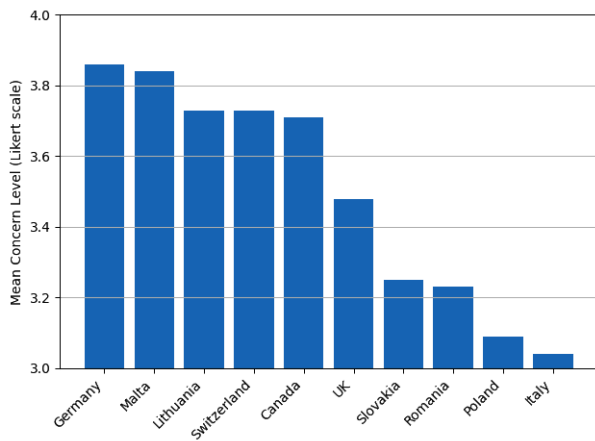


Fig. 5. Perceived GenAI impact on Academic Integrity by country

evated concern aligns with Germany's systematic and thorough approach to academic standards and quality assurance. German academic culture's emphasis on methodical scholarship and institutional integrity contributes to viewing GenAI as requiring comprehensive management strategies and careful oversight to prevent academic compromises.

2. *Malta* (30 respondents, average: 3.84). Malta shows the second-highest concern level among countries with substantial samples, with an average rating of 3.84. This heightened concern may reflect Malta's unique position as a small island nation with a concentrated academic community, where integrity violations could have greater proportional impacts. The higher rating suggests Maltese academics view GenAI as requiring careful oversight to maintain educational standards.

3. *Lithuania* (45 respondents, average: 3.73). Lithuania, representing the largest single country sample in the survey, demonstrates high concern about GenAI leading to academic integrity violations with an average rating of 3.73, placing them well above the overall survey average (3.42). This fact suggests that Lithuanian academic communities view GenAI as a significant challenge to maintaining academic standards, possibly reflecting the country's strong emphasis on educational quality and institutional integrity within the European higher education framework.

4. *Switzerland* (30 respondents, average: 3.73). Swiss respondents demonstrate high concern levels with an average of 3.73, matching Lithuania's elevated rating and reflecting the country's traditionally rigorous academic standards and quality-focused educational approach. Switzerland's strong emphasis on academic excellence and institutional reputation may contribute to heightened sensitivity about potential GenAI-related integrity issues.

5. *Canada* (37 respondents, average: 3.71). Canadian respondents demonstrate above-average concern with a rating of 3.71, making them among the more cautious countries regarding GenAI's impact on academic integrity. This higher level of concern may reflect the maturity of Canadian higher education systems and well-established academic integrity frameworks that view GenAI as a more significant disruption requiring careful management and policy development.

6. *UK* (22 respondents, average: 3.48). British respondents show moderate concern with an average of 3.48, placing them slightly above the overall survey average. This measured response may reflect the UK's extensive experience with integrating educational technology and its established frameworks for managing academic integrity challenges. The moderate rating suggests a balanced approach to GenAI adoption with appropriate caution.

7. *Slovakia* (41 respondents, average: 3.25). Slovakia shows moderate-to-low concern with an average rating of 3.25, placing it below the overall survey average. This moderate stance indicates that Slovak academic communities may be more adaptable to technological changes, possibly due to experience with educational system transitions and technological integration challenges. The substantial sample size makes this finding exceptionally reliable for understanding Central European academic perspectives.

8. *Romania* (42 respondents, average: 3.23). Romania, with the second-largest sample, shows moderate-to-low concern with an average rating of 3.23, remarkably similar to Slovakia's results. This moderate stance suggests that Romanian academic communities may be more pragmatic about GenAI integration, viewing it as a manageable challenge rather than a fundamental threat to academic integrity. The substantial sample size reinforces the reliability of Eastern European academic perspectives.

9. *Poland* (33 respondents, average: 3.09). Polish respondents exhibit low-to-moderate concern with an average of 3.09, ranking among the least worried countries about GenAI's impact on academic integrity. This relatively low rating suggests that Polish academic communities may be more optimistic about managing GenAI integration without severe academic integrity compromises. Poland's position as a major EU education hub with significant technological advancement may contribute to this more confident stance toward GenAI adoption and management.

10. *Italy* (32 respondents, average: 3.04). Italian respondents show the lowest concern level with an average rating of 3.04, indicating the most relaxed approach to GenAI's potential impact on academic integrity among major sample countries. This finding may reflect Italian academic culture's adaptability to technological changes or a more pragmatic approach to educational innovation. Italy's significant representation in the survey makes this moderate stance noteworthy for understanding Southern European academic perspectives.

Comparative regional analysis is shown in Fig. 6 (ranked by concern level – highest to lowest):

1. *Eastern Europe* (Lithuania, Romania, Slovakia, Poland – 161 respondents combined). Eastern European countries show varied perspectives, ranging from 3.09 to 3.73. While Poland and Italy show lower concern, Lithuania demonstrates significantly higher awareness of potential issues. This variation suggests that national academic cultures and institutional contexts significantly influence GenAI perceptions despite geographical proximity.

2. *Western Europe* (Germany, Switzerland, Malta, Italy, UK – 136 respondents combined). Western European responses display the most significant variation

(3.04–3.86), indicating highly diverse perspectives within the region. This range suggests that local academic cultures, regulatory frameworks, and institutional histories create distinct approaches to GenAI integration even within similar economic and educational environments.

3. *German-speaking countries* (Germany, Switzerland – 52 respondents combined). Both major German-speaking countries show consistently high concern levels (3.73–3.86), suggesting shared cultural or linguistic influences on perceptions of academic integrity. This pattern may reflect common educational traditions emphasizing thorough scholarship and systematic approaches to quality assurance.

4. *North America* (Canada – 37 respondents). Canadian data represents the primary substantial North American sample, showing above-average concern (3.71). This outcome suggests that North American academic communities may be more apprehensive about GenAI's integrity implications than many of their European counterparts, possibly reflecting different regulatory environments or institutional approaches.

The ten countries with 20+ respondents provide statistically meaningful insights representing 67.3 % of all survey responses. The data reveals significant national variations in GenAI perception, ranging from Poland's optimistic 3.09 to Germany's cautious 3.86. This 0.77-point range indicates that cultural, institutional, and regulatory contexts substantially influence how academic communities perceive GenAI's relationship to academic integrity.

The clustering of certain countries (Eastern European pragmatism, German-speaking caution) suggests that regional academic cultures and shared educational traditions play essential roles in shaping GenAI adoption attitudes. These findings have significant implications for policy development, suggesting that one-size-fits-all approaches to GenAI regulation in academia may be less effective than culturally sensitive, nationally adapted strategies.

At this stage, the H_1 hypothesis correlates well with the empirical data (average estimate of 3.42). It should be noted that the authors continue this survey and hope to get a large representative sample both in individual countries and regions. The results of the analysis of the expanded sample will be presented in the following works.

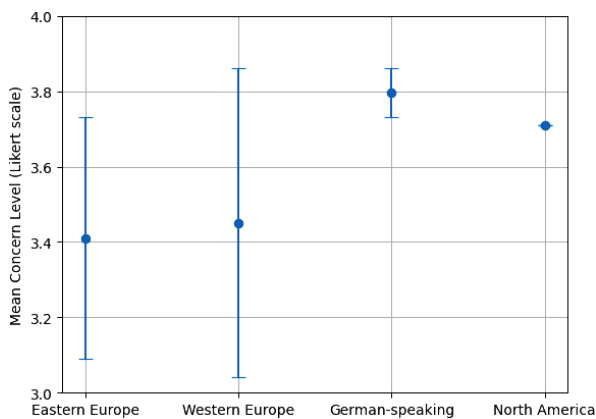


Fig. 6. Perceived GenAI impact on Academic Integrity by region

Conclusion. The cross-national survey of 496 academic stakeholders across multiple regions provides substantial empirical evidence supporting the hypothesis that GenAI use leads to violations of academic integrity, with an overall mean score of 3.42 on a five-point Likert scale significantly exceeding the neutral threshold of 3.0. The research reveals considerable variation in perceptions across national contexts, ranging from Italy's relatively relaxed stance at 3.04 to Germany's heightened concern at 3.86, demonstrating that cultural, institutional, and regulatory frameworks substantially influence how academic communities perceive the relationship between GenAI technologies and academic integrity violations. The clustering of responses within regional and linguistic groups, particularly the consistently high concern levels in German-speaking countries and the more pragmatic approaches observed in Eastern European nations, underscores the importance of understanding GenAI integration challenges through culturally sensitive lenses rather than adopting universal policy frameworks.

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References.

- Cotton, D. R., Cotton, P. A., & Shipway, J. R. (2023). Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. *Innovations in Education and Teaching International*, 61(2), 228-239. <https://doi.org/10.1080/14703297.2023.2190148>
- Rudolph, J., Tan, S., & Tan, S. (2023). War of the chatbots: Bard, Bing Chat, ChatGPT, Ernie and beyond. The new AI gold rush and its impact on higher education. *Journal of Applied Learning and Teaching*, 6(1), 364-389. <https://doi.org/10.37074/jalt.2023.6.1.23>
- Zawacki-Richter, O., Marin, V.I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education – where are the educators? *International Journal of Educational Technology in Higher Education*, 16(1), 39. <https://doi.org/10.1186/s41239-019-0171-0>
- Holmes, W., & Porayska-Pomsta, K. (2022). The ethics of artificial intelligence in education. Practices, Challenges, and Debates. Routledge, 312 p. ISBN 9780367349721.
- International Center for Academic Integrity (2021). *The fundamental values of academic integrity* (3rd ed.). ICAI. Retrieved from https://academicintegrity.org/aws/ICAI/asset_manager/get_file/911282?ver=1
- Fishman, T. (2009). "We know it when we see it" is not good enough: Toward a standard definition of plagiarism that transcends theft, fraud, and copyright. *Proceedings of the 4th Asia Pacific Conference on Educational Integrity*. Retrieved from <https://hdl.handle.net/10779/uow.27825690>
- Bertram Gallant, T. (2017). *Academic integrity in the twenty-first century: A teaching and learning imperative*. Jossey-Bass. 143 p. ISBN 978-0470373668.
- Sutherland-Smith, W. (2008). *Plagiarism, the Internet, and student learning: Improving academic integrity*. Routledge. ISBN 9780415432931.

9. Mujtaba, B. (2024). Clarifying Ethical Dilemmas in Sharpening Students' Artificial Intelligence Proficiency: Dispelling Myths About Using AI Tools in Higher Education. *Business Ethics and Leadership*, 8(2), 107-127. [https://doi.org/10.61093/bel.8\(2\).107-127.2024](https://doi.org/10.61093/bel.8(2).107-127.2024)

10. Vaswani, A., Shazeer, N., Parmar, N., Uszkoreit, J., Jones, L., Gomez, A. N., Kaiser, L., & Polosukhin, I. (2017). Attention is all you need. *Advances in Neural Information Processing Systems*, 30, 5998-6008. <https://doi.org/10.48550/arXiv.1706.03762>

11. OpenAI (2023). *GPT-4 technical report*. arXiv. <https://doi.org/10.48550/arXiv.2303.08774>

12. Adiguzel, T., Kaya, M. H., & Cansu, F. K. (2023). Revolutionizing education with AI: Exploring the transformative potential of ChatGPT. *Contemporary Educational Technology*, 15(3), ep429. <https://doi.org/10.30935/cedtech/13152>

13. Weber-Wulff, D., Anohina-Naumeca, A., Bjelobaba, S., Foltýnek, T., Guerrero-Dib, J., Popoola, O., Šigut, P., & Waddington, L. (2023). Testing of detection tools for AI-generated text. *International Journal for Educational Integrity*, 19, 26. <https://doi.org/10.1007/s40979-023-00146-z>

14. Howard, R. M., & Davies, L. J. (2009). Plagiarism in the Internet age. *Educational Leadership*, 66(6), 64-67. Retrieved from <https://www.ascd.org/el/articles/plagiarism-in-the-internet-age>

15. Vie, S. (2013). A pedagogy of resistance toward plagiarism detection technologies. *Computers and Composition*, 30, 3-15. <https://doi.org/10.1016/j.compcom.2013.01.002>

16. Rahman, M. M., & Watanobe, Y. (2023). ChatGPT for education and research: Opportunities, threats, and strategies. *Applied Sciences*, 13(9), 5783. <https://doi.org/10.3390/app13095783>

17. Bretag, T. (2016). *Handbook of academic integrity*. Springer. Retrieved from <https://link.springer.com/reference-work/10.1007/978-981-287-098-8>

18. Morris, E. J. (2018). Academic integrity matters: Five considerations for addressing contract cheating. *International Journal for Educational Integrity*, 14, 15. <https://doi.org/10.1007/s40979-018-0038-5>

19. Zámek, D., & Zakharkina, Z. (2024). Research Trends in the Impact of Digitization and Transparency on National Security: Bibliometric Analysis. *Financial Markets, Institutions and Risks*, 8(1), 173-188. [https://doi.org/10.61093/fmir.8\(1\).173-188.2024](https://doi.org/10.61093/fmir.8(1).173-188.2024)

20. Piven, A. (2023). Analysis of Financial Reports in Companies Using Machine Learning. *Financial Markets, Institutions and Risks*, 7(4), 135-154. [https://doi.org/10.61093/fmir.7\(4\).135-154.2023](https://doi.org/10.61093/fmir.7(4).135-154.2023)

21. Borissov, D., & Liuta, O. (2025). Ethical Practices in Modern Academia: Does Length of Educational Experience and Quality of Governance Contribute to a Deeper Understanding of Academic Integrity? *Business Ethics and Leadership*, 9(1), 95-108. [https://doi.org/10.61093/bel.9\(1\).95-108.2025](https://doi.org/10.61093/bel.9(1).95-108.2025)

22. Plastun, A., & Kozmenko, S. (2025). Stolen Ukrainian universities: An invisible Russian weapon. *Problems and Perspectives in Management*, 23(2), 151-175. [https://doi.org/10.21511/ppm.23\(2-si\).2025.11](https://doi.org/10.21511/ppm.23(2-si).2025.11)

23. Yarovenko, H., Horbachova, O., Bylbas, R., & Latysh, D. (2025). Digitalization As a Socioeconomic Challenge: Modeling the Impact On the Level of Cybercrime Considering Socioeconomic, Technological and Institutional Factors. *SocioEconomic Challenges*, 9(2), 282-315. [https://doi.org/10.61093/sec.9\(2\).282-315.2025](https://doi.org/10.61093/sec.9(2).282-315.2025)

24. Tarasenko, S., Vorontsova, A., Régent, V., Soss, J., & Mylenkova, R. (2025). Science mapping analysis of challenges surrounding cloud universities and their impact on the resilience of higher education. *Knowledge and Performance Management*, 9(2), 1-17. [https://doi.org/10.21511/kpm.09\(2\).2025.01](https://doi.org/10.21511/kpm.09(2).2025.01)

25. Iurchenko, M., & Ponomarenko, M. (2025). Ukrainian Educational and Scientific Potential After the Full-Scale Invasion: Socioeconomic Challenges and Prospects. *SocioEconomic Challenges*, 9(1), 21-38. [https://doi.org/10.61093/sec.9\(1\).21-38.2025](https://doi.org/10.61093/sec.9(1).21-38.2025)

26. Hrytsenko, L., Pakhnenko, O., Kuzior, A., & Kozhushko, I. (2024). Smart technologies in banking. *Financial Markets, Institutions and Risks*, 8(1), 81-93. [https://doi.org/10.61093/fmir.8\(1\).81-93.2024](https://doi.org/10.61093/fmir.8(1).81-93.2024)

27. Yefimenko, A., Boronos, V., Serpeninova, Yu., & Koldovskiy, A. (2025). Innovative and Technological Determinants of Corruption Reduction: How do Knowledge and Technology Contribute to Public Integrity and Transparency? *Knowledge Economy and Lifelong Learning*, 1(1), 21-34. [https://doi.org/10.61093/kell.1\(1\).21-34.2025](https://doi.org/10.61093/kell.1(1).21-34.2025)

28. Haley, P. (2025). Artificial Intelligence and Ethical Dimensions of Automated Traffic Enforcement: Implications for Public Health, Healthcare Equity, and Social Justice. *Health Economics and Management Review*, 6(2), 32-49. <https://doi.org/10.61093/hem.2025.2-03>

29. Haley, P., & Burrell, D.N. (2025). Integrating Artificial Intelligence into Law Enforcement: Socioeconomic and Ethical Challenges.

SocioEconomic Challenges, 9(2), 60-77. [https://doi.org/10.61093/sec.9\(2\).60-77.2025](https://doi.org/10.61093/sec.9(2).60-77.2025)

30. Yarovenko, H., Kuzior, A., Norek, T., & Lopatka, A. (2024). The future of artificial intelligence: Fear, hope or indifference? *Human Technology*, 20(3), 611-639. <https://doi.org/10.14254/1795-6889.2024.20-3.10>

31. Kaczorowska-Spychalska, D., Kotula, N., Mazurek, G., & Sułkowski, Ł. (2024). Generative AI as source of change of knowledge management paradigm. *Human Technology*, 20(1), 131-154. <https://doi.org/10.14254/1795-6889.2024.20-1.7>

32. Napieralski, P., Wojciechowski, A., & Korjonen-Kuusipuro, K. (2024). Artificial intelligence for scientific research – large language models in manuscript preparation. *Human Technology*, 20(3), 416-419. <https://doi.org/10.14254/1795-6889.2024.20-3.0>

Генеративний штучний інтелект провокує порушення академічної доброчесності: міф чи реальність?

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Мета. Метою роботи є емпірична перевірка тези про те, чи провокує використання генеративного штучного інтелекту (GenAI) порушення академічної доброчесності.

Методика. Дослідження базується на бібліометричному аналізі та крос-національному анкетному опитуванні академічних стейкхолдерів із країн Європейського Союзу, Великої Британії, Канади, США та інших регіонів. Загальна вибірка становить 496 респондентів. Опитування проводилося в анонімній формі за допомогою Google Forms із використанням п'ятибальної шкали Лайкерта для оцінювання рівня згоди зі твердженням про те, що використання GenAI призводить до порушень академічної доброчесності. Для обґрунтування репрезентативності вибірки застосовано формулу Кохрана.

Результати. Результати дослідження свідчать про помірно високий рівень занепокоєння академічних спільнот щодо впливу GenAI на академічну доброчесність (середнє значення 3,42 при нейтральному рівні 3,0), що підтверджує гіпотезу H_1 про сприйняття GenAI як потенційної загрози академічній доброчесності. Виявлені суттєві міжкраїні відмінності: від відносно низького рівня занепокоєння в Італії й Польщі до високих значень у Німеччині, Швейцарії, Литві й Канаді. Простежується регіональна й культурна кластеризація відповідей, зокрема підвищена обережність у німецькомовних країнах і більш прагматичне ставлення у країнах Східної Європи. Це свідчить про значний вплив національних освітніх традицій, інституцій-

них рамок і регуляторних підходів на сприйняття ризиків GenAI.

Наукова новизна. Полягає у першому крос-національному емпіричному аналізі сприйняття зв'язку між використанням GenAI і порушеннями академічної доброчесності на основі широкої міжнародної вибірки. Робота пропонує системний погляд на вплив культурних, регіональних та інституційних чинників на формування ставлення до GenAI в академічному середовищі.

Практична значимість. Полягає в можливості використання результатів роботи при розробленні національних та інституційних політик щодо інтеграції GenAI в освітній процес. Виявлені міжкраїн-

ні й регіональні відмінності свідчать про недоцільність універсальних регуляторних рішень і підкреслюють необхідність культурно чутливих, адаптованих до локального контексту стратегій. Результати можуть бути використані адміністраціями університетів, комітетами з академічної доброчесності, розробниками освітніх програм й органами управління освітою для формування збалансованих підходів до використання GenAI, що поєднують інноваційність зі збереженням академічних цінностей.

Ключові слова: *GenAI, академічна доброчесність, опитування, порушення*

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