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FINAL GROUP REPORT

## **The Role and Impact of Generative AI in Higher Education: Perspectives from Students, Professors, and University Management**

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# The Role and Impact of Generative AI in Higher Education

## Abstract

This study explores the role and impact of Generative Artificial Intelligence (GenAI) in higher education, focusing on the perspectives of three key stakeholder groups: **professors**, **students**, and **university leaders**, from five countries and various universities, [Azerbaijan](#), [Mexico](#), [Philippines](#), [Russia](#), and [Ghana](#). The purpose of the research is to understand how these stakeholders perceive the integration of GenAI in educational contexts, including its opportunities, challenges, and implications for teaching, learning, and policy.

A mixed-methods approach was employed, combining both **quantitative** and **qualitative** analyses. The quantitative component involved identifying the **Top 10 Keywords** from interview scripts, providing insights into key topics of interest. The qualitative component involved theme distribution analysis, where keywords were grouped into broader themes such as **AI Adoption**, **Education**, **Policies**, and **Challenges**. Data were collected through structured interviews, with participants selected based on their roles and accessibility within their respective institutions.

Key findings revealed that **AI Adoption** was the dominant theme across all scripts, especially for professors and students, emphasizing the focus on integrating GenAI tools to enhance learning experiences and teaching methodologies. **Education** also emerged as a significant theme, while **Policies** and **Challenges** were acknowledged but less prominently discussed. These findings suggest a global interest in leveraging GenAI in education, with varying levels of adoption and consideration for ethical, technical, and institutional challenges.

**Keywords:** Generative Artificial Intelligence, higher education, AI adoption, teaching, learning, stakeholders, mixed-methods, theme distribution, perceptions.

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## 1. Introduction

Generative Artificial Intelligence (GenAI) has emerged as a transformative force in education, offering innovative tools for personalized learning, automated content creation, and enhanced administrative efficiency. In higher education, where diverse stakeholders, including students, faculty, and institutional management, encounter complex academic and operational demands, the integration of GenAI represents a significant change. This change is not only technological but also cultural, requiring institutions to address challenges such as ethical concerns, equity in access, and the implications for pedagogical practices and policymaking. Currently, various universities and countries have begun adopting GenAI in various capacities, the global state of its implementation and the perspectives of key stakeholders remain underexplored.

Existing research acknowledges the potential of GenAI to revolutionize higher education by enabling tailored learning experiences, streamlining administrative workflows, and enhancing decision-making processes. Studies highlight its ability to foster inclusivity through adaptive learning technologies and improve efficiency in routine academic tasks, such as grading and resource management. However, scholars also point to critical challenges, including data privacy risks, biases in AI models, and the need for stakeholder readiness to embrace these technologies. Despite the growing body of literature, most studies focus on single regions or specific applications of GenAI, leaving a research gap in understanding its global adoption and the nuanced perspectives of students, educators, and policymakers across diverse cultural and institutional contexts.

This study aims to bridge this gap by investigating the current state of GenAI in higher education worldwide, focusing on the perceptions and experiences of three key stakeholder groups: students, professors, and university management. Specifically, this research seeks to answer the following research question: **How do students, professors, and university management perceive and implement GenAI in higher education across different countries?** The study's objectives include identifying shared and divergent trends in GenAI adoption, uncovering stakeholder priorities and concerns, and providing actionable insights for its ethical and inclusive integration.

To achieve these objectives, qualitative interviews were conducted with participants from the selected countries, including diverse educational systems and cultural backgrounds. Interview transcripts were analyzed using semantic analysis, a robust technique that allows for identifying recurring themes and patterns within text data. This approach enabled a systematic exploration of stakeholder perceptions and their implications for GenAI adoption. By applying a global lens and

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leveraging advanced analytical tools, the study provides a comprehensive understanding of GenAI's role in higher education.

The paper is structured as follows: The literature review discusses existing studies on GenAI in education, highlighting the research gaps this study addresses. The methodology section details the research design, data collection, and semantic analysis processes. Findings are presented in the subsequent section, emphasizing both shared insights and stakeholder's variations. The paper concludes with a summary, practical recommendation, and directions for future research, along with appendices containing supporting materials such as interview guides, consent forms and code for reproducibility.

This report offers critical insights for whoever is seeking to address the challenges and harness the opportunities of this transformative technology in diverse educational systems from any part of the world.

## 2. Literature Review

The advent and development of technologies such as artificial intelligence have created benefits and challenges for educational stakeholders. (Mensah & Baffour-Koduah, 2023). Xiao, Chen, and Bao (2023) argued that generative AI technologies, such as ChatGPT, have recently garnered substantial attention from higher education institutions where there is an urgent need to comprehend the consequences of these technologies for teaching, learning, and assessment since their integration into academic settings is changing conventional pedagogical frameworks.

A more recent stream of economic literature investigates the role of policy regulations in promoting equitable access to quality education and improving student learning outcomes. For instance, Xiao, Chen, and Bao (2023) conducted an empirical analysis examining the approaches of waiting, banning, and embracing in the adaptation of policies for generative AI in higher education. This section provides an overview of previous studies related to the topic, establishing connections between existing research and the current study. The review primarily focuses on literature examining generative AI (GenAI) and its associated models, with particular emphasis on their applications in education. Additionally, the discussion highlights how the insights from prior

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research inform and shape the objectives of the present study, emphasizing the alignment and contribution of this research to the ongoing discourse on GenAI in educational contexts.

## **2.1 Opportunities and challenges of GenAI in higher education (Stakeholder Perspectives: Faculty, Students, and Administrators)**

Generative AI's introduction into education has sparked considerable interest since its inception, with numerous studies exploring its transformative potential alongside its challenges in the classroom and broader educational context. Chan and Hu (2023) underscore the role of GenAI tools like ChatGPT in enhancing teaching and curriculum development by enabling the creation of engaging course materials, automating administrative tasks, and providing personalized feedback to foster higher-order learning. Similarly, Kohnke et al. (2023) highlight how GenAI can facilitate customized instruction and learning, particularly in English language education. However, these advancements are tempered by concerns over biases, privacy, and the risk of disseminating misinformation.

Xiao, Chen, and Bao (2023) also bring attention to ethical concerns such as plagiarism and the misuse of AI in assignments, emphasizing the critical need for responsible AI education. While early adopters' express enthusiasm for ChatGPT's potential to revolutionize pedagogy, skepticism lingers, particularly around issues like cheating. Their research stresses the importance of striking a delicate balance between harnessing GenAI's promise and addressing its ethical and practical implications to ensure responsible use in educational settings. Likewise, Chan and Hu (2023) explore students' perspectives, finding that many have a positive outlook on GenAI tools like ChatGPT, appreciating their utility in academic writing and learning support.

Administrators, on the other hand, face the intricate challenge of integrating GenAI into institutional frameworks while adhering to ethical and regulatory standards. As Walczak and Cellary (2023) and Chan (2023) argue, administrators must craft policies that balance innovation with academic integrity, allocate resources for infrastructure upgrades, and address biases in AI systems. Collaborative efforts between stakeholders are pivotal, with faculty and administrators working together to establish clear AI usage guidelines and students contributing to co-creating policies that address their concerns (Ali et al., 2024).

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## 2.2 Research Gaps and Challenges

Despite being made available to the public in November 2022, Generative AI tools such as ChatGPT have drawn serious criticism from academics. These issues are primarily empirical (Gilson et al., 2023; Khalil & Er, 2023; Tlili et al., 2023) and opinion-based (Hosseini et al., 2023; Hu, 2023).

While the topic of Generative AI in education has been researched, significant gaps remain, particularly in capturing the perspectives of all stakeholders involved. Much of the existing literature emphasizes institutional-level responses and focuses on STEM disciplines, leaving the humanities and social sciences underexplored. Moreover, the ethical dimensions of AI-driven personalization, such as data privacy and bias, are often discussed in theoretical terms but lack practical insights into their impact on students and faculty. Importantly, there is limited research that delves into the lived experiences of individual stakeholders such as students, faculty, and administrators in navigating and adapting to AI tools in educational contexts. This study aims to address these gaps by providing a more holistic understanding of Generative AI's implications, with a particular focus on encapsulating the nuanced experiences and perspectives of these key groups.

## 2.3. Justification for Current Research

Given these gaps, our study aims to contribute to the literature by investigating how generative AI tools are being utilized in diverse academic contexts and evaluating the effectiveness of various policy adaptations. Building on Xiao, Chen, and Bao's (2023) framework, we hypothesize that institutions adopting a balanced approach neither outright banning nor fully embracing GenAI are more likely to achieve positive outcomes. Furthermore, our methodological approach, which includes both qualitative interviews and quantitative surveys, allows for a comprehensive analysis of stakeholder experiences.

This research is timely and relevant, as it addresses an urgent need for evidence-based recommendations that can guide higher education institutions in responsibly integrating GenAI technologies. By bridging theoretical insights with practical applications, our study seeks to advance the discourse on AI in education and provide a roadmap for future policy development.

## 2.4 Stakeholders Selection and Cultural Background

The selection of stakeholders and their cultural backgrounds plays a pivotal role in understanding the global implications of Generative Artificial Intelligence (GenAI) in higher education. For this study, stakeholders were deliberately chosen from three distinct groups: professors, students, and university leaders, representing their unique roles and perspectives within academic ecosystems. Additionally, participants were drawn from Azerbaijan, Mexico, Philippines, Russia, and Ghana, ensuring a culturally diverse dataset that reflects the varying stages of GenAI adoption across different educational contexts. This selection was driven by the researchers' affiliations and access to institutions in these countries, leveraging relationships with alma maters and professional networks to gather data. Such strategic sampling ensured not only the availability of participants but also enriched the study with nuanced, region-specific insights.

Including a range of stakeholders from diverse cultural contexts is essential for addressing the gaps in current research, which often prioritizes studies from Western countries while overlooking the unique challenges and opportunities in other regions (Altbach & Knight, 2007). As educational institutions worldwide increasingly integrate GenAI into their operations, understanding how cultural and systemic differences influence adoption becomes critical (Zawacki-Richter et al., 2019). By involving stakeholders from both developed and emerging economies, this research contributes to a more comprehensive understanding of GenAI's role in higher education. It explores how cultural and institutional contexts shape perceptions, adoption strategies, and the ethical challenges associated with this transformative technology, thereby providing actionable insights for global and context-sensitive implementation.



## 3. Methodology

The research employed a **mixed methods approach** to analyze the perspectives of various stakeholders on the role and impact of Generative Artificial Intelligence (GenAI) in higher education. This approach combines **quantitative** and **qualitative** analysis to provide both measurable insights and a deeper understanding of the themes underlying the data. Stakeholders included **professors, students, and university leaders** from five countries: **Azerbaijan, Mexico, Philippines, Russia, and Ghana**.

The data collection process involved structured interviews guided by stakeholder-specific questionnaires resulting in a total of fifteen (15) interviews mixed by the three stakeholders selected for this research.

Each interview guide was tailored to the stakeholder's role to capture their unique experiences and views. For professors, the questions focused on pedagogical practices, curriculum development, and classroom experiences. For students, the focus was on learning methods, challenges faced, and expectations from educational institutions. University leaders were questioned on institutional policies, strategic initiatives, and their vision for integrating GenAI into higher education systems. This approach ensured a comprehensive understanding of the multifaceted impact of GenAI.

To streamline the language of all interview transcripts and ensure consistency in applying Natural Language Processing (NLP) techniques, Google Translate was used to translate the Russian interview transcripts into English. This approach minimized potential language barriers and reduced noise in the data, enabling more accurate analysis. Before using Google Translate, all transcripts were carefully reviewed to remove any identifying information, such as names, institutional details, or other sensitive content. This step ensured adherence to ethical research practices and maintained the privacy of participants while preparing the data for analysis.

A total of 15 interview scripts were analyzed, consisting of transcripts saved in .docx and .txt formats. The scripts were processed into a unified corpus after pre-processing, ensuring uniformity and relevance. The diverse dataset captured the challenges, opportunities, and transformative potential of GenAI in higher education as perceived by the stakeholders.

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The **quantitative** component focused on identifying the most frequently mentioned keywords across all interview scripts. Tokenization was applied to split the corpus into individual words, and common stopwords (e.g., "the," "and") were removed to retain meaningful terms. A frequency count of the filtered tokens was conducted, revealing the **Top 10 Keywords**.

This quantitative approach allowed the study to objectively measure areas of focus within the interviews, providing a data-driven foundation for further exploration. The frequency of terms reflected the recurring concerns, priorities, and areas of emphasis among stakeholders.

The theme distribution keywords into broader themes to capture the deeper patterns and narratives in the data. Thematic categories, such as **AI Adoption**, **Challenges**, **Education**, and **Policies**, were created based on recurring concepts in the scripts. The frequency of keywords within each theme was calculated to identify their relative importance.

A thematic distribution pie chart provided a visual representation of these themes. For example, "AI Adoption" and "Education" emerged as dominant themes, reflecting a collective focus on integrating GenAI tools into teaching and learning practices. This approach added depth and context to the analysis, uncovering not only what stakeholders emphasized but also why these areas were significant to them.

In addition to the quantitative approach, the study also employed a **qualitative analysis** to explore the deeper, contextual aspects of Generative Artificial Intelligence adoption in higher education. This component aimed to capture the nuanced perceptions, experiences, and concerns expressed by the different stakeholder groups: professors, students, and university leaders.

The qualitative data analysis was conducted three times, separately for each of the participant groups: students, professors, and university leaders. For each group of interviewees, the data were analyzed separately to uncover group-specific issues and perspectives. Each analysis followed the Template Analysis methodology, using initial templates to identify key themes such as AI Adoption, Education, Policies, and Challenges.

Qualitative data were analyzed using **thematic analysis**, a well-established method in qualitative research. Thematic analysis allows for the identification of key themes, patterns, and recurring topics within the interview data, offering insights into the subjective experiences and attitudes of

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participants. This method was chosen for its ability to provide in-depth understanding of complex, often abstract phenomena, such as the ethical and pedagogical implications of integrating GenAI into higher education. During the analysis, the template was adjusted to incorporate newly identified themes, which allowed for the inclusion of the unique aspects of perception and approach to the integration of GenAI in different contexts. This iterative approach provided a deeper understanding of the views of students, professors, and university leaders on the use of Generative Artificial Intelligence in the educational process.

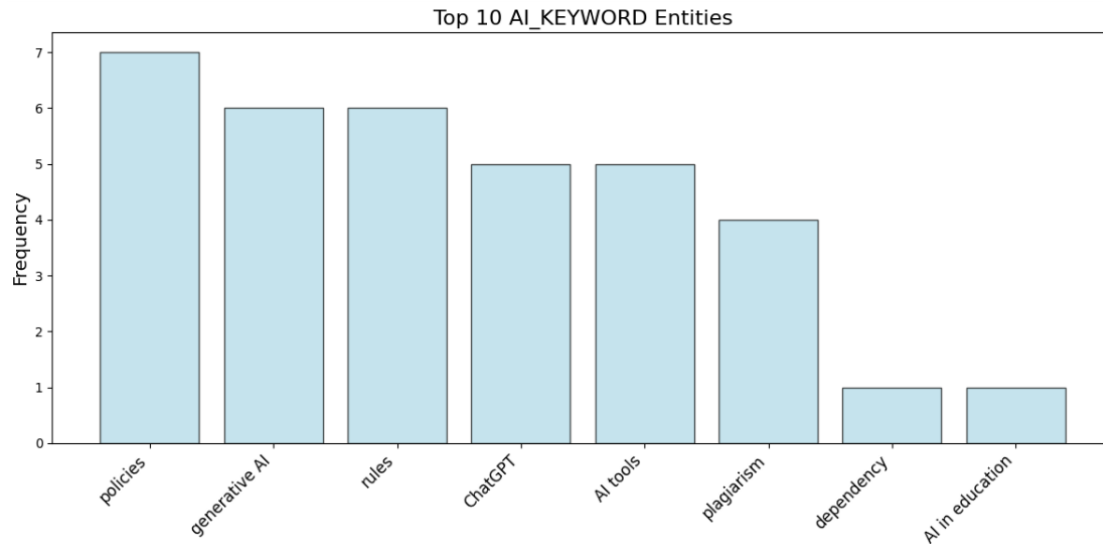
### 4. Findings

#### 4.1 Quantitative Analysis - Students

The quantitative analysis of the student and professor stakeholder interviews highlighted important trends through the identification of the **Top 8 Keywords** and their distribution

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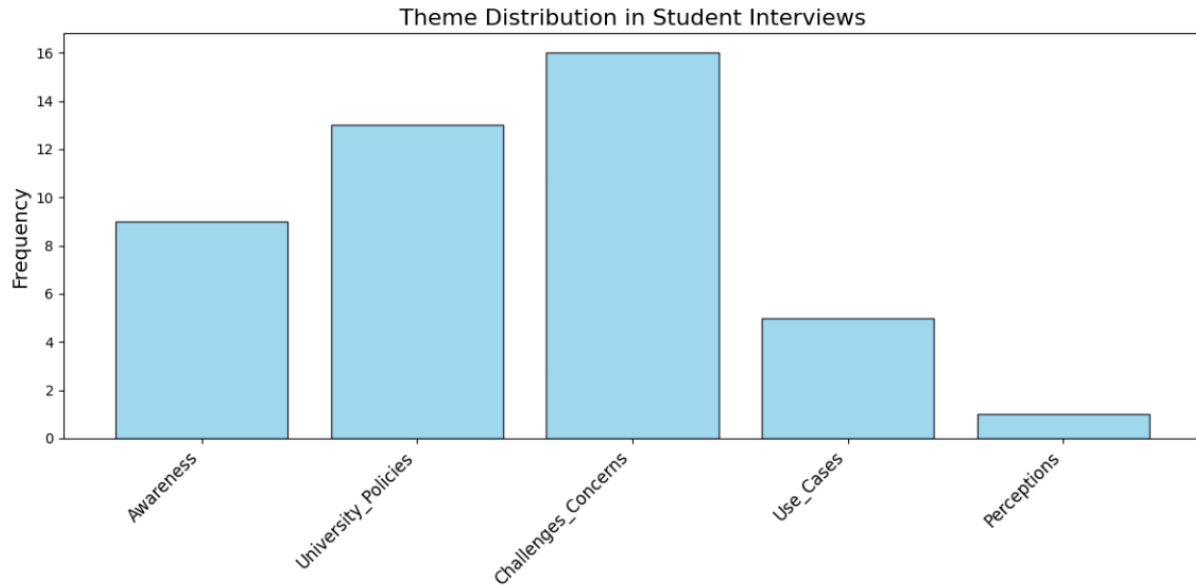
across the scripts. Keywords such as **"students," "learning," "AI,"** and **"teaching"** dominated the discussions, reflecting their relevance to the integration of Generative AI (GenAI) in higher education.



**Figure 1:** The bar chart illustrates the **Top 8 Keywords** identified from the student interview scripts, emphasizing terms like **"policies," "generative AI,"** and **"AI tools."** These keywords highlight students' primary concerns and interests, including the use of AI tools to enhance learning experiences and the need for institutional guidance.

The following chart shows the distribution of students' focus on leveraging GenAI to improve academic outcomes. The most repeated theme among students was the challenges and concerns section.

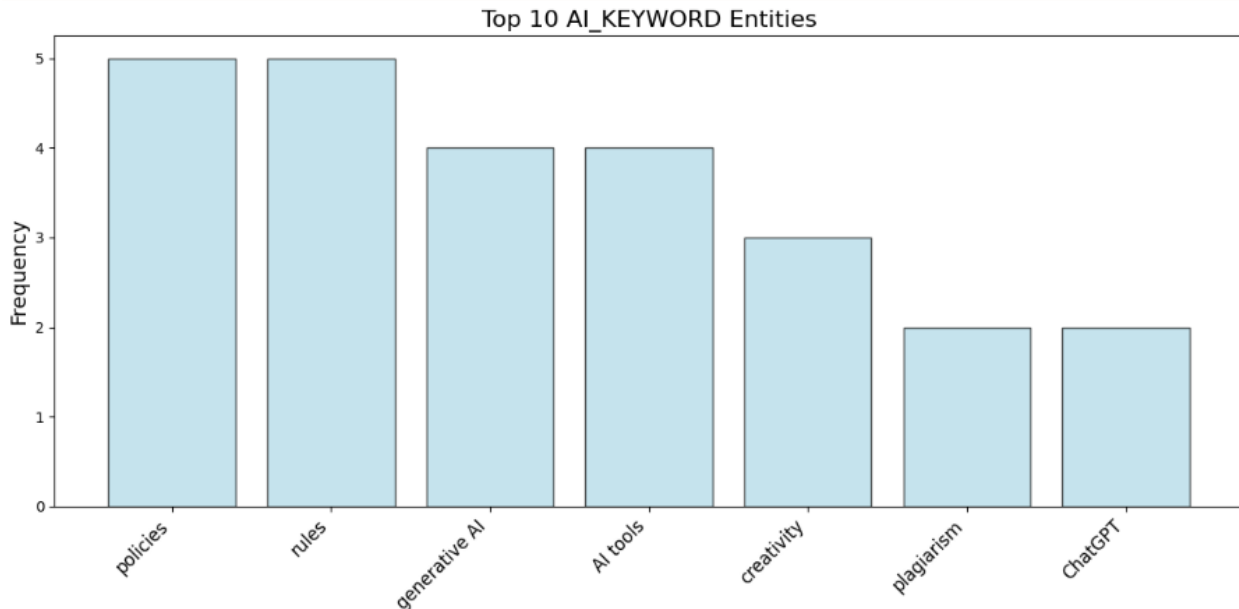
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**Figure 2:** The accompanying bar chart showcases the **Theme Distribution**, quantifying the proportion of discussions related to key categories such as University Policies and Awareness. This distribution underscores students' focus on leveraging GenAI to improve academic outcomes while addressing challenges and ethical considerations.

The quantitative analysis of the professor interview scripts revealed significant focus areas through the identification of the **Top 7 Keywords**, including **"Policies"**, **"Rules"**, and **"Creativity"**. These keywords reflect professors' emphasis on incorporating Generative AI (GenAI) into teaching practices and curriculum development. The frequent mention of **"Policies"** aligns with the broader literature, which highlights the need for more clarity and steering in how AI is adopted in the educational landscape. This quantitative insight demonstrates how professors are navigating the dual challenge of embracing technological innovation while maintaining pedagogical integrity.

## 4.2. Quantitative Analysis - Professors



**Figure 3:** The bar chart illustrates the **Top 7 Keywords** identified from the professor interview scripts, emphasizing terms such as **"Policies"**, **"Rules"**, and **"Generative AI"**. These keywords highlight professors' primary concerns and interests, including the integration of GenAI into curriculum design, enhancing teaching methodologies, and adapting to emerging technologies.

In the context of **theme distribution** from the **professor's perspective** resulted in the following themes, *Awareness use*, *Student use*, and *GenAI providers*. Having the *awareness use* as the most repeated theme refers to professor's own knowledge, understanding and recognition of GenAI tools and their potential or limitations in educational setting, from the impact on GenAI in pedagogy, assessments and the whole learning environment. It also represents how the professors see their role as responsible for raising awareness among students about the ethical and practical use of these technologies and how it is affecting already their skills development and learning as a whole.

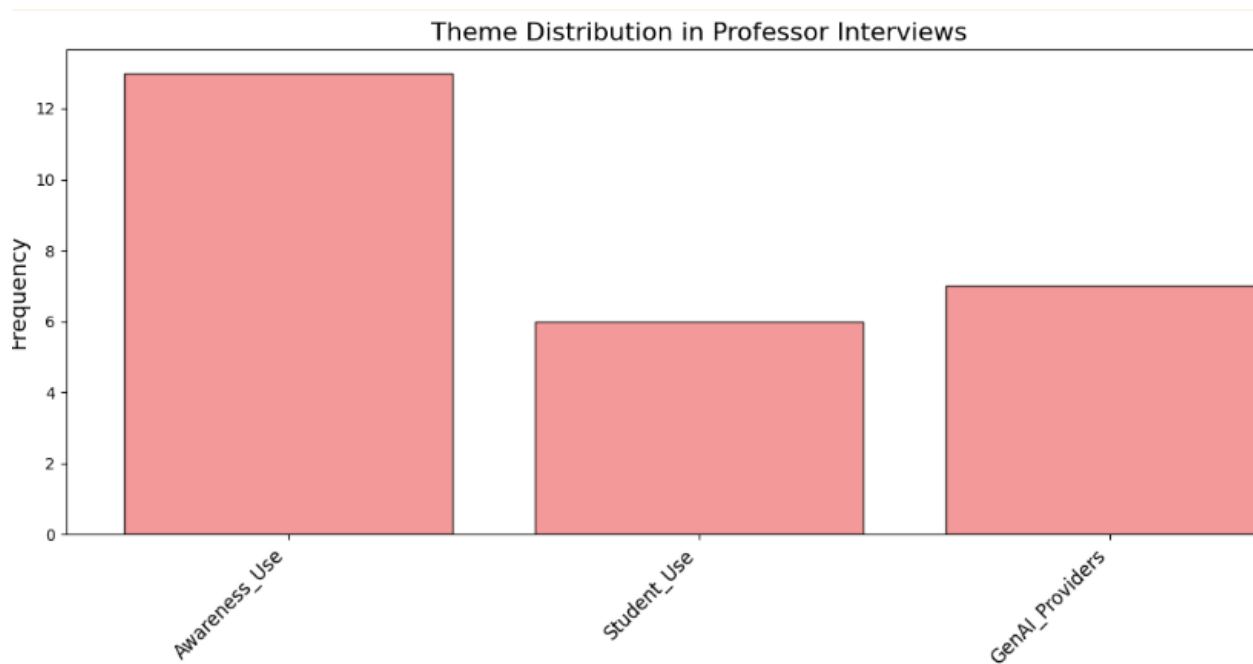
If we dig deeper into the second theme which is *student use*, it related directly to the perception of professors of how their students use and interact with GenAI tools. This includes observations of frequency, purpose and the style of using it (e.g., for completing assignments, creative projects, or even cheating...). From the

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professor's standpoint, students' attitudes towards GenAI tools, their willingness to adopt it without asking questions or reflecting on it's a main concern.

Thirdly we have the theme *GenAI providers* which refers to the entities or organizations that create and distribute GenAI tools. From the professor's side this involves perceptions or critiques of the tool's design, accessibility, and alignment with educational goals. A direction to explore may be the relationships from professors with these providers, such as training opportunities or feedback loops to better adopt these technologies in an educational setting, being thoughtful of the main purpose of education and learning for society.

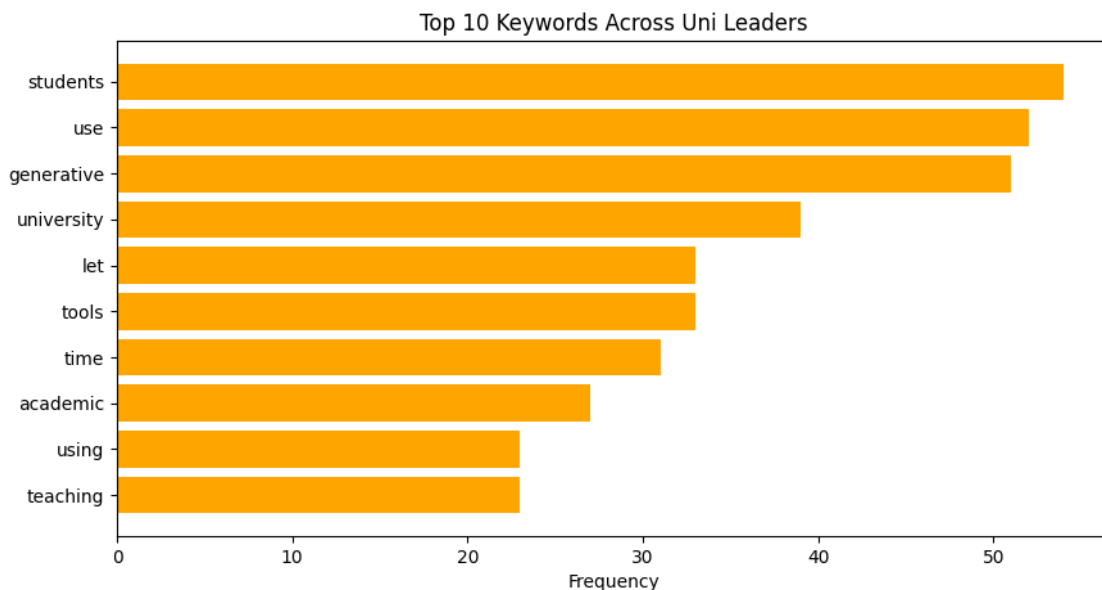
These themes based on the interviews we had with professors shows how they differ across these themes, how their role is to bridge the gaps between student's actual use and the awareness provided by institutions or tool creator, lastly but not more importantly, the challenges or opportunities they see as professor within the ecosystem where education and technology merges or interact closely.



**Figure 4:** The accompanying bar chart showcases the **Theme Distribution**, quantifying the proportion of discussions related to key categories such as "**Awareness\_Use**" and "**Student\_Use**".

## 4.3 Quantitative Analysis – University Management

The keyword frequency analysis highlights **"students," "use,"** and **"generative"** as the most recurrent terms, emphasizing the role of students as beneficiaries of generative AI technologies in higher education. The prominence of **"university"** and **"tools"** further indicates a strong focus on institutional-level strategies for adopting AI-powered resources. The terms **"academic," "teaching,"** and **"using"** suggest ongoing transformations in pedagogy and faculty workflows, driven by a need to integrate these tools effectively into academic environments. These results output the university management's responsibility to facilitate this transition, ensuring AI tools are incorporated into teaching practices at the same time evaluating the potential challenges like time allocation and skill development among educators.



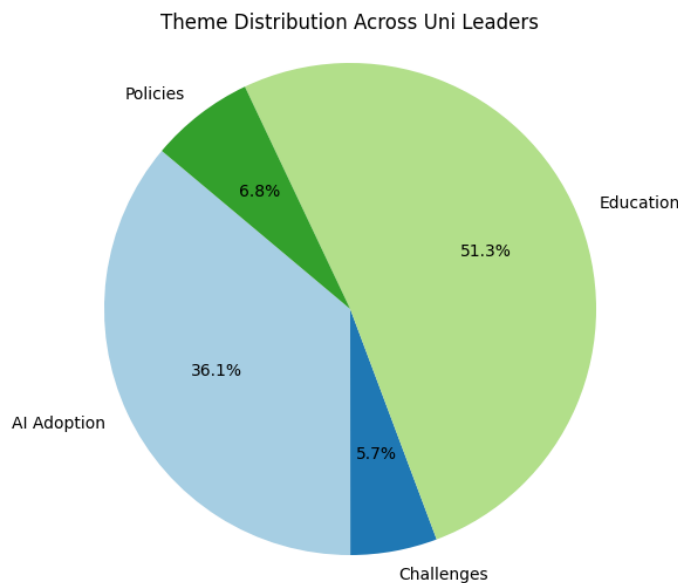
**Figure 5:** The bar chart illustrates the **Top 10 Keywords** identified from the University Leaders interview scripts, emphasizing terms such as **"students"**, **"use"**, and **"university"**. These keywords highlight university management focus points and areas of concerns and opportunities.

The thematic distribution reveals that **"Education"** dominates with **(51.3%)**, reflecting university management's primary role in shaping how generative AI influences learning outcomes, curriculum design, and teaching methodologies. **"AI Adoption"** **(36.1%)** points to the strategic implementation of AI across



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various institutional processes, signifying the importance of infrastructure and policy readiness. Meanwhile, **"Policies" (6.8%)** and **"Challenges" (5.7%)** indicate the less frequent yet critical discussions on governance, ethics, and the risks posed by these technologies. These findings suggest a call to action for university leaders to balance their focus between operationalizing AI in education and addressing its broader implications, ensuring alignment with institutional goals and expectations of society.



**Figure 6:** The pie chart illustrates the **Theme Distribution** across the two interviews of University Management, representing the proportion of discussions dedicated to key themes. **Education** accounts for the largest and more than half **51.3%**, emphasizing the systemic approach and focus within the educational landscape. **AI Adoption** follows with **36.1%**, highlighting the dynamic and effect of GenAI tools in education. **Policies** and **Challenges** comprise **6.8%** and **5.7%**, respectively, indicating emerging but less dominant concerns about ethical frameworks and implementation barriers.

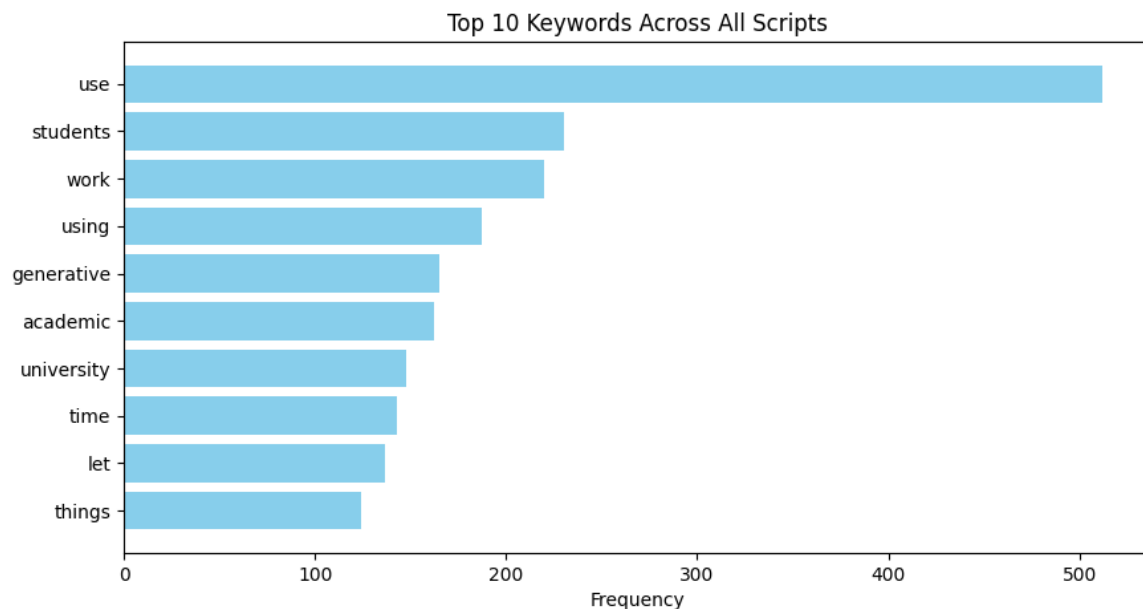
## 4.4 Quantitative Analysis – General (All stakeholders)

The keywords *"use," "students," "work,"* and *"using"* show just how central generative AI (GenAI) has become in education, especially in how students and professors interact with it. *"Use"* and *"using"* come up so much because they highlight the ongoing process of figuring out how GenAI fits into learning—whether it's students experimenting with it for assignments or professors trying to integrate it into their teaching. The word *"work"* ties everything together, reflecting both the creative

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outputs students produce with these tools and the effort professors put into guiding, evaluating, and sometimes rethinking academic standards. It is no surprise that *"students"* are a focal point since they're on the frontlines of testing how GenAI changes learning by being the first ones to adopt these tools.

Words like **"generative," "academic," and "university"** pull the conversation into the bigger picture. They remind us that this is happening in the structured world of higher education, where innovation often meets tradition. *"Time"* feels particularly relatable—it's not just about deadlines but also about how quickly things are shifting with GenAI, leaving everyone scrambling to keep up. Then there's **"let"** and **"things,"** which might seem simple, but they add a human touch. **"Let"** points to how professors are deciding when and how to allow GenAI in their classrooms, while **"things"** reminds us of this is about real, tangible impacts and some ambiguity in defining what this tangible impact look like - like grades, creativity, and even trust between students and educators. These words capture the complexity of GenAI in education, balancing its challenges and opportunities.

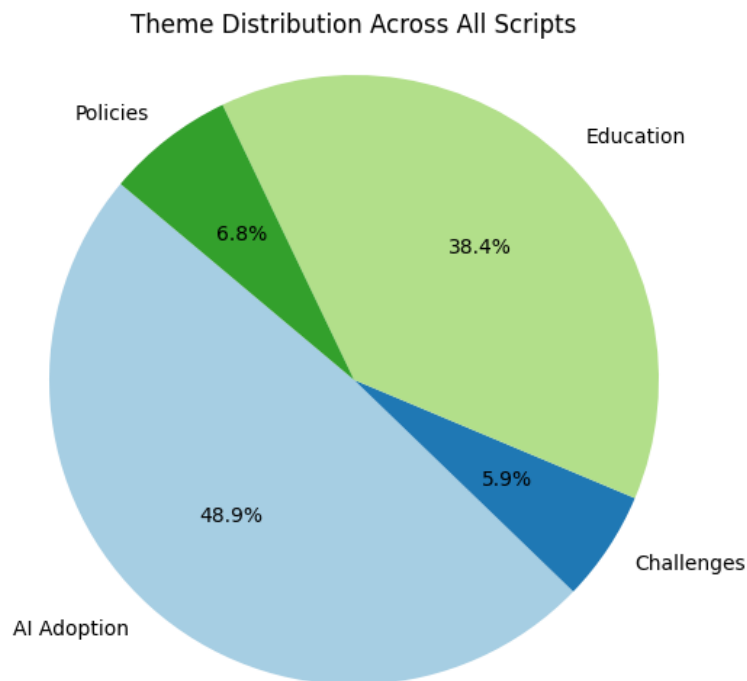


**Figure 7:** The bar chart illustrates the **Top 10 Keywords** identified across all interview scripts. The most frequent keyword, **"use"**, highlights the central role of how stakeholders perceive the application of GenAI in higher education. Other prominent keywords, such as **"students," "work," "generative," "academic,"** and

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"**university**," emphasize the discussions surrounding the integration of AI in student learning, academic settings, and institutional frameworks. These results provide insight into the primary themes of AI utilization and its impact on education.

The analysis of theme distribution reveals that **AI Adoption** is the most prominent theme, comprising **48.9%** of the discussions across all stakeholder groups. This finding aligns with existing literature, which underscores the transformative potential of GenAI to revolutionize educational practices, streamline administrative workflows, and personalize learning experiences (Wang & Huang, 2022). The significant focus on **Education** (**38.4%**) highlights stakeholders' enthusiasm for employing AI tools to enhance pedagogy, with particular interest in adaptive learning technologies that cater to diverse student needs (Smith, 2021).



**Figure 8:** The pie chart illustrates the **Theme Distribution** across all 15 interview scripts, representing the proportion of discussions dedicated to key themes. **AI Adoption** accounts for the largest share at **48.9%**,

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reflecting the significant interest in integrating GenAI into higher education. **Education** follows with **38.4%**, highlighting stakeholders' focus on leveraging AI to enhance teaching and learning. **Policies** and **challenges** comprise **6.8%** and **5.9%**, respectively, indicating emerging but less dominant concerns about ethical frameworks and implementation barriers.

The comparatively smaller shares of **policies (6.8%)** and **challenges (5.9%)** suggest that while stakeholders acknowledge the need for ethical guidelines and infrastructure readiness, these aspects are still secondary to the broader excitement around adoption and innovation. These findings emphasize the critical role of proactive policy development and strategic planning to address implementation barriers and ensure equitable access to GenAI in higher education.

## 4.5 Qualitative Analysis

As **qualitative** component we did manual summarization on each interview script, looking for commonalities and patterns.

The following shared key themes are an evaluation and review of the interview's scripts from students and professors. Firstly, the **perception of Generative AI**, it is viewed as a transformative tool by both stakeholders, students associate generative AI with tools like ChatGPT and Perplexity, seemingly mixed perceptions exist around its credibility, meaning, being a shortcut more than a legitimate academic resource. Secondly, the **advantages and opportunities**, students benefit from Generative AI's ability to streamline coding, research and writing tasks, professors leverage this technological tool to innovate in their teaching methods and adaptive learning. Both agreed that Generative AI fosters breaking writer's block.

As next key theme we have **challenges and Risks**, the most common concern was the over-reliance on Generative AI risks the enhancing overtime of critical thinking and originality, more on the student's side from overusing it or be highly dependent on it. Professors highlight inaccuracies and "hallucinations", which are instances where large language models (LLMs) generate false or misleading information while presenting it as factual. These hallucinations occur when AI systems produce outputs that are not based on their training data, are incorrectly decoded, or do not follow any identifiable pattern (IBM, 2024). Finally, the **policies and Regulations**, which both mentioned that existing policies in most institutions from the stakeholders we interviewed are informal or

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nonexistent, both professors and students stressed the importance of creating clear guidelines, including mandatory AI literacy workshops and integrating GenAI into curricula transparently.

## 4.6 Qualitative Analysis – Students

As part of the qualitative component of the study, we manually summarized each interview script, searching for commonalities and patterns across the data. By using a template analysis approach, these themes were examined across student interviews, allowing for a clearer understanding of how students view and interact with GenAI in higher education, as well as the implications for policy and practice moving forward.

Building on these shared insights, the analysis was structured around the following key themes that emerged across the student interviews: AI Adoption, Education, Policies, Challenges.

[In Table 1](#), we present the qualitative analysis of the student interviews, structured around the main topics that emerged during the analysis process. For each main topic, the frequency of mentions and key subtopics are summarized based on the interviews conducted with six students.

The qualitative analysis of student interviews revealed several key themes regarding the use of AI in education.

1. **AI Usage Policy:** Students emphasized the need for clear policies and guidelines for AI use in education. Many highlighted the importance of AI literacy, ethical usage, and adapting policies to the fast-evolving AI landscape.
2. **AI Tools:** Students frequently use AI tools like ChatGPT, finding them useful for academic tasks such as writing and research. However, there were mixed opinions about the reliability and limitations of these tools.
3. **Changes in Learning Approaches:** The introduction of AI tools has significantly changed how students approach their studies, making tasks more efficient. Students noted the advantages of generative AI over traditional methods.
4. **Challenges with AI:** Common concerns included inaccuracies in AI-generated content, ethical issues, and limitations in free AI versions. Some students also faced challenges in adapting AI tools to their specific educational needs.

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5. **Overcoming Problems:** Students suggested strategies to overcome AI challenges, such as improving query accuracy and using citations for verification. Paid AI versions and better AI training were also mentioned as potential solutions.
6. **AI in Other Areas:** Outside of education, students use AI for personal projects, creative work, and professional tasks. They also recognized AI's potential in fields like marketing and advertising.
7. **Future of AI in Education:** Students foresaw a transformative impact of AI on education, particularly in terms of personalized learning and adaptive technologies. They stressed the need for regulation to ensure ethical and effective AI integration.

### 4.7 Qualitative Analysis – Professors

The qualitative analysis for professors was conducted using a template created based on the interview scripts. The initial themes were identified by reviewing the interview data and categorizing recurring concepts, which provided a structured framework for further analysis. This template helped us identify the key areas where professors expressed their views on Generative AI (GenAI) in education. The main themes and subtopics derived from the analysis are as follows:

1. AI Adoption
  - a. Willingness to use GenAI
  - b. Education
2. Policies
  - a. Regulation of GenAI use
  - b. Adapting policies to AI progress
3. Challenges
  - a. Academic application challenges
  - b. Addressing challenges
4. AI Use by Students
  - a. Student use of GenAI
  - b. Benefits of GenAI for students
  - c. Drawbacks of GenAI for students
  - d. Student actions to mitigate drawbacks
  - e. Teacher actions to mitigate drawbacks

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5. University Response
  - a. University policies on GenAI
  - b. University leadership response
6. AI Providers
  - a. GenAI provider roles
  - b. Sustainability concerns with GenAI use
7. Recommendations
  - a. Recommendations for stakeholders
  - b. Changes in academic teaching
  - c. Changes in student learning
  - d. Changes in university management

After conducting the qualitative analysis, the following key themes emerged, reflecting various aspects of AI's role in education, its ethical implications, and its future development across different regions:

1. Use of AI in Education
  - a. Impact of AI on the Learning Process
  - b. The Role of Teachers in Educating Students About AI
  - c. Educating Students on Proper Use of AI
  - d. The Role of Students in Using AI
  - e. Student Responsibility for AI Usage
  - f. The Role of AI in Student Assessment
  - g. Risks and Threats of Using AI in Examinations
  - h. Flexibility and Adaptation of Educational Systems to AI
2. Students and AI
  - a. Application of AI by Students
  - b. Student Dependence on AI
3. Ethics and Use of AI
  - a. Ethical Norms and Responsibility
  - b. Scientific and Educational Ethics
  - c. Academic Integrity and AI
    - i. Measures for Ensuring Academic Integrity

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4. Corporate Use of AI
  - a. AI in Business and Startups
  - b. Collaboration Between Companies and Educational Institutions
5. Accessibility of AI for Students
  - a. Programs and Initiatives for Students
  - b. Open AI Models and Accessibility of Technologies
6. The Future of AI in Russia and Abroad
  - a. AI Development in Russia and Europe
  - b. AI Integration in Scientific Research
7. General Perception of AI in the Academic Environment
  - a. Perception Issues of AI by Teachers and Students
8. Problems and Challenges in Using AI
  - a. Problems with Accuracy and Specificity of Content
  - b. Issues with Content Quality and Paraphrasing
9. Support in AI Education
  - a. Lack of Resources and Tools for Working with AI
  - b. Educational Initiatives for Teaching Proper Use of AI
10. University Policies on AI
  - a. Ethical norms and responsibility
  - b. Scientific and educational ethics
  - c. Academic integrity and AI
  - d. Measures for ensuring academic integrity
11. University Responsibility for AI
  - a. The Role of the University in Formulating AI Policies
  - b. The Need to Change the Educational Process
12. Impact of AI on Education
  - a. Issues with the Sustainability of AI Use
  - b. The Role of AI in Teaching
13. Teaching with AI
  - a. Application of AI in Student Education
  - b. AI Assistance to Teachers in Creating Lecture Content
14. The Future of AI in Education



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- a. Predictions for the Future
- b. AI as a Tool for Improving Educational Quality

The analysis of AI use in education reveals key insights into how professors perceive and integrate AI into their teaching practices. In the following section, we will present the results of the qualitative analysis derived from interviews with professors:

1. **Use of AI in Education:** AI is transforming education by personalizing learning and supporting students with tailored content. Teachers play a crucial role in educating students about the benefits and risks of AI, ensuring its ethical and effective use. Students are increasingly using AI for research, writing, and problem-solving, but there are concerns about over-dependence, which could impact critical thinking. AI is also becoming a tool in student assessments, offering personalized evaluations but raising questions about academic integrity. Educational systems must adapt to AI's rapid progress, integrating it into curricula while maintaining high educational standards.
2. **Students and AI:** Students are using AI for various academic tasks, but reliance on these tools is growing, potentially affecting their ability to think critically and independently. While AI can enhance efficiency, it is important that students balance its use with original thought and creativity.
3. **Ethics and Use of AI:** The ethical use of AI is a key concern, with issues like academic integrity, fairness, and privacy at the forefront. Clear guidelines are needed to ensure AI is used responsibly in education, preventing issues like plagiarism and ensuring transparency in academic work.
4. **Corporate Use of AI:** AI is not only transforming education but also business and startups, where it drives innovation. Collaboration between companies and educational institutions can help integrate AI into curricula and research, benefiting both sectors.
5. **Accessibility of AI for Students:** Efforts to improve access to AI tools for students are underway, including initiatives to make AI resources more inclusive. Open-source models are playing a significant role in democratizing access to AI technologies.
6. **The Future of AI in Russia and Abroad:** In Russia, the adoption of AI in education and business is progressing but faces challenges due to limited resources and international collaborations. In universities, the focus is on research and developing AI-driven educational

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programs, but full integration requires improvements in access to technology and stronger partnerships with companies.

7. **General Perception of AI:** Perceptions of AI in education are mixed, with both teachers and students viewing it as a tool for progress but also expressing concerns about its potential misuse and the risks it presents.
8. **Problems and Challenges in Using AI:** Key challenges in AI use include issues with accuracy, content quality, and over-reliance on AI-generated material, which can compromise originality and critical thinking. Universities need to address these concerns through policies and educational initiatives.
9. **University Policies on AI:** Universities must create clear policies on the ethical use of AI, ensuring it aligns with academic integrity standards. This includes developing guidelines to prevent misuse and promoting responsible AI use within academic contexts.
10. **University Responsibility for AI:** Universities are responsible for formulating AI policies and ensuring that their teaching processes adapt to AI's growing role in education. This includes updating curricula and offering professional development for faculty.
11. **Impact of AI on Education:** AI's impact on education extends beyond teaching, influencing sustainability and efficiency. Its role in teaching is growing, as AI supports personalized learning and assists teachers in creating content.
12. **Teaching with AI:** AI is helping teachers create customized learning paths and generate lecture content, streamlining administrative tasks and making teaching more efficient.
13. **The Future of AI in Education:** The future of AI in education looks promising, with expectations that AI will continue to enhance learning experiences, improve educational quality, and support personalized teaching methods.

### 4.8 Qualitative Analysis – University management

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**Table 2.** presents a qualitative analysis of the application and implications of Generative AI in university management and education. It covers key aspects such as the adoption of AI technologies, their impact on teaching and learning, university administration, and the challenges and opportunities AI presents for academic institutions.

## 5. Discussion

### 5.1 Diverse Perceptions of Generative AI Across Stakeholder

The perception and implementation of generative AI (GenAI) in higher education vary significantly among students, professors, and university policymakers. These differences as identified in our study are shaped not only by their unique roles, priorities, and challenges but also by the cultural contexts in which they operate. Students primarily viewed GenAI as a tool for enhancing efficiency and simplifying academic tasks. Tools like ChatGPT and Perplexity have been invaluable for tasks such as structuring essays, analyzing data, and brainstorming ideas. For the students, these tools provide much-needed support in overcoming challenges like writer's block or even initiating tasks that might otherwise seem daunting. However, concerns about over-reliance on AI tools are evident. Students acknowledge that dependency on AI could hinder the development of critical thinking and problem-solving skills, as well as lead to academic integrity concerns when AI-generated outputs are used without verification or refinement. The professors on the other hand, approach GenAI with a mixture of optimism and caution. They recognize the potential of AI tools to streamline tasks like grading and lecture preparation, as well as its ability to foster personalized learning experiences. However, ethical concerns dominate their perceptions, particularly around plagiarism and diminishing originality in student work. STEM professors emphasize the limitations of current AI tools, which often produce inaccurate results in technical fields. This highlights the need for further refinement of AI systems to meet the specific needs of academic disciplines. Additionally, the lack of clear institutional policies on GenAI use creates uncertainty among educators, leaving them to navigate these tools without adequate guidance.

The focus of University policymakers was on balancing the opportunities and challenges of GenAI at an institutional level. In regions like Mexico, policymakers have proactively implemented measures such as ethics committees and faculty training to integrate AI responsibly. However, this proactive

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approach is not mirrored globally. Resource constraints, resistance to change, and cultural skepticism about AI hinder progress in many regions. Policymakers also emphasize concerns about the cultural relevance of GenAI tools, which are often designed for Western-centric contexts, limiting their applicability in diverse educational settings.

### 5.2 Global and Cultural Variations in AI Adoption

As mentioned earlier in Mexico, proactive approaches by implementing structured policies and training programs to integrate AI into curricula. These efforts reflect an understanding of GenAI's potential. However, institutions in regions like Ghana and Russia face barriers such as limited resources, cultural resistance, and the absence of clear policies. Stakeholders in these regions acknowledge the benefits of AI but often lack the infrastructure or institutional support necessary for widespread adoption. Cultural attitudes that emphasize traditional academic values and hard work further complicate integration, with some perceiving AI as a shortcut that undermines genuine effort.

The cultural relevance of AI tools is another critical factor. Many GenAI systems are designed with Western-centric frameworks which is understandable because they are created by Western companies, making them less effective in non-Western contexts. This bias impacts the accessibility and applicability of AI in diverse settings, also in disciplines like STEM, where precision and contextual understanding are essential.

## 6. Conclusion and Recommendations

This research highlights how Generative AI (GenAI) is transforming higher education by supporting students in simplifying complex academic tasks and enhancing professors' productivity through streamlined workflows. Students use GenAI to manage assignments more efficiently, professors value its potential for saving time and offering foundational ideas. However, concerns about dependency, academic integrity, and inaccuracies in AI outputs persist. Both groups emphasized the need for balanced usage, advocating for GenAI as a supplement to, rather than a replacement for, critical thinking and creativity. The absence of institutional guidelines emerged as a critical gap, underscoring the need for policies that foster responsible AI adoption in academia.

This study contributes to the understanding of GenAI's integration into academia by juxtaposing the perspectives of professors and students, highlighting both opportunities and limitations. It advances theoretical discourse by emphasizing the importance of a multi-stakeholder approach that includes not just educators and learners but also university leaders and AI developers. Methodologically, it identifies a gap in evaluating how AI tools are adopted across diverse cultural and academic environments, offering a foundation for future studies in global higher education.

As opportunities, we would like to highlight that GenAI tools offer tailored feedback, improving learning experiences, particularly in under-resources settings. Doing more, with less, since professors can be supported by GenAI in administrative tasks, dedicating more time to research and mentorship. AI tools can democratize education since it provides broader access to quality resources, especially in emerging regions such as Latin America, Asia-Pacific, and BRICS countries. The results showed creative potential, since GenAI opens new roads for innovative teaching and research practices, closing the gaps in knowledge and encouraging exploration.

As challenges, we would like to mention the dependency risks, since over-reliance was one of the repeated concerns from all stakeholders on AI tools and that this could hinder critical thinking and creativity among students. Additionally, maintaining academic integrity and originality remains a pressing concern for all stakeholders, most for professors that have more contact with students and at the end of the day need to grade the assessments. Awareness of use resulted in repeated analysis as key finding and the reason being is due to the lack of contextual understanding in AI-generated output, which generate challenges for high-precision tasks, for example in higher education, where

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the output and the credibility of the results and degree are at stake. The cultural relevance in the sense that current AI tools are predominantly Western-focused, limiting their applicability in diverse educational contexts and languages pose a challenge in their proper adoption across the globe with a better impact and common understanding.

As future directions we would like to encourage the following research questions as next steps of this research, how can universities develop policies that encourage ethical AI usage without limiting critical thinking and damaging the educational credibility of output?, how can partnerships between universities and GENAI providers address challenges like bias, explainability, and accuracy?, what are the long-term impacts of AI on learning outcomes, faculty roles, and the broader educational landscape?, what frameworks can ensure the cultural and contextual relevance of AI tools in global academic settings?, what is the systemic approach from students, professors and university management need to take in order to tackle this huge opportunity and challenge in adopting GENAI in academic setting?.

Universities must lead the way by adopting clear policies that balance innovation with ethical considerations. Training programs for faculty and students, coupled with curriculum integration of AI ethics, will foster responsible use and critical engagement with GenAI. Collaborative innovation between academic institutions and AI developers can further ensure the cultural and contextual relevance of these tools. By broadening the scope of research and stakeholder inclusion, we can unlock GenAI's full potential, equipping higher education for a future that respects creativity, integrity, and global equity.

The integration of Generative AI in academia offers significant opportunities but requires careful navigation of its challenges. Future research should focus on engaging AI developers, university leaders, and institutions in diverse cultural contexts to refine AI tools and policies. In doing so, higher education can prepare for a future shaped by AI while respecting creativity, equity, and global academic excellence.

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## 8. Appendices

The appendix section contains all relevant materials and documents used throughout the research process. It includes the **interview guides** tailored to each stakeholder group (professors, students, and university leaders), outlining the questions posed to participants and the rationale behind them. Additionally, **informed consent** forms and **interview letters** are provided, detailing the ethical considerations and permissions obtained from participants. The appendix also includes the **code for cleaning the scripts**, which was used to preprocess the interview data, as well as the **code for performing the quantitative and qualitative analysis**, including keyword frequency and theme distribution. For transparency, **documents with key summaries** are provided, which are manually compiled to offer an overview of the most significant insights from each interview, organized by a stakeholder group. These materials ensure that the research process is reproducible and well-documented, allowing readers to fully understand the methodology and analysis performed in this study.

[Research Design and Interview Materials - Report](#)

[Task 5 - Summary of Interviews \(1 per each interview\)](#)

[Task 6 - Quantitative Analysis](#)

**Table 0: Lists of Universities by Countries:**

<b>Lists of Universities</b>	<b>Country of Origin</b>
Monterrey Institute of Technology and Higher Education (ITESM)	Mexico
University of Ghana, Legon	Ghana
French Azerbaijani University	Azerbaijan
University of Strasbourg	Azerbaijan
University of Cape Coast	Ghana
ITMO University, ITMO	Russia
National Research University Higher School of Economics	Russia
	Philippines

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**Table 1: Qualitative Analysis**

Main Topic	Subtopic/Details	Number of Mentions (out of 6 interviews)
<b>1. AI Usage Policy in Education</b>	Influence of Policy on AI Usage	4
	Need for Policy/Guidelines	5
	Importance of Awareness in Policy Creation	4
	Ethics of AI Usage in Education	3
	Adapting Educational Policy to Rapid AI Progress	2
<b>2. AI Tools Used</b>	Frequency of AI Tool Usage	6
	Impact of AI on Academic Work	5
	Pros and Cons of Specific AI Tools	4
	Satisfaction with AI Tools	4
<b>3. AI Usage Before the Emergence of Generative Models</b>	How Assignments Were Done Before AI	3
	Changes in Approaches to Learning with AI	5
	Advantages of Generative AI Models Compared to Earlier Approaches	4
<b>4. Problems and Challenges with AI Usage</b>	Issues with Information Accuracy	5
	Issues with Image Generation	3
	Problems with Information Fragmentation (e.g., Gemini)	2
	Limitations of Free AI Versions	3
	Ethical Issues with AI Usage	3
	Challenges in Adapting AI to Educational Program Needs	2
	How to Improve Query Accuracy	4
<b>5. Overcoming Problems with AI Usage</b>	Using Citations and Links for Information Verification	3
	Advantages of Paid AI Versions	2
	Working with Images via AI	3
	Training AI for Better Results	3
	Overcoming AI Tool Limitations with Additional Adjustments	2
	Using AI for Creating Texts Outside of Education Areas	4
<b>6. AI Benefits in Other Areas</b>	Using AI for Personal Projects	3
	Using AI in the Professional Field	4
	AI as a Tool for Creative Projects	3
	AI in Marketing and Advertising	3

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<b>7. Future of AI in Education</b>	AI Regulation in Education	4
	Development of Adaptive Technologies in Education	3
	AI's Impact on Teachers and Students	4
	AI's Impact on the Education System as a Whole	5

**Table 2- Qualitative Analysis**

Main Topic	Subtopic	Comment
<b>1. Generative AI in Education</b>	First Associations	AI seen as a tool for innovation in research and teaching, enhancing academic workflows.
	Opinion on Generative AI	AI can improve academic efficiency, reduce plagiarism, and ensure content authenticity.
<b>2. University's Role in AI Integration</b>	Administration's Actions	No formal AI policy yet, but university is working on guidelines and raising awareness about AI.
	Faculty and Student Engagement	Informal use of AI tools by students, faculty not fully prepared to handle this shift.
	Challenges in AI Policy Implementation	Key concerns include maintaining academic integrity and creating clear guidelines for students and faculty.
<b>3. AI in Teaching and Learning</b>	Responsibility of Educators and Students	Educators need to foster critical thinking and ensure responsible AI usage while maintaining originality in academic work.
	Changes in Teaching	AI can automate administrative tasks, support students and faculty, and improve data-driven decisions in teaching.
	Personalized Learning with AI	Adaptive learning tools powered by AI can offer tailored educational experiences and improve outcomes.
<b>4. AI Policy and Governance</b>	Existence of Policy	University has issued basic guidelines on AI use in teaching, but the policy is still evolving.
	Policy Application	Faculty allowed to create course-specific AI usage rules, but the university is considering more structured control over AI tools.
<b>5. Ethics of AI Use</b>	Ethical Committee's Role	University is forming an ethics committee to address AI's implications for privacy, transparency, and academic fairness.
	Sustainability and Long-Term Considerations	Ethical discussions are ongoing but not yet a central focus; AI's long-term sustainability remains a topic for future debate.

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<b>6. Faculty and Student Reactions to AI</b>	Faculty Reactions	Faculty members who clearly outline AI usage guidelines find students adapting easily; others need more support.
	Student Reactions	Students were surprised by the formal AI policies, initially thinking AI use could be anonymous or unrestricted.
<b>7. Benefits and Challenges of AI Policy</b>	Benefits	AI policy helps create a safe environment for academic experimentation and innovation while ensuring adherence to university standards.
	Challenges	Resistance from IT departments due to costs, risks, and complexity of external vs. in-house AI tools.
<b>8. AI Tools and Solutions</b>	Use of Various AI Tools	Access to multiple AI tools within the university's internal infrastructure supports diverse academic needs.
	Resources for AI Use	AI department and participation in conferences provide ongoing learning opportunities for faculty and students.
<b>9. AI in Administration</b>	AI in University Management	AI is used for crafting clearer communications, automating administrative tasks, and analyzing institutional data.
	Use in Course Design	AI tools assist faculty in designing and generating assignments, exams, and course materials, ensuring they align with institutional standards.
<b>10. Data and AI Challenges</b>	Data Usage and Information Preservation	Universities face challenges around the storage and management of AI-generated data, with concerns over data privacy and ownership.
<b>11. AI Sustainability and Change</b>	Constant AI Changes	Rapid advancements in AI technologies present challenges for consistent adoption and integration, leading to adaptation fatigue.
	Challenges with Technology Integration	Switching between educational tools like Blackboard and Canvas requires significant training and adjustment, adding to the burden on faculty.
<b>12. Recommendations for Future Actions</b>	Strategic Focus	Universities need to develop a long-term strategy for AI integration, focusing on solving practical problems, not just using new technologies for their own sake.
<b>13. Post-Pandemic Innovations</b>	Consolidation of Innovations	After the pandemic, universities need to finish integrating existing innovations before adopting new technologies like AI.
	Stress on Faculty	Faculty stress levels have increased, partly due to additional workload from new technologies, including AI.
<b>14. AI's Role in Improving Education</b>	AI as a Tool, Not a Replacement	AI should complement, not replace, traditional teaching methods, helping with routine tasks but leaving the critical educational

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		relationship between student and teacher intact.
	Delegating Tasks with AI	Students should use AI for basic tasks, such as information search or concept clarification, but should develop critical skills to avoid overreliance.
<b>15. AI and University Management</b>	Professionalizing University Management	AI has the potential to improve administrative decision-making, leading to more efficient and data-driven management practices.
	Need for Specialized Managers	AI can assist non-business administrators in improving their decision-making skills and managing university operations more effectively.