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Comparative analysis of artificial intelligence policies in universities across five countries

Luke Parker[1*], A. Jane Loper[2], Josh Hayes[2], Alice Karakas[3], Steven White[2] and Heidi Hallman[2]

*Correspondence:
Luke Parker
luke.parker@acu.edu.au
[1]Australian Catholic University, Melbourne, Australia
[2]University of Kansas, Lawrence, KS, USA
[3]Washburn University, Lawrence, KS, USA

Abstract

The rapid integration of artificial intelligence (AI) in higher education has led to significant gaps in policy frameworks across universities worldwide. This study analyzes AI policies at 343 leading universities in Australia, Canada, China, the U.K., and the U.S., selected from the top 1500 institutions globally, as ranked by Times Higher Education for excellence in education across 2024/2025. Using a comparative analysis approach, we examined how these institutions govern the use of AI tools in teaching and learning contexts. Data were gathered from publicly available policy documents, student handbooks, and faculty guidelines, and analyzed using qualitative thematic coding supported by descriptive statistics. Our findings reveal diverse approaches, ranging from outright prohibitions to policies granting instructor's discretion, with notable regional differences influenced by cultural and regulatory factors. Quantitatively, for example, nearly half of universities adopted discretionary policies, while fewer than one in five issued outright bans. This study fills a gap in the literature by providing the first cross-regional analysis of AI policies in higher education, highlighting the absence of a universal framework. These insights offer valuable guidance for institutions to develop flexible, adaptive AI governance models that reflect their unique needs and values.

Highlights

- Reviewed AI policies of 343 top universities across five countries ranked in the top 1500 Times Higher education rankings.
- 52% of universities allow instructors to determine AI usage.
- 39% of universities did not present a stated rationale for AI policy.
- 46% of universities defer to instructor approval for AI use in courses.
- 31% of universities reference Academic Integrity in AI policies.
- 47% of universities provide no additional information on AI use to students or staff.
- Significant regional variations in AI policy approaches were identified

Keywords Artificial intelligence in education, AI policies in universities, Generative AI, AI governance, AI policy, AI usage in education, AI guidelines, AI regulation in universities, ChatGPT

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1 Introduction

The digital landscape is currently engaged in a revival of the space race, a geopolitical competition for technological superiority to enter into unknown realms, but this time it is unfolding with artificial intelligence (AI). Tech companies and research labs are rapidly increasing their exports of different AI-generated platforms to perform a myriad of functions, including geosocial location (e.g., Life360, Find A Friend), a new model of iPad calculator models that can solve complex mathematical equations, and large language models (e.g., ChatGPT, Co-pilot, Gemini) that can answer questions and write responses in a few mere seconds. The aim of these products is to revolutionize existing methods of performing a task; however, the user experience can sometimes be forsaken in the race to produce new products ahead of the competition. In May 2024, Google unveiled its latest model of advanced search engine capabilities, Google AI Overview, which was intended to elevate the search engine capabilities but failed when it produced several inaccuracies [1]. In a *Times* article, Thomas Monteiro stated, "Google doesn't have a choice right now. Companies need to move really fast, even if that includes skipping a few steps along the way. The user experience will just have to catch up'" [2]. The world of education, traditionally not known for its speed, is grappling with the rapid integration of new technologies into classrooms. Typically, the adoption of such innovations undergoes a lengthy process of debates, trials, multiple reviews, and pilot programs before full integration. However, the swift advancement of these technologies is catching many educational institutions off guard, with no clear uniform approach or general consensus on their adoption.

The AI revolution is impacting numerous industries, and established practices in with higher education are being no exception. AI technologies have permeated various facets of academia, from administrative operations to pedagogy and research [3]. Universities across the globe are leveraging AI to enhance learning experiences, optimize student outcomes, and streamline institutional processes. Applications, such as intelligent tutoring systems, predictive analytics for student performance, and AI-driven research tools, are transforming the educational landscape [4, 5].

However these advancements also necessitate robust AI policies to address ethical considerations, data technologies, privacy, and equity in access to AI [6]. This comparative analysis explored various AI policies across 343 world-class universities from the five most represented countries in the 2024 World University Rankings by *Times Higher Education*: Australia, Canada, China, the U.K., and the U.S. By examining these institutions, the study aims to provide a global perspective on how higher education is adapting to, integrating, banning, or considering the role of AI.

Recent scholarship has begun to examine how higher education institutions are addressing the governance challenges posed by generative AI and related computing technologies [7, 8]. At the global level, initiatives to establish regulatory frameworks for AI in higher education have highlighted the intersection of computing governance, policy, and educational practice [9].

This study extends this growing body of literature by providing a large-scale, cross-national comparative analysis of AI policies at top-tier universities. In doing so, it aligns with the scope of Discover Computing by investigating institutional responses to emerging computing technologies, with particular attention to governance, ethical considerations, and policy diffusion across diverse national contexts.

2 Literature review

The rapid pace at which AI is morphing its capabilities to mimic educational practices requires schools to conduct research and understand the digital landscape and platforms before generalizing the uses of or banning any AI on campus [10]. Because many of these Internet-based models can perform established practices taught across a multitude of fields, researchers are fervently investigating the impact on existing assessment strategies and tools, different learning paradigms, and the dynamic relationship between educational technology and necessary ethical considerations [11, 12]. For tools such as ChatGPT, capabilities grow with each new release and iteration, including assessment scoring, language and literacy tutoring, assistance in research, and translation [13, 14]. In some studies, such as Talan and Kalinkara's [15] case study on ChatGPT-4, the technological giant surpassed human test-takers in an anatomy course demonstration, however, that proficiency is not the same across all disciplines. Another example occurred at Wharton Business School, where researchers found that GPT-4 earned a score ranging from B to B- after completing all required assignments in a business management course [16]. It is clear that there are many advantages to AI use within the classroom. As indicated by Parker et al. [17], students and staff alike struggle to remember time without the ability to use AI for various purposes, from planning lesson plans to grading.

Despite the significant advantages these tools offer in enhancing educational practices, there are concerns regarding their use. Some studies have highlighted limitations and constraints, particularly in the platform's ability to perform complex mathematical tasks, which underscores the need for a balanced approach to integrate AI into education. In Chia and Theo's [18] exploration of GPT-3, they discovered that the application could only average 16 out of 100 marks on three mathematics assessments, which is an integral resource used for determining the secondary school placement of middle school-aged students in Singapore. Another study by Suchman et al. [19] revealed that neither version of ChatGPT (3 or 4) could achieve an acceptable score of 70% on the American College of Gastroenterology Self-Assessment tests. The earlier version, GPT-3, received 65.1, and the latest version, GPT-4, earned 62.4 and fell below the passing marks required. Even Luo's [20] review of universities' AI policies failed to acknowledge the evolving nature of originality in an AI integrated academic landscape.

The authors called for a shift from a surveillance-oriented approach towards a more inclusive framework that recognizes human-AI collaboration and adapts assessment policies to the realities of digital knowledge production. Recent work by Li et al. [21], Jin et al. [22], Kooli and Yusuf [23] similarly emphasize the importance of proactive AI governance frameworks that balance innovation, ethical oversight, and stakeholder inclusion.

In AI's infancy, a small percentage of universities established policies related to AI use in the classroom, ranging from an embrace of various platforms to a full restriction of its use in assignments and assessments [24, 25]. Many of these policies stem from the discussions of the ethical considerations with choosing to embrace and co-construct knowledge across different areas of study [26, 27]. Given the readily available access to different AI tools, concerns of academic integrity, research codes of conduct, and the necessary skills needed to navigate digital spaces (e.g., critical thinking, digital literacy, deciphering false narratives) are at risk of potential diminishment without considerations of the capabilities of the various AI resources [26, 28, 29]. Wu et al. [30] and

Sutedjo et al. (2025) highlighted that universities are increasingly providing faculty with structured support and guidance on AI use, underscoring the importance of professional development in responsible AI adoption. The research of Fowler et al. [31] highlighted the need for universities to develop clearer AI strategies to both train faculty and students to establish ethical guidelines to ensure equitable and transparent AI adoption. With each new release and AI-generated model infiltrating a myriad of spaces, educational institutions need to explore the affordances that AI can bring to the classroom while addressing the constraints on educational paradigms and well-researched practices. Bo [32] and Ng et al. [33] further emphasized that globally, AI policy development must address equity, privacy, and transparency concerns to support inclusive and responsible educational practices.

2.1 Global trends in AI policy development

The surge in AI applications available to the public has spurred a parallel movement in the formulation of AI policies in higher education institutions worldwide [34, 35]. Educational leaders are crafting policies to regulate and guide AI use across campuses, focusing on fostering innovation while safeguarding against potential risk. For instance, the European Union's General Data Protection Regulation (GDPR) significantly impacts how universities manage AI systems that involve personal data [36]. In the United States, guidelines from organizations such as EDUCAUSE and the American Council on Education are shaping AI policy frameworks in academia [37]. Many countries in Asia, particularly China and Singapore, are rapidly advancing to integrate AI into their educational policies and systems, driven by national strategies to become leaders in AI innovation [38]. These global trends reflect a concerted effort to balance the benefits of AI with its ethical [39] and practical challenges. Linderoth et al. [40] argue that, while AI policies aim to address ethical and governance concerns, they often reflect economic and political agendas, emphasizing workforce preparation over deeper educational reforms.

Recent studies [41, 42] underscore the need for policy frameworks that are not only nationally aligned but also ethically anticipatory, engaging stakeholders to ensure responsible innovation. Well-formulated AI policies in higher education institutions are crucial for guiding the ethical use of AI, protecting student and faculty data, ensuring equitable access to AI resources, and maintaining academic integrity. Moreover, they can help institutions navigate the complexities of AI implementation and address potential societal impacts. The urgency of developing effective AI policies is accentuated by high-profile instances of AI failures and the rapid pace of technological change.

2.2 A gap in the existing research

There is a notable gap in the comprehensive research on the development and implementation of AI policies within universities. While some studies have explored the technological aspects and educational applications of AI [43, 44], there is limited analysis of how institutions are crafting policies to manage these technologies effectively. One critical aspect overlooked by many university AI policies stems back to ensuring equitable access to AI tools and resources The development and implementation of AI policies must prioritize ensuring equitable access to AI tools and resources, fostering an inclusive academic environment where all students and faculty can effectively engage with emerging technologies. Recent comparative studies [21, 42, 45] illustrated how universities are

experimenting with diverse governance strategies, highlighting differences in adoption speed, stakeholder involvement, and ethical oversight across regions.

While the rapid adoption of AI in higher education promises transformative benefits, it also risks exacerbating existing inequalities if not carefully managed. Universities must recognize that students from diverse socioeconomic backgrounds may face barriers in accessing and utilizing AI technologies effectively. These barriers can include lack of access to high-speed internet, insufficient technical infrastructure, and limited exposure to AI tools prior to university enrollment. Additionally, international students, who often use AI to overcome language barriers, may encounter unique challenges. AI-driven translation and language support tools can be invaluable for these students, enabling them to better understand course materials and participate in academic discussions [46]. However, ensuring equitable access to such tools requires proactive policies that address the specific needs of non-native language speakers and provide support systems for their effective use [47]. Bo [32] and Ng et al. [33] highlighted the importance of embedding equity considerations directly into AI policy frameworks to prevent exacerbating digital divides and to ensure all learners benefit from AI-enabled educational tools. Our analysis demonstrates that universities must continue to prioritize the creation of inclusive AI policies that provide all students with the necessary support to effectively leverage these technologies, ensuring equitable access and engagement across diverse academic environments. By focusing on equitable access, universities can ensure that AI serves as a catalyst for educational empowerment rather than a perpetuator of inequality. Additionally, responsible innovation frameworks [21, 41] suggest that policy-making should not solely react to technological capabilities but should be actively anticipating societal impacts, thus involving faculty, students, and external stakeholders in decision-making.

Furthermore, there is a need to examine the diversity of approaches taken by universities across different regions, and their effectiveness in addressing the ethical, legal, and social implications of AI. The purpose of this study is to analyze the differences in the approach to and implementation of AI policies in higher education institutions globally. This research aims to examine policies from a diverse range of universities to understand how addressing the affordances and constraints posed by the proliferation of AI technologies transforms teaching practices across the world.

By benchmarking our findings against recent international studies [21, 30, 45], our study contributes to a more nuanced understanding of global AI policy trends, highlighting both convergences and divergences in how institutions address equity, governance, and ethical considerations.

3 Methods

3.1 Research design

This research employed a comparative analysis approach [48, 49] to explore AI policies at 343 top-tier universities, from five countries globally across the end of 2024 and start of 2025. The comparative approach facilitates a deep, nuanced analysis of policy documents, uncovering themes and patterns in how these institutions govern the use of generative AI tools in education [49]. This methodology allows for a deeper understanding of how governing bodies at various institutions grant affordances and constraints for the implementation of practice with emerging technology. Simultaneously, this approach reveals how institutions demonstrate a progressive culture towards expanding

possibilities in education and research. The quantitative analysis showcased the prevalence and distribution of various policy types, enhancing our understanding of the broader trends within the dataset [50].

3.2 Research questions

Given the number of universities from different cultural backgrounds and values, along with education expectations of faculty and staff, the research was guided by the following questions:

1. How is AI being used at universities around the world?
2. What is the rationale for these policies?
3. What permissions do students need to acquire to use AI in a course?
4. What existing university policy is referenced by the AI policy?
5. What is the "application of use" stated in the policy?
6. What instructions are provided for the instructors/faculty to adhere to regarding the use of AI in the classroom?

The questions were crafted to be intentionally broad to allow for the investigation of each university's policy to be revealed in what was publicly available. The research questions also aligned with the data collection questions (see Sect. 4) to extract precise language and usage of AI policies within universities and classrooms around the world to understand similarities and differences regarding how universities understood the transformative potential of integrating AI.

3.3 Sampling and selection criteria

Through purposive sampling [49], this study targeted a list of 1500 top universities in the world, recognized for their significant research activity and academic excellence, according to the *Times Higher Education's* World University Rankings [51]. The sample of 1500 universities according to *Times Higher Education's* rankings was then narrowed to the five most represented countries in the field of education: Australia, Canada, China, the U.K., and the U.S. These five countries had the highest number of universities within the top 1500 rankings for education.

The decision to focus on these countries was guided by their prominence in global higher education, the diversity of their governance systems, and their early engagement with institutional responses to artificial intelligence in teaching and learning. This selection also ensured coverage across different cultural, regulatory, and educational contexts.

To ensure a focus on institutions at the forefront of research and policy development in emerging technologies like AI, this totaled 343 universities across these five countries. These universities were selected to provide insights into how leading academic institutions are addressing AI integration in their educational frameworks.

Universities were included only if sufficient policy documentation was publicly accessible. Institutions with limited English-language web content were not automatically excluded; where necessary, official AI-related policy documents in other languages (e.g., Chinese) were accessed using professional translation tools and validated through cross-checking by native or fluent speakers. Including universities from a diverse range of countries enabled the capture of a wide array of educational contexts and policy environments. The sampling resulted in geographic balance, allowing for a comparative

analysis of AI policies across different cultural and regulatory settings. This approach helped understand how regional factors might influence AI policy development.

3.4 Data collection

The data was primarily collected from the official websites of the 343 top-tier universities in the sample (see above for explanation on how these 343 universities were chosen). The study focused on publicly available documents such as policy statements, student handbooks, and faculty guidelines related to AI usage. These sources provided comprehensive information on how these institutions manage the use of generative AI tools in educational contexts. The 343 universities were divided amongst the six co-authors to locate the publicly available guidelines or policies. Qualtrics XM, a cloud-based management software, was used to conduct a systematic review of each university's website to extract relevant information. Each entry was entered in the system to answer the following questions:

1. AI at the university is:
    - Not allowed under any circumstances
    - Not allowed across the university (unless clear approval has been given by instructor)
    - Allowed in the university (unless instructors do not allow its use within their course)
    - Left to the instructors' discretion regarding usage in their own class
    - Allowed for use (however not for assessment purposes) (Student does not need to reference its use)
    - Allowed for use (however not for assessment purposes) (Student does need to reference its use)
    - Allowed for use (in any way the student wishes) (Student does not need to reference its use)
    - Allowed for use (in any way the student wishes) (Student does need to reference its use)
    - N/A (no policy, statement, or guideline)
    - Other
2. What is the rationale for the policy (if any)?
3. What permissions do students need to acquire to use GenAI in a course?
4. What existing university policy is referenced in the AI policy (i.e., ethics, integrity, honor system, behavior, etc.)?
5. What is the *application of use* stated in the policy?
6. What instructions are provided for the instructors/faculty to adhere to regarding the use of GenAI in the classroom?
7. Any additional information relevant to the policy, statement, or guideline.

This process involved thorough keyword searches and manual examination of publicly available information. Each group of universities assigned to one researcher was reassigned to a different group to verify the accuracy in the data extraction.

Where institutions had multiple websites for different faculties, schools, or campuses, all available sources were reviewed to ensure comprehensive coverage. For non-English documents, such as those from Chinese universities, professional translation tools were used to obtain an initial translation, which was then cross-checked by native or fluent speakers to ensure accuracy and preserve policy meaning. All URLs and document metadata were recorded for verification and reproducibility.

3.5 Data analysis

The core of the data analysis was qualitative with a thematic analysis [49] being employed to code and categorize the policy documents based on the six research questions. Each corresponding author was given a selection of universities to extract data from regarding their AI policy. From there, each researcher was tasked with analyzing the data to craft the first round of codes to highlight themes within their designated group. The codes included themes such as instructor discretion, citation required, and not allowed for assessment. Next, each researcher was assigned a different group of universities to verify the extracted data and codes to ensure they aligned with the research questions, as well as discuss the acceptance or rejection of the initial codes. Once all first-round codes were gathered, Authors 1, 2, and 3 combined the codes to create a finalized codebook to identify themes with the entire data set. This involved identifying key themes and patterns across different universities and countries, enabling the grouping of similar policy approaches into broader categories and uncovering recurring motifs and unique policy frameworks. Finally, the thematic analysis and codebook was given to the remaining researchers to verify the findings and mark any discrepancies within the analysis to reach a consensus of codes, themes, and categories.

To complement the qualitative findings, a descriptive quantitative analysis was used to summarize the frequency and distribution of different policy approaches [50]. The analysis quantified how many universities allowed, forbade, or delegated AI usage decisions to instructors and tallied references to existing policies such as academic integrity or honor codes. These summaries provided a clear, numerical overview of the landscape of AI policy strategies.

To enhance interpretive depth, the analysis was guided by two complementary frameworks: policy diffusion [52] and responsible innovation [41]. Policy diffusion theory explained the transnational spread and divergence of AI governance practices, while responsible innovation provided an evaluative lens to consider whether institutional policies reflected principles of anticipation, inclusion, reflexivity, and responsiveness.

A comparative analysis was then conducted to explore differences and similarities in AI policies across countries and regions. By situating these patterns within the dual lenses of policy diffusion and responsible innovation, the study was able to identify not only regional trends and distinctive policy features but also the ways in which cultural, educational, and regulatory environments shaped institutional responses to AI policy development.

3.6 Ethical considerations

The research adhered to ethical standards throughout the data collection and analysis process [53]. As the data was publicly accessible from university websites, there were no concerns regarding privacy or consent. The researchers ensured an accurate and faithful

representation of the information and maintained transparency in the methodology to facilitate reproducibility and verification of our findings.

3.7 Validity and reliability

This study implemented several strategies to ensure the validity and reliability of the findings:

- Triangulation: Information was cross-verified from multiple sources and maintained consistency across different data points. Each university's policy documents were reviewed independently by different team members to reduce bias and enhance data accuracy.
- Inter-rater Reliability: To minimize subjective bias in coding and interpretation, researchers assessed inter-rater reliability among the team members. Consistent agreement rates were maintained to ensure reliable coding and interpretation of the qualitative data [54].
- Pilot Testing: A pilot test with a subset of universities was conducted to refine the data collection and analysis procedures, ensuring their robustness and applicability across the entire sample.
- Peer Review: The methodology and findings were subjected to peer review within the research team, ensuring the rigor and validity of our approach and interpretations.

These measures upheld the integrity and trustworthiness of our research outcomes, providing a strong foundation for analyzing AI policies in higher education across diverse global contexts.

4 Results and findings

4.1 Characterization and patterns of AI policies in higher education

The first question sought to understand how universities approach the use of AI through institutional policy. Based on data gathered from the policies of 343 universities, several key patterns emerged regarding the use of AI in educational contexts. As is evident in Table 1, the predominant policy, seen in 179 instances (52%), allows instructors to determine AI usage within their own classrooms. This high occurrence highlights a significant preference for granting autonomy and flexibility to course instructors, enabling educators to tailor AI integration to their specific needs and pedagogical methods [10–12, 31]. By contrast, the approach of outright prohibition with specific exceptions is drastically less common, with only 16 occurrences (less than 5%). This suggests that most institutions prefer not to restrict AI usage entirely but rather opt for more flexible or adaptable guidelines [14, 22].

Table 1 Distribution of universities by AI policy category and prevalence (%)

Number of universities (and %)	Policy category
179 (52.2)	Instructor discretion
99 (28.9)	No policy evident
25 (7.3)	University-wide Permission with Instructor Control
16 (4.6)	Prohibition with Exceptions
9 (2.6)	Other
8 (2.3)	Limited Use with Conditions (reference)
4 (1.2)	Unlimited Use with Conditions (reference)
3 (<1)	Limited Use with Conditions (no reference)

When examining policies that permit limited AI use under certain conditions, only three universities (less than 1%) universally allowed AI use without requiring students to reference it, indicating a minimal emphasis on unacknowledged AI integration. Slightly more frequently (2%), eight universities mandated that when AI is used it had to be referenced, but only used in specific tasks, placing an emphasis on transparency and the ethical consideration of AI's role in academic work [18, 31, 55]. However, only four universities (1%) provide students with the flexibility to use AI in any manner as long as it is properly referenced, balancing openness with accountability.

Policies granting university-wide permission for AI use, contingent on instructor control, appeared in only 25 instances (7%). This reflects a mild trend in which universities endorse AI use broadly, but defer individual instructors to set specific guidelines within their classrooms [22, 31]. This approach blends institutional endorsement with local adaptability.

The 'Other' category, which encompasses nine occurrences (3%), and includes a range of unique AI policies, represents the diverse and experimental nature of how institutions are wrestling with integrating AI, while acknowledging their limitations in knowledge of AI [27, 31]. Some institutions (e.g. [56] mandate explicit instructor policies to standardize AI usage across courses, while others decentralize governance to unit-specific guidelines (e.g. [57]), accommodating disciplinary nuances. Conversely, stringent prohibitions in certain universities restrict AI use unless explicitly permitted (e.g. [58]), emphasizing control and academic integrity. This variability accentuates the need for continued dialogue and research to foster adaptable and transparent AI policies that align with the diverse institutional contexts and educational goals [22, 26].

Interestingly, universities that are part of the Russell Group [59], a selective and prestigious group of 24 research universities in the United Kingdom, are more likely to have comprehensive AI policies in place than any other group from any other country examined. Their policies reflect a balanced approach, with a range of permissions encouraging innovation while ensuring ethical considerations [31, 34]. Russell Group universities demonstrate a proactive stance in integrating AI into their educational frameworks, which could be an example for other universities worldwide.

Overall, the data revealed a clear trend towards instructor discretion and institutional flexibility, with a smaller proportion of universities adopting restrictive or highly prescriptive AI policies [22, 28]. This variability underscores the ongoing need for adaptable and context-sensitive frameworks of AI governance within higher education [27, 31].

4.2 What is the rationale for an AI policy?

While characterizing the use of AI in top-tier universities, the second question asked what the rationale was for the AI policy if there was one in place. Table 2 highlights that while many universities recognized that AI was a tool that had a purpose that was

Table 2 Distribution of universities by stated rationale for AI policy

Number of universities (and %)	Rationale for AI policy
208 (60)	Rationale presents broad statements about AI
135 (39)	No rationale
48 (23)	Rationale references AI's potential
29 (14)	Rationale includes warnings about the dangers of AI
4 (1)	Rationale included warnings of AI being potentially factually incorrect

quickly accelerating, 135 universities (39%) did not present a stated rationale linked to an AI policy. Instead, broad statements about the rapid evolution of AI were used as a rationale in all cases that presented a rationale (208 universities). For example, the language used in these rationales urged the use of AI in higher education as exploratory, and made statements resembling, "with the rapid onset of available generative artificial intelligence tools such as ChatGPT," [60] and "the world of higher education is rapidly changing, and the rise of artificial intelligence (AI) is a key factor in this transformation" [61]. Other statements were less positive, but still emphasized AI's rapid evolution: "The creation of policy to govern a single technology is problematic when the technology is new and rapidly evolving, with poorly understood use cases" [62]. The underscoring of AI's rapid change appears to be the default position in presenting a rationale for AI policy [13, 22, 31].

Within the rationale, the examined universities (48 universities, 23%) referred to the fact that AI technology and student access to it were not going away and could not be ignored or outright banned from use in college work. Words such as "innovative" and "embrace" embrace' characterized the potential of AI. Therefore, rationales have attempted to present AI usage positively, emphasizing its potential to enhance students' studies [12, 22, 26]. Following these acknowledgements, 29 universities (14%) warned of the dangers of AI and referenced associated problems, such as plagiarism. A small minority of these schools' rationales highlighted the ways in which AI results and produced text can be factually incorrect and thus students must be wary of using AI. Furthermore, rationales urged students to refer to and acknowledge the use of AI in their work [18, 31].

As stated in the findings from research question #1, universities that are part of the Russell Group [59], are more likely to have AI policies than other institutions. The principles stated in the rationales for these policies were quite articulate,they included statements that not only referenced AI's rise and evolution, but also highlighted a focus on AI's ability to promote collaboration [22, 34]. For the most part, rationales took a critical look at AI. In doing so, these rationales urged the thoughtful integration of AI in university courses [27, 31].

4.3 What permissions would students need to acquire to permit the use of AI in a course?

The third research question examined the types of permissions students would need to obtain to use AI in their coursework. Of the 343 universities analyzed, 212 (62%) included some version of a comment regarding permissions for AI usage. As clearly represented in Table 3, several university policies mentioned permissions from more than one category [10, 17, 31].

A large number of these universities, 158 (46%) indicated that the authority to grant such permissions primarily rests with the course instructors. This suggests a

Table 3 Distribution of universities by type of permission required for student use of AI in courses

Number of universities (and %)	Permissions that students need to use AI in a course
212 (61.8)	Permission of some type noted
158 (46.1)	Instructor permission needed
25 (7.3)	No specific permission needed, but student must cite AI use
15 (4.4)	Vague description (such as "it depends")
11 (3.2)	Instructor permission and head of school/ department permission needed
3 (<1)	It is explicit that AI cannot be used

decentralized approach, in which individual faculty members determine the role of AI in their classes [14, 22]. For instance, Stanford University emphasized that the use of AI tools must be explicitly approved by the course instructor and detailed in the syllabus [63]. This finding aligns with the findings from research question one, where the autonomy given to individual instructors in making decisions about AI usage was similarly highlighted. The decentralized approach across these universities reflects the evolving nature of AI policies, where institutions still navigate the balance between academic integrity and the potential benefits of AI tools in enhancing learning outcomes [26, 31].

In addition to the instructor's discretion, a smaller subset of institutions, 11 (3%), required dual approval, involving both the instructor and a higher administrative level, such as the head of the department or school. The University of Sheffield, for example, noted that any use of AI tools in coursework requires consent from both the course instructor and department chair [64]. This dual-permission model appears to be aimed at ensuring a more consistent and controlled application of AI across courses within the same department or programme [22]. Twenty five universities (7%) did not note any specific permissions needed, but did make clear that if students use AI in their work they must cite it. Language such as the following was used to note this: "No permission is required, students however must cite its use in line with the academic integrity policy" [56].

Interestingly, 15 (4%) universities provided vague or extremely flexible guidelines regarding permissions. These institutions used a broad language that left the specifics of permission widely up to the student's interpretation. The University of Ottawa's guidance illustrates this ambiguity, stating that one should check the course syllabus and each assignment's instructions for academic integrity provisions [65]. Such statements suggest that, while the use of AI may be allowed, the authority to permit or prohibit it does not necessarily lie solely with the individual instructor [22, 31]. Instead, it may be inferred that students need to pay close attention to each course's detailed academic integrity guidelines, which may vary significantly.

It is important to consider how these permissions may affect students' engagement with AI. Institutions that require higher levels of approval may discourage the use of AI, potentially stifling innovation and adaptation. Conversely, those that allow more instructor-level discretion may foster a more flexible and adaptive learning environment and the exploration of AI tools by the instructors themselves. However, this could lead to inconsistencies and confusion among students regarding the role of AI in their education. With the significant variance in how permissions are structured, universities should continue to adapt to the integration of AI in academic settings with clarity and consistency in policy languages [22, 31]. Doing so is crucial to effectively manage its use while maintaining academic standards.

4.4 What are the referenced university policies in various AI policies (e.g., ethics, integrity, honor system, behavior, etc.)

Across the 343 universities examined in this study, one of the questions sought to understand what existing policies are referenced or mentioned within the AI policy or guidance information, thereby understanding how AI policies sit within the context of the universities. Of all the universities in the study, Table 4 shows that 138 (40%) either did not reference any other policies explicitly within their websites or had no AI policy

themselves. By far, the most common policy mentioned in the website documentation referred back to the Academic Integrity policy, with over 109 (31%) referring to this policy. For example, Leeds Beckett University in the U.K. mentioned, "deploying generative AI without proper acknowledgement constitutes Unfair Practice and will result in your work being penalized under Section 10: Academic Integrity of LBU's Academic Regulations" [66]. In 2023, Queen's University, Ontario, Canada updated its academic integrity policy: "In light of generative AI, the Academic Integrity Subcommittee of the Senate Committee for Academic Development and Procedures has drafted updates to the types of departures from academic integrity in the context of generative artificial intelligence" [67].

The next most noted policy referenced was the academic misconduct policy. For the purposes of this evaluation, academic misconduct, student misconduct, and research misconduct were treated as separate policy categories. Academic Misconduct was mentioned twenty-one times (6%) under the AI guidance. University of Brighton, The U.K. explained that our current student regulations for academic misconduct are based on the importance of attribution and citation in the spirit of promoting academic integrity. These have now been updated to include a new category of misconduct, commissioning, which explicitly covers the inappropriate use of AI tools without acknowledgement' [68]. Western University in Canada also mentioned, 'If you are a student and choose to use AI in a way that violates the rules of a course syllabus, you are violating policy on academic honesty' [62].

The University Honor Code was the third most noted policy on the websites, with 15 universities (4%) referring to this code within their AI policies. Baylor University, in Texas, United States, stated, "At this time, University Policy does not dictate a particular approach to AI. Instructors should provide specificity in the syllabus to establish course expectations and clarify boundaries for potential honor code violations' [69].

An analysis of AI policies across 343 universities in Australia, Canada, China, the U.K., and the U.S. shows that new AI policies are being integrated into pre-existing academic frameworks to guide student use. Interestingly, 138 universities (40%) either currently do not have a policy or have stand-alone policies that operate independently of these

Table 4 University policies referenced within AI guidelines (e.g., academic integrity, misconduct, honor code, ethics)

Number of universities	Policy
138 (40.2%)	NA or No reference to other policies
109 (31.8%)	Academic Integrity
21 (6.1%)	Academic Misconduct
15 (4.4%)	Honor Code
13 (3.8%)	Student Misconduct
8 (2.3%)	Ethics Policy
8 (2.3%)	Academic Honesty
6 (1.7%)	Academic Dishonesty
5 (1.5%)	Plagiarism
2 (<1%)	Academic Conduct
2 (<1%)	Student Behavior
1 (<1%)	Research Misconduct, Student Charter, Unacceptable academic practice, quality assurance agency, student success, student code of conduct, student integrity

frameworks. Among those with policies, the most commonly referenced was Academic Integrity, cited by 109 universities, underscoring the emphasis on maintaining the originality and integrity of student work [22, 31, 70]. This trend reflects a broader concern within academia for upholding academic standards amidst emerging technologies [70].

This section highlights the diverse range of policies currently guiding the use of AI in higher education, encompassing student misconduct, ethics, academic honesty, and plagiarism. This variety indicates that universities are actively seeking ways to integrate AI use responsibly while ensuring that these technological advancements do not compromise long-held educational values [12, 26]. When drafting an official AI policy, it is crucial to integrate this new policy or guidance into existing university frameworks rather than isolating it as a standalone document. This integration ensures coherence and alignment with the broader institutional policy landscape, leveraging already established policies with which students are familiar.

4.5 Application of use of AI in the various policies (permitted and prohibited uses)

The next area of focus examines specific guidelines and policies related to the application and permissible use of AI for students and staff. This section investigates AI tools that can and cannot be used within the academic context and any permissions required before using them. Table 5 notes that among the universities reviewed, 164 (47%) did not provide any additional information to students and staff on how and where they could use AI or any information pertaining to permissions required throughout this process [18, 22, 31]. Within the specific guidance provided to students on allowed uses for AI within their courses, it was most common (40 universities or 11%) to refer students back to obtaining approval for AI use from the instructor or to review the syllabus or course outline for information. At Florida Atlantic University (United States), it was noted that class policies related to AI use were decided by individual faculty. Some faculty may permit the use of AI in some assignments but not others, and some faculty may prohibit the use of AI in their course entirely [71]. Similarly, at the University of Texas at El Paso (United States), it was stated, "It is important to note that the choice to make use of AI technologies in the classroom and the specific policies around AI usage in such contexts

Table 5 University guidelines on permitted and prohibited uses of AI tools by students and staff

Number of universities	Application of use
164 (47%)	No specific information provided
40 (11%)	Deferred approval to Instructor, syllabus, course outline
34 (10%)	Provided specific guidance on how to cite AI use
26 (8%)	Gave explicit information on allowed uses for AI
23 (7%)	Referred students and staff back to academic policies
14 (4%)	Gave explicit information on disallowed uses for AI
12 (3%)	Must seek permission before using
12 (3%)	Encouraged staff to engage in open dialogue with students
7 (2%)	Can only be used for studying but assessments only if instructor allows it
7 (2%)	Can only be used for studying
7 (2%)	AI detectio
7 (2%)	Gave information for staff how to use AI
6 (2%)	Encouraged students and staff to play around with it
5 (1%)	Referred back to student responsibilities of using AI
5 (1%)	Information for instructors in creating their own policy
4 (<1%)	General Guidance

is generally at faculty discretion," [72] whereas others, such as Washington University in St. Louis (United States), state that "Students are encouraged to ask instructors about their course policy" [73].

Thirty-four (10%) universities provided information to students specifically related to the citing and referencing of AI tools. This guidance emphasizes ensuring that students appropriately reference or cite the use of AI. For example, at the University of Melbourne (Australia), it was noted, "If an assessment task does permit the use of AI tools and technologies in the preparation of the submission, this usage must be appropriately acknowledged and cited in accordance with the Assessment and Results Policy" [74]. At the University of California Berkeley (United States), it was stated, 'To maintain good academic practice and the fairness of assessment you must acknowledge this contribution' [75]. Similarly, at the University of Glasgow in the United Kingdom, it was noted that it is important for students to understand that they should not use AI tools to generate assessment content and submit it as if it were their own work. Rather, they should understand how AI might be used and how to acknowledge its use" [76].

Twenty-six universities (8%) provided specific guidance to the students regarding the acceptable use of AI. For instance, at The School of Oriental and African Studies (SOAS) of London in the United Kingdom, it was noted that AI can be "Used as an educational tool, it can help you make sense of difficult text, use it as a starting point for an essay question: to brainstorm, to give you an indication of what is required, to help you understand the essay question, to clarify concepts that you are having difficulty understanding, and use it to help you create a plan for your work.

It is used as a starting point to identify gaps in research and areas to investigate further (being mindful of bias, assumptions, etc.)" [77].

At the University of Exeter in the United Kingdom, it was noted that AI tools can "Help improve your grammar and the structure of your writing, Generate ideas and images" [78], and at New York University in the United States, "Specific uses of GenAI are encouraged (generating ideas, editing, translating, outlining)" [79]. At The University of Western Australia (Australia), it was noted that AI "can be used anywhere if referenced. However, one cannot upload lecture slides, handouts, unit outlines, or exam papers to the system. As they are copyrighted' [56]. Within the information provided to students across these 26 universities on how AI can be used, the most common approach was similar to New Mexico State University's (United States) stance on AI: "Use AI as a supplement rather than a substitute to guide/support your own critical thinking" [80]. Throughout the policies, students were encouraged to use AI as a study tool, plan work, brainstorm, identify gaps, and improve their structure and grammar. However, only one policy explicitly mentioned the approved use for assessment tasks.

Twenty-three universities (7%) referred their students to various academic policies for further information on AI. As noted in the previous section, the most common academic policy was Academic Integrity. Within this guidance, the students also provided specific information regarding the potential implications and misuse of AI tools. For example, Old Dominion University (United States) advised students to "understand the importance of privacy, as AI tools often require access to data to function effectively and discuss how to address privacy concerns" [81]. Additionally, students were cautioned about "the potential for misuse of AI-generated content, such as creating misleading information or deepfakes." New Mexico State University reminded students that "AI has been

known to 'make up' references or copy and paste material from the internet without referencing it. So, if you submit these fake references or include AI text without checking it, you could be guilty of academic misconduct which carries some severe penalties" [80].

Although 26 universities (8%) provided specific guidance on permissible uses of AI, only 14 (4%) explicitly outlined where AI use was prohibited [22, 27, 31]. Concordia University (United States) stated, "students may not use artificial intelligence tools for completing exams, writing research papers, or completing other course assignments, including creative assignments, posts to discussion forums, or smaller writing assignments" [82]. At Memorial University of Newfoundland (Canada), students were informed that "students may not use GAI in any of the following ways: Submitting an assignment presented as their own. This includes, but is not limited to, essays, research papers, computer codes, and solutions to mathematical problems. Using GAI as an aid to completing an assignment, such as paraphrasing from GAI content. Submitting answers to any quiz, test, or exam question using GAI solutions' [83]. The Teesside University (United Kingdom) provided specific guidelines on "What is definitely not permitted? Generative AI was used to create content for your assignments without permission or explicit instruction to do so. Believing and using AI-generated information without independently checking its accuracy. Submitting work, like blog posts or essays, that was made using AI without acknowledging its AI origin' [84].

The analysis of AI policies regarding their application and permissible use within universities reveals a diverse landscape of guidelines and recommendations. A large proportion of universities (161, 47%) did not provide any additional information on the use or permissions required for AI tools, highlighting a gap in comprehensive policy dissemination. Among those that offered guidance, the emphasis varied from requiring instructor approval and citing AI use to detailing acceptable and unacceptable applications within academic work. Notably, only a small percentage explicitly outlined the prohibited uses of AI, underscoring the need for clearer and more consistent policies. This variation suggests that while some institutions are proactive in integrating AI into their academic frameworks, others continue to navigate the complexities of its implementation, pointing to an ongoing evolution in how higher education institutions address the opportunities and challenges presented by AI technology [12, 22, 31].

4.6 Guidance and Instructions provided to Instructors/Faculty on AI Use

The next area of focus was to investigate the instructions or information provided to instructors, professors, lecturers, and faculty regarding the use of AI within the classroom. As shown in Table 6, a total of 163 (47%) did not provide any publicly accessible guidance to faculty on their websites. In contrast, 180 (53%) universities offered guidance, support, and examples to help instructors navigate the emerging world of artificial intelligence in higher education [22, 31].

Of the 180 universities that provided guidance, 60 (17%) offered staff instruction related to syllabi and course descriptions.

This guidance included a specific language, example course policies, and syllabus statements for the inclusion or ban of AI. Boston College (United States) provided staff with course-by-course examples of existing syllabus policies, highlighting the reasonable and unreasonable use of AI in the classroom.

Table 6 Types of AI guidance and support provided to university staff

Number of universities	Type of guidance provided to staff
163 (47%)	No guidance or additional information to staff
60 (17%)	Syllabi and course description information
35 (10%)	General guidance and information on AI use for instructors
25 (7%)	Affirmation to staff that they can choose their own policy
13 (4%)	How to use AI within your classes
12 (3%)	How to have conversations regarding AI with your class
10 (3%)	Legal, security, and policy information
10 (3%)	Training and professional development opportunities
10 (3%)	Redesigning academic assessment tasks
4 (1%)	General information on AI for staff who have not have any experience before with AI
4 (1%)	What to do when plagiarism is suspected
3 (<1%)	Information on AI detectors
2 (<1%)	Information on Academic policies
2 (<1%)	Information on faculty responsibilities when using AI

University of California, Los Angeles (UCLA) (United States) staff were provided with a collaborative document where they could find examples of syllabus language, policy language, and resources curated by UCLA's teaching and learning community.

Thirty-five (10%) universities provided general guidance and information on AI use to instructors. This information ranges from explanations of AI and specific software programs like ChatGPT such as the "5 Things to Know about ChatGPT" provided to staff at the University of Texas (United States) [85]. In addition, guidance is not limited to general information about programs. It also includes ethical considerations for AI use, as noted by the University of Newcastle in Australia, and general lists of learning and guidance on AI tools for staff at the University of Reading in the United Kingdom [12, 18].

Twenty-five (7%) of the policies generally reaffirmed that instructors could choose the level of implementation with which they felt comfortable. For instance, American University (United States) notes, "As you consider what response to these ever-changing tools is most appropriate for you and your students, keep learning at the forefront and equity in mind [86] while The University of Western Australia (Australia) tells instructors they "are allowed to create specific policies for AI's use on specific tasks if they require" [56]. This approach is particularly important when a university does not have a specific overarching policy, deferring to staff to determine their level of comfort with this emerging technology.

Thirteen universities (4%) provided guidance to the staff on how to use and integrate AI within their classes or administrative tasks. For example, The University of Ottawa in Canada advised staff, "Depending on the discipline and intended learning outcomes, professors could use AI in several ways. The use of AI in education is still in its early stages and its impact will continue to evolve as technology advances. It is important for professors and students to understand the limitations of AI and use it in responsible and ethical ways while also considering its potential benefits for enhancing the learning experience [65].

Similarly, at Mississippi State University (United States), staff were provided with common uses of AI in the classroom [22, 31], including "Generate examples, demonstrations, alternate test questions, and discussion prompts, review written objectives, directions, and prompts" [87].

Twelve universities (3%) advise staff members to discuss AI use with their students in higher education. Queen's University (Canada) notes to staff, "It is essential, then, that instructors speak to their classes about their perspectives on generative AI and detail the conditions for its use in their courses." This sentiment is echoed by The University of Buffalo (United States), which emphasizes that staff must "be clear about expectations." [88] Similarly, The University of Texas Rio Grande (United States) advises that "As important as establishing expectations is also taking time to communicate with your students. Make sure to include capabilities, limitations, and ethical use of AI technologies, such as ChatGPT, in your discussion [89]. In relation to your course, discuss with them that the skills and behaviors they learn in the ten universities (3%) offered training opportunities for staff to gain further professional development in using AI [26]. For example, at the University of South Australia (Australia), a series of "Learning Modules for staff and students include discussions of the appropriate uses of artificial intelligence" [90] were developed, in addition to the availability of one-on-one consultations with the Teaching Innovation Unit. Similarly, staff at the University of Leicester in the United Kingdom "have access to training workshops offered at the university level. Where required, school level training and support can be provided by Education Services" [91].

Ten universities (3%) also advised staff on how to redesign academic assessment tasks in the era of students using AI. For example, at Bangor University in the United Kingdom, staff were provided with information on "Employing forms of assessment that enable students to demonstrate their knowledge and subject skills in a non-text-based assignment e.g. oral presentation, panel discussion, poster presentation, creating a diagram," "Basing assessments upon experiential activities, such as seminars, fieldwork, practical's or other in-class activity. Here, students will need to work with information/data/content that has been gathered as part of an activity," and the use of artifacts that are generated as part of teaching and learning activities, such as field and laboratory notebooks, compositions, multimedia products, and reflective diaries [92]. Other universities, including the University of Central Florida and the University of Connecticut (both located in the United States), highlight that staff should consider ways to adjust assignments and assessments to minimize cheating [22, 31]. Other types of information within these policies include general information on AI for staff who have never interacted with or used AI before, information on academic policies and AI, guidelines on what to do when plagiarism is suspected, cautionary advice on using AI detectors, and clarifications on faculty responsibilities when using AI.

The data shows that universities have integrated a wide range of additional sources of information for instructors, encompassing up to 14 distinct types of guidance. If guidance is provided to staff, it typically includes syllabi and course description information, general guidance and information on AI use, affirmation that staff can choose their own policies, and information on how to use AI in their classes. Additionally, universities provide guidance on how to have conversations with students regarding AI; legal, security, and policy information, and training and professional development opportunities for AI use. However, universities are less likely to provide information to staff on what to do when plagiarism is detected, AI detectors, academic policies, and faculty responsibilities when using AI [12, 18].

Drafting an official AI policy, including as many of these elements as possible ensures comprehensive guidance and support for instructors and students, promoting a clear

understanding of the ethical, legal, and practical considerations of AI use. This approach fosters a well-rounded educational environment, encouraging the responsible and effective integration of AI technologies in higher education [22, 26, 31].

5 Discussion

5.1 United States

This study examines the websites of 150 universities in the United States to understand their stance on AI and related policies. Policies in the United States, in general, range from explicit prohibitions to decentralized decision making, highlighting the complexities of balancing technological innovation with ethical considerations. While some universities advocate AI to enhance learning and research responsibly, others leave AI largely unaddressed, emphasizing faculty autonomy.

The approach to AI usage varied significantly among the students. Only three universities accessed in this study explicitly forbid the use of AI unless instructors give permission, while 12 allow it unless it is specifically prohibited. Twenty-nine universities (19%) avoided addressing AI use in their policies. The majority, 106 universities (71%), left the decision up to individual instructors, empowering them to set their own guidelines and expectations for AI use in their courses. This approach encourages faculty to communicate their AI-related policies clearly to students.

In examining AI policies across 150 universities in the U.S., a clear consensus emerges on the ethical and responsible integration of generative AI tools in education. The majority of the universities (120, or 80%) examined encouraging the use of AI to enhance learning and research, such as helping students develop critical thinking and writing skills or assisting in drafting research proposals. However, 90 universities (60%) expressly emphasized maintaining academic integrity, with strong prohibitions against presenting AI-generated content as original work. Notably, 60 universities (40%) advise against “misuse,” not necessarily defining what misuse is, but highlighting concerns about academic dishonesty and the improper use of AI-generated content. In contrast, 40 universities (27%) left the topic largely unaddressed, providing no specific guidance or mentioning AI tools in their policies. In these cases, policies are typically left to the discretion of individual faculty members, either at the instructor or department level, who are urged to clearly communicate their specific guidelines and expectations to students through syllabi and discussion. As technology evolves, institutions advocate for continuous adaptation and emphasize the importance of privacy, ethical use, and data security in leveraging AI tools.

Sixty (40%) of the US universities examined did not provide specific rationales or guidelines regarding the integration of generative AI tools, such as ChatGPT, in educational contexts. This indicates a gap in formalized policies or statements across these institutions, emphasizing the ongoing development or varying levels of preparedness in addressing AI's role of AI in higher education. The remaining responses reflected diverse perspectives on faculty autonomy, ethical considerations, and potential benefits and challenges associated with AI in academia. Of the 150 American universities reviewed, "Academic Integrity" was the most commonly referenced policy, noted in 95 instances. Other frequently mentioned policies included "Honor Code" and "Code of Conduct." This indicates a varied approach among universities in establishing formal guidelines for

referencing existing policies when addressing AI integration of artificial intelligence in academic settings.

In general, instructors at U.S. universities are encouraged to carefully consider integrating generative artificial intelligence (AI) tools, such as ChatGPT, into their courses, with faculty having discretion over their use and advised to establish clear expectations if deciding to permit the use of the tools. Several universities provide example syllabus statements specifying when AI-generated content may be employed and how to acknowledge it.

The Centers for Teaching Excellence (CTE), referenced by 17 universities, offers guidance. It encourages instructors to familiarize themselves with AI systems, understand their capabilities and limitations, ensure that assignments align with objectives, and promote academic integrity. Publicly available data (university websites) show that 116 universities (77.3%) did not provide explicit guidance or examples for instructors to design their own policies for AI use within their classes, although additional resources may be available internally or through other channels.

The analysis of these 150 universities in the U.S. reveals diversity marked by delegated decision-making and varying degrees of specificity. While most universities empower instructors to set their own guidelines for AI use, substantial variability exists in addressing ethical considerations and ensuring academic integrity. The prevalence of policies emphasizing faculty autonomy underscores the complex interplay between technological integration and educational values.

5.2 United Kingdom

This study reviewed the websites of 85 universities in the United Kingdom to determine each policy on AI usage for students and staff. Policies in the United Kingdom almost exclusively left the use of AI in the classroom up to the instructors' discretion regarding how it would be integrated into the syllabus or assessments for any particular course. Thirty-nine universities (46%) simply provided guidelines for instructors on the use of verbiage when incorporating AI policies into their classes. For students, their online portals pointed to the responsible uses of AI for their work and how to appropriately cite the platforms when they were used in their final assignments. 56 (66%) universities advocate for the use of AI, highlighting its potential benefits for enhancing student learning and while cautioning against the negative issues that can arise from its usage, whether problems with the information returned by AI or the ethical usage of this technology by students seeking to break schools' ethics code or outright plagiarize by using applications such as ChatGPT. Regarding information-targeting faculties, most policies emphasized faculty autonomy.

One of the more interesting aspects found within this collection of schools was isolating the 24 universities (28%) that comprised the Russell Group, the selective and prestigious universities that supposedly shared policies to ensure high standards of academic integrity and forward-thinking stances in various academic fields. Examining each institution's public website, seven of the 24 institutions (29%) did not have anything listed in terms of a policy or reference to an honor code when considering AI for the school. Only four institutions (17%) had a comprehensive statement allowing both faculty and students to use AI tools in their work and research with proper citation and ethical practices. The remaining 13 schools (54%) of the Russell Group provided guidelines for the

discretion of the use of AI-generated tools to be determined by the instructor in terms of how they could be used in the classroom.

A significant emphasis was placed on the adherence of students to follow the schools' academic integrity or honor code, which was focused on original works and the consequences for plagiarism. Reviewing the policies across the U.K., 39 (46%) universities gave discretion regarding the use of AI in the classroom, coursework, and assessments entirely up to the instructor. Similarly, 17 (20%) explicitly permitted students to access and use AI tools in their studies or practices, as long as they specifically cited the platform in their final products.

However, even in these cases, the faculty retained the authority to prohibit the use of AI in particular tasks and assignments including assessments. Conversely, 29 (34%) of U.K. universities did not provide any guidelines or policies about AI tools in coursework or reporting, but did reference integrity codes as the barometer to determine how it was effectively utilized in turned in assignments.

In summary, the analysis of AI policies across UK universities highlights a nuanced approach that balances innovation and academic integrity. While many institutions leave the decision of AI integration to individual faculty members, there is a consistent emphasis on responsible use and adherence to ethical guidelines. This approach reflects a broader recognition of the diverse impacts of AI on education and the need for flexible yet principled policy frameworks.

5.3 Canada

In a similar position to higher education institutions in the U.K., Canadian universities have allowed course instructors to choose how AI can be used in their classes. This approach reflects the strong tradition of academic freedom in Canadian higher education, where instructors retain significant autonomy over curriculum design, teaching methods, and assessment practices [93, 94]. In such contexts, the handling of AI-related issues is often delegated to the discretion of the individual instructor rather than mandated through institution-wide policy. This decentralized approach allows academic staff independently determine their stance on AI use in teaching and assessment.

Of the 25 universities selected for this study, six (25%) did not have anything available on their public pages that discussed anything involving AI. Conversely, 19 (more than 75%) other universities provided rationales that entailed descriptions of the positive aspects that AI brings to both professional practice and the classroom, and the need for mindful uses of the various platforms when employed in educational practices.

Many universities acknowledged their lack of comprehensive understanding of AI-generated systems, due in part to the nearly consistent changes that occur within the platforms and are pushed out to the general public:

> *Be aware that not everything that genAI technology produces is correct. You may wish to experiment with the technology to see what kinds of errors it generates; citations are often fabricated and inaccurate prompts are sometimes taken as facts. There is a risk that genAI may perpetuate the biases inherent to the material on which it is trained. [95]*

This recognition of false information has led universities to use AI-generated models to reference their academic integrity standards, codes of student behavior, codes of

academic behavior, misconduct, or conduct to which students are held. Seven out of the 19 (37%) universities referenced academic integrity, one referenced academic behavior, two referred to academic honesty codes, two stated that not properly citing the use of AI in submission was a violation of student misconduct policies, one university cited the code of conduct for all students, and the other six universities (32%) did not include a reference to their standards or codes when utilizing AI in the classroom.

Overall, because of the changes in performance across platforms as well as individual understanding, it appears that most of the Canadian universities researched in this study were responsible for the course instructors. Thirteen universities (50%) provided methods for instructors planning to apply AI in their classroom, including, "potential benefits for instructors are also important considerations if the use of such tools lightens the instructor workload without negatively impacting the student experience" [96]. Similar to UK universities, guidelines were provided, but no official policies were available.

5.4 Australia

Australian universities have proactively integrated AI into their higher education sector, reflecting a broader national commitment to fostering innovation and technological advancement [22]. This study examined the websites of 35 Australian universities to understand their stances on AI and related policies.

Six universities (17%) allowed the use of AI within their policies, but not for assessment purposes, requiring students to appropriately cite AI whenever it is used. Eight universities (23%) had policies stating that AI use is generally not allowed unless specifically permitted by an instructor, lecturer, or professor for a particular task. The most common policy observed in 16 universities (46%) defers to individual instructors. These universities instruct students to review syllabi or course descriptions for specific guidelines set by instructors, allowing them to determine the level of AI use permitted in their classes. Looking deeper into the permissions required of students regarding AI use, over 50% explicitly instructed students to defer to course-specific instructions. Additionally, seven (20%) university policies mandated that AI use must be referenced, regardless of the context. The remaining policies included restricted use of AI for assessments, conditional support for AI use, and no specific policy provided. Only one university permits AI use in all contexts, including studying and assessments, provided that it is appropriate.

The most common rationales behind the creation and implementation of AI policies in Australian universities are associated with ensuring that all student work is their own and maintaining the importance of academic integrity. These policies also emphasize the necessity for students to understand how to use AI tools responsibly and ethically. Additionally, they integrate support for learning and development, allow for flexibility and individual discretion, and recognize the rapid evolution of AI technologies and their significant role in the higher education system.

Generally, within Australian universities, AI policies fall under referenced Academic Integrity policies. Specifically, 26 of 35 universities (73%) adhered to this approach. Other policies were associated with the student code of conduct, the acceptable use of ICT resources, and academic misconduct.

Finally, when looking at the instructions provided to Australian instructors regarding AI use within their classes, there was generally deference to each instructor's choice of

the level of AI use permitted within their classrooms. Instructor guidance also encouraged building awareness and competency of AI use by students, and being open and talking about the use of Generative AI with students, as this is something that is not going away. Many universities have made reference to providing training and support to AI instructors in higher education. This included receiving modules for creation and drafting course policies, reconfiguring assessment tasks, using AI for marking, and professional development opportunities to integrate AI into existing courses.

The data from the 35 Australian universities examined clearly showed that AI is not a neglected topic in the country, with only three universities lacking a clear policy or stance on AI use. Policies frequently defer individual instructors to determine their comfort level with AI and encourage students to review course syllabi and descriptions before using AI tools.

Additionally, instructors receive professional development opportunities and are encouraged to maintain open dialogue with students regarding the use of AI in their classes.

5.5 China

In 2022, Chinese regulators banned the use of the most prevalent large language model, ChatGPT, due to its noncompliance with Chinese censorship laws [97]. Specifically, Carrozza [98] observed, “The model is trained on open information based in Western countries. Potentially, it raises many issues [for the Chinese government], because people could have used it to raise questions about sensitive topics.” Consequently, OpenAI, the creator of ChatGPT, prohibited the use of Chinese credit cards for purchasing ChatGPT 4.0 [99]. Going forward, all companies operating within this space in China must obtain a license from the Ministry of Industry and Information Technology and fulfill other "permitting requirements’ (China Internet Information [100]).

Thus, while searching for specific policies pertaining to AI use within Chinese universities, references to ChatGPT are minimal. However, it is essential to recognize that this ban does not equate to disregard for AI. Chinese higher education institutions frequently mention AI degrees, certificates, training courses, and press announcements on their websites.

For instance, Nanjing University has introduced a core curriculum system on artificial intelligence literacy that students will enroll in integrating AI into their existing fields. Similarly, Beijing Normal University, in collaboration with UNESCO, established a UNESCO Chair on Artificial Intelligence in Education in 2023 to foster collaboration between researchers and teaching staff. According to the official website of the Shanghai Ranking (Global Times [101]) at least 248 universities in China have introduced AI majors, including Tsinghua University, Shanghai Jiao Tong University, and Nanjing University leading the 2023 rankings.

It is also important to note that not all university websites are fully accessible. Some required student or staff passwords to access certain website pages, whereas others were not translatable from Chinese to English. Only two of the 47 (4%) Chinese universities examined had clear AI policies, although they were not specific to ChatGPT. Instead, these policies were applied to Chinese-developed large-language-model AI programs, including Zhipu AI, Wenxin Yiyan, and iFlytek Spark. Tianjin University had specific rules for AI use, stipulating that if an undergraduate thesis contained more than 40%

AI-generated content, the student would receive a warning and would be required to undertake substantial revisions before the university conducted further inspections. Shanghai Jiao Tong University also issued Generative AI teacher usage guidelines in late 2023. These guidelines address data privacy, security, copyright, academic integrity, ethics and critical thinking. Teachers were instructed to encourage students to consider issues such as fairness, transparency, explainability, and the privacy and security of using AI in their classes.

Although not all information on these websites is publicly available or accessible to researchers, it is evident that there is a significant focus on AI within Chinese universities. Much of this focus is directed towards integrating artificial intelligence degrees, programs, and certificates rather than integrating AI into existing courses. Additionally, certain AI platforms have been banned from use within China, which will undoubtedly continue to shape the landscape of AI use in global universities.

The comparative analysis method of this study revealed nuances and systematic differences amongst the 343 top-tier universities. In many instances, nearly half the total of schools examined, left the decision to use AI in courses up to the instructor. This flexibility in policy implementation granted universities the opportunity to alter and reform the policy as platforms updated the capabilities and global reach. A noteworthy finding came from instances when vetted, existing policies around *Academic Integrity*, *Academic Misconduct*, and *Honor Codes* were included in the vague language of the policy to ensure the protection of the university to unforeseen scenarios and future legal concerns. Similar to the findings in Mahrishi et al.'s (2025) study that called for "transparency and ethical balance in AI usage" (p. 6) when examining regulatory frameworks in higher education. The variety in language and uses found amongst the universities policies of this study point to the infancy stage in which AI currently exists. The broad, elusive language of AI policies in higher education benefits institutions to allow for the opportunity to conduct research, examine the influence that new technology has on existing practices, and openly interpret the word *ethics* to fit within the cultural values of the institution.

6 Implications

The findings from the five countries examined in this study (Australia, Canada, China, the U.K., and the U.S.) convey several implications for policy and practice in higher education. Institutions with potentially effective AI policies take into account their unique cultural, educational, and regulatory contexts, increasing the flexibility and adaptability of policies to local needs and values. Ethical considerations, including data privacy, academic integrity, and equitable access to AI resources, should be prioritized through clear guidelines on responsible AI use to mitigate risks and enhance educational outcomes.

Engaging a broad range of stakeholders, including students, faculty, and policymakers, is essential for creating comprehensive and widely supported policies. Given the rapid pace of AI development, universities should regularly review and adapt their policies to address emerging challenges. Institutions should also invest in professional development programs to equip faculty and staff with the skills to integrate AI effectively, with an emphasis on AI literacy and ethical considerations.

This study also highlights that students are often not provided with clear information on how AI can and cannot be used whether for studying, completing assignments, or

preparing for future employment. As AI becomes more prevalent, universities should ensure students are trained in AI use, both for academic work and for professional readiness.

7 Limitations and future directions

Within this research, a considerable limitation stems from the exclusive reliance on public information through university websites. Without direct access to Codes of Ethics, Codes of Conduct, or AI policies housed within different schools or departments the analysis may have missed relevant documents and therefore cannot be considered fully comprehensive or generalizable across different countries and all universities. Another limitation of the study is its narrow focus on five countries, specifically the top universities within each. Additionally, these countries, with the exception of China, were predominantly Western and majority-white, which may limit the generalizability of the findings to more diverse global contexts.

Given the rapidly evolving nature of institutional responses to generative AI, policies may have been released or revised after the data collection period (December 2024–January 2025). This temporal limitation should be considered when interpreting the results, as they represent a snapshot in time rather than a continuously updated policy landscape.

This study did not examine smaller universities, teaching-focused institutions, or community colleges. Including these types, an in-depth study into AI policies within institutions in future research could shed light on how faculty, staff, and administrators across a broad spectrum of higher education contexts bridge the gap between emerging technology and established teaching practices.

Future research could benefit from triangulating policy analysis with survey or interview data from students, faculty, and administrators to assess the alignment between institutional policy intent and its perceived impact. Expanding the scope to include a wider range of countries and institutional types, and incorporating more frequent, longitudinal tracking of policy changes, would provide a richer understanding of AI governance in higher education.

Longitudinal studies should monitor the evolution of AI policies over time and evaluate their effects on teaching, learning, and institutional operations. Comparative research across different types of institutions and within specific disciplines could offer deeper insights into the factors shaping AI policy development and implementation. Rigorous impact assessments could identify best practices as well as areas needing improvement.

8 Conclusion

This exploration of 343 AI policies from top-tier universities globally underscores the complex landscape of AI governance in higher education, and reveals the absence of a universally applicable framework for AI governance. These findings signify the relative newness of this issue in college campuses. Advancement involves heightened awareness and the need for serious progress. This variability shows the need for adaptable policies that reflect the dynamic nature of AI and education. Using a comparative analysis approach, this study identified key patterns and themes in AI policies, highlighting regional variations. The study reveals the developing spectrum of approaches towards

AI integration, ranging from the rare no-use allowed policy to open endorsements and encouragement of its use. These variations emphasize the influence of local cultural, educational, and regulatory contexts on the development and implementation of AI policies within the educational context.

The findings further reflect diversity in institutional values, cultural contexts, and regulatory environments, thus underscoring the understandable absence of a universally applicable framework across higher education institutions. This variability highlights the necessity for flexible and adaptable policies tailored to the uniqueness of this issue, that technology changes faster than any institution can keep pace with. Addressing this need may be difficult for some institutions, given the juxtaposition between the speed of change within the world of technology and the slow nature and culture of educational institutions. The fact remains that universities will need to update their policies as technology develops further, and student use evolves. Along with the transformation of AI policies, it is imperative that institutions ensure transparency in both the language and accessibility of these policies. Accessible communication is crucial for both students and faculty to fully understand each university's stance on the integration of AI in classroom assignments and research activities.

Regarding future research and policy development, longitudinal studies should be conducted to track the evolution of AI policies over time and assess their impact on educational practices and outcomes. Comparative studies across different types of institutions as well as within different disciplines could provide deeper insights into the factors influencing AI policy development and implementation. Rigorous impact assessments of AI policies on student learning, faculty practices, and institutional effectiveness could identify the best practices and areas for improvement. Encouraging interdisciplinary collaboration among educational researchers, AI experts, ethicists, and policymakers could foster the development of comprehensive and forward-thinking AI policies. Further qualitative research surveying student and faculty views on the policy and its effectiveness and ethics could provide rich data.

Additionally, this work could serve as a starting point for efforts to develop global frameworks and guidelines for AI use policies. Higher education institutions, to conclude and reinforce, must strike a balance between innovation and regulation, ensuring that the adoption of AI technologies aligns with their pedagogical values and objectives while also being realistic given the widespread use of AI technology by their students. This work emphasizes the need for continuous dialogue and collaboration among educational institutions, policymakers, and stakeholders to navigate the complexities of AI implementation and harness the potential benefits of AI in education responsibly. Our study provides a foundational understanding for universities seeking to develop or refine their AI governance frameworks, and contributes to the growing body of knowledge as institutions worldwide traverse this ever-evolving digital landscape.

Author contributions

All authors (Dr. Luke Parker, Mrs. A. Jane Loper, Mr. Josh Hayes, Dr. Alice Karakas, Dr. Steven White, Dr. Heidi Hallman) jointly conceived the project, contributed to the development of the methodology, participated in data collection and analysis, and collaborated on the interpretation of findings. The manuscript was written collaboratively, and all authors approved the final version for submission.

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Data availability
This study did not generate or analyze a separate dataset. The findings are based on publicly accessible university websites, including policy documents, student handbooks, and institutional statements. Because these websites are regularly updated, some links may no longer be active. Where available, policies and documents are cited directly in the reference list. No additional dataset was created or archived beyond the cited sources.

Declarations

Ethics approval and consent to participate
Not applicable.

Consent to publish
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The authors declare no competing interests.

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