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# The Future of AI in Academic Writing: A Case Study of Undergraduate and Postgraduate Assessments

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**Abstract**
The integration of artificial intelligence (AI) tools in academic writing has gained significant attention globally, yet its implications remain underexplored in developing countries like Pakistan. This qualitative study investigates the role of AI tools in undergraduate and postgraduate assessments within the Pakistani academic context, focusing on their perceived benefits, challenges, and implications. Using thematic analysis, the study draws insights from semi-structured interviews with students and educators from various universities in Pakistan. The findings reveal that AI tools enhance efficiency and writing quality while addressing language-related challenges, particularly for students with limited English proficiency. However, ethical concerns, including plagiarism and over-reliance on AI, alongside socio-economic barriers such as unequal access to digital tools, hinder their effective utilization. Additionally, the absence of institutional policies and training programs exacerbates these challenges, creating uncertainty regarding AI integration in academic settings. This research highlights the need for comprehensive frameworks, equitable access to resources, and ethical guidelines to ensure the responsible use of AI tools in education. By contextualizing global trends within Pakistan's socio-economic and educational landscape, this study provides valuable recommendations for policymakers and educators to navigate the evolving role of AI in academic writing.

Keywords: Artificial intelligence, academic writing, higher education, qualitative research, thematic analysis, Pakistan

## Introduction

Artificial intelligence (AI) has emerged as a transformative force in education, fundamentally altering how students and educators approach academic writing and assessments. AI-powered tools such as ChatGPT, Grammarly, and Turnitin have gained prominence for their ability to assist students in generating, refining,

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and evaluating written content. These technologies promise to enhance academic writing skills, promote efficiency, and reduce the cognitive load of drafting and editing. However, their implications vary significantly across contexts, particularly in developing countries like Pakistan, where disparities in digital literacy, access to technology, and institutional policies shape the adoption and effectiveness of such tools. In the global context, AI's application in academic writing has been studied extensively for its ability to improve coherence, grammar, and argumentation structure (Kumar et al., 2023). Studies have highlighted its potential to bridge linguistic gaps for non-native English speakers, allowing students to meet academic standards more effectively (Zhao et al., 2023). However, these advantages come with challenges, including ethical concerns over originality, the misuse of AI for academic dishonesty, and the risk of over-reliance on machine-generated content (Stein et al., 2024).

In Pakistan, where educational institutions are increasingly adopting digital learning practices post-COVID-19, the integration of AI in academic writing remains a relatively underexplored area. Pakistani students, particularly at the undergraduate and postgraduate levels, face unique barriers, such as limited access to high-speed internet, high subscription costs for advanced AI tools, and a lack of institutional support or training in effectively utilizing these technologies (Ahmed & Rashid, 2024). Additionally, cultural factors and traditional teaching practices often hinder the seamless adoption of AI, as educators may view these tools as a threat to originality and critical thinking (Khan et al., 2023). Given the increasing relevance of AI in academic contexts, it is vital to explore how these tools are being utilized by undergraduate and postgraduate students in Pakistan. This study aims to examine the perceptions, experiences, and challenges faced by students and educators in integrating AI into academic writing. A qualitative approach using thematic analysis allows for an in-depth understanding of these dynamics, shedding light on the broader implications of AI in Pakistan's educational landscape.

By focusing on Pakistan, this research contributes to the growing discourse on AI in education while addressing the localized needs and challenges of a developing country. The findings provide valuable insights for policymakers, educators, and students to harness the potential of AI in academic writing, ensuring its responsible and effective integration into higher education.

## Background

The integration of Artificial Intelligence (AI) in education has been accelerating globally, driven by rapid advancements in machine learning, natural language processing, and data analytics. AI tools such as generative language models (e.g., ChatGPT) and grammar checkers (e.g., Grammarly) are increasingly being used to assist students in various aspects of academic writing, including content generation, grammar correction, and the improvement of writing fluency. AI's promise to streamline academic writing processes, provide immediate feedback, and facilitate personalized learning has led to growing interest in its application in higher education (Kumar et al., 2023). However, despite its potential, there remain

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concerns regarding its ethical implications, academic integrity, and its effectiveness in different educational contexts. Globally, research has underscored AI's potential to enhance students' academic writing capabilities, especially in terms of structure, clarity, and coherence. For instance, AI tools have been shown to significantly reduce the time required for writing and editing while improving the overall quality of written assignments (Stein et al., 2024). In some educational systems, AI-based writing assistants are integrated into curriculums to help students develop strong writing skills, especially for those who struggle with language barriers (Zhao et al., 2023). Despite these successes, studies have also raised concerns about the potential over-reliance on AI tools, which could inhibit critical thinking, creativity, and the development of essential writing skills (Stein et al., 2024).

In Pakistan, however, the widespread adoption of AI tools in academic writing has been slower, particularly in the context of undergraduate and postgraduate education. Pakistan's educational system faces a number of challenges, including limited access to advanced technological tools, disparities in digital literacy, and a general reluctance to adopt new technologies due to cultural and pedagogical concerns (Ahmed & Rashid, 2024). Furthermore, many educational institutions, particularly at the undergraduate level, continue to rely heavily on traditional teaching methods that prioritize rote memorization and exam-based assessments, often at the expense of critical writing and analytical skills (Khan et al., 2023). The COVID-19 pandemic accelerated the digital transformation of education, pushing institutions to adopt online learning platforms and digital tools more quickly than before. This shift has sparked interest in AI applications for academic purposes, particularly as institutions strive to enhance the quality of education amid growing student numbers and limited resources. However, in Pakistan, the adoption of AI tools remains inconsistent across institutions, with many students and educators unfamiliar with how to best utilize these tools in academic contexts (Ahmed & Rashid, 2024). The digital divide in Pakistan manifested in disparities in internet access, technological infrastructure, and technical skills poses additional barriers to the integration of AI in education (Khan et al., 2023).

Moreover, the perceptions of AI in the Pakistani educational context remain largely unexplored. While AI tools may offer significant benefits, there are concerns about their impact on academic integrity and whether students and educators are ready to embrace such technology in a meaningful way. The role of AI in academic assessments especially in writing assignments raises critical questions regarding originality, fairness, and the evolving nature of academic skills. For example, there is the question of whether AI-generated content aligns with the expectations of academic rigor in Pakistan's higher education system, which often emphasizes traditional, instructor-guided methods of learning and assessment. This research aims to fill the gap in existing literature by exploring the perceptions, experiences, and challenges faced by undergraduate and postgraduate students in Pakistan when using AI tools for academic writing. It seeks to understand how these technologies are perceived, their utility in improving academic writing skills, and the barriers that exist in effectively utilizing AI in the academic context. The study

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also investigates the potential implications of AI for educational practices in Pakistan, offering insights into how institutions can better integrate AI technologies to support learning outcomes.

**Research Objectives**

1. To explore the perceptions of undergraduate and postgraduate students in Pakistan regarding the use of AI tools for academic writing in assessments.
2. To examine the impact of AI tools on students' academic writing skills, including critical thinking, creativity, and originality, in the context of undergraduate and postgraduate assessments in Pakistan.

**Research Questions**

1. How do undergraduate and postgraduate students in Pakistan perceive the usefulness and ease of use of AI tools in academic writing?
2. In what ways do AI tools influence students' academic writing practices, particularly regarding critical thinking, creativity, and originality, in the context of assessments?

**Significance of the Research**

This research was significant in several ways, particularly in its contribution to the understanding of how Artificial Intelligence (AI) tools influenced academic writing practices in Pakistani higher education. By focusing on the perceptions and experiences of undergraduate and postgraduate students, the study addressed a gap in the literature regarding the use of AI in educational contexts, specifically within Pakistan.

First, the research provided valuable insights into the acceptance and use of AI tools in academic writing. As Pakistan's education system continued to transition toward digital platforms, understanding how students perceived and interacted with AI tools became vital. This study revealed how AI tools were viewed in terms of usefulness and ease of use, which informed the broader discussion on technology adoption in developing countries, particularly in a post-pandemic educational landscape.

Second, the research explored the potential impact of AI tools on students' writing skills, including critical thinking, creativity, and originality. By examining the balance between AI assistance and independent thought, the study contributed to the ongoing debate about whether AI enhances or undermines the development of essential academic skills. The findings offered a nuanced understanding of AI's role, particularly in a context where traditional educational methods and technology adoption are still evolving.

This research had practical implications for educators, policymakers, and institutions in Pakistan. It provided evidence on the effectiveness and challenges of integrating AI into academic writing assessments, helping educators identify areas where AI could support or hinder student learning. The findings also highlighted the need for targeted training and digital literacy initiatives to ensure that students were equipped to use AI tools effectively without compromising the quality of their

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academic work.

## Literature Review

The integration of Artificial Intelligence (AI) in higher education, particularly in academic writing, has gained significant attention in recent years. AI-powered tools such as grammar checkers, text generators, and citation assistants have revolutionized how students approach writing tasks. This literature review explores recent studies that address the application of AI in academic writing, focusing on its use in undergraduate and postgraduate assessments, with a particular emphasis on the Pakistani context. AI's role in enhancing academic writing has been explored in numerous studies. Recent research suggests that AI tools can significantly improve the quality of academic writing by providing instant feedback on grammar, syntax, and structure (Kumar et al., 2023). These tools help students develop more coherent and polished writing, particularly for those who struggle with language proficiency or are non-native English speakers (Zhao et al., 2023). AI's potential to assist in these areas is particularly valuable in contexts where English is not the first language, as it allows students to meet academic standards more efficiently and effectively (Zhao et al., 2023).

However, AI's impact on critical thinking and creativity in academic writing has been debated. While AI can aid in technical aspects of writing, concerns have been raised about its potential to undermine students' ability to engage deeply with content and develop original ideas (Stein et al., 2024). Studies have shown that while AI tools can assist in content creation and refinement, they may also discourage students from thinking critically and formulating their arguments independently (Stein et al., 2024). This raises the question of whether AI is enhancing or diminishing students' academic writing skills in the long term.

## AI Adoption in Higher Education in Developing Countries

In developing countries like Pakistan, the adoption of AI in education is less widespread and faces several unique challenges. The digital divide, characterized by disparities in internet access, technological infrastructure, and digital literacy, poses significant barriers to the integration of AI tools (Ahmed & Rashid, 2024). In Pakistan, the reliance on traditional educational practices focused heavily on rote memorization and examination-based assessments also hinders the incorporation of modern technologies such as AI (Khan et al., 2023). As a result, students in Pakistan may not be fully aware of AI's potential benefits, and educators may be hesitant to integrate such tools into their teaching practices (Khan et al., 2023). Despite these challenges, the COVID-19 pandemic has accelerated the adoption of digital tools in Pakistani education. This shift has prompted interest in AI as a means to support learning, especially for students in online and hybrid learning environments (Ahmed & Rashid, 2024). Research indicates that AI tools have been used to enhance online learning experiences by offering personalized feedback and improving the quality of academic writing (Jabeen & Khan, 2023). However, the usage of AI in academic writing remains limited, with a gap in understanding how students and educators in Pakistan perceive and use these technologies.

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**AI and Perceptions in the Pakistani Context**

Few studies have explored the perceptions of AI in Pakistan's educational landscape. The available literature suggests a mixed reception among both students and educators. On one hand, students view AI tools as helpful for improving their writing quality and efficiency, especially in the context of large class sizes and limited faculty support (Khan et al., 2023). On the other hand, educators express concerns about academic integrity, fearing that students may misuse AI for plagiarism or over-reliance on machine-generated content (Jabeen & Khan, 2023). This tension between the benefits and potential risks of AI in academic writing underscores the need for further research into how these tools are used and understood in Pakistan. Studies also highlight the importance of digital literacy in effectively using AI tools. While some students in urban centers may have access to AI-powered tools, many students in rural areas struggle with both access to technology and the necessary skills to use AI effectively (Ahmed & Rashid, 2024). This disparity exacerbates existing inequalities in education and limits the widespread adoption of AI in academic writing across the country.

**AI's Role in Shaping Future Education**

The future of AI in academic writing, particularly in Pakistan, depends on various factors, including technological infrastructure, faculty training, and student preparedness. Recent literature suggests that AI can play a transformative role in education by providing personalized learning experiences, enhancing writing skills, and supporting students with diverse needs (Zhao et al., 2023). However, the successful integration of AI requires a shift in pedagogical approaches, with educators embracing the potential of these tools while addressing concerns related to academic integrity and skill development (Stein et al., 2024). Some researchers propose that AI could serve as a supplement to traditional educational practices, offering additional support rather than replacing the role of the educator (Kumar et al., 2023). This approach encourages students to use AI for writing assistance while maintaining a focus on critical thinking, creativity, and independent learning. By balancing the benefits of AI with the importance of academic rigor, Pakistani higher education institutions could better prepare students for the demands of the future workforce.

The literature on AI in academic writing reveals both opportunities and challenges in its application across different educational contexts. While AI has the potential to improve writing quality, especially for non-native English speakers (Hao, 2022), its impact on critical thinking and creativity remains a topic of concern (Anderson & Rainie, 2023). In Pakistan, the adoption of AI in higher education is still in its early stages, and the digital divide poses significant barriers to its widespread use (Sadaf et al., 2021). However, as digital tools become more integrated into Pakistani educational practices, it is essential to understand how AI is perceived and utilized by students and educators. This study aims to fill this gap by exploring the experiences and challenges of undergraduate and postgraduate students in Pakistan, providing valuable insights into the future of AI in academic writing.

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**Theoretical Framework**

The research is guided by a theoretical framework that integrates key concepts from technology adoption, constructivist learning, and social cognitive processes. The Technology Acceptance Model (TAM) (Davis, 1989) provides a foundational perspective on how users perceive and adopt new technologies. According to TAM, perceived usefulness (PU) and perceived ease of use (PEOU) are the primary factors influencing technology adoption. In the context of AI in academic writing, PU examines whether students and educators believe that AI tools enhance writing quality, save time, and improve learning outcomes, while PEOU assesses whether AI tools are accessible and user-friendly without requiring extensive technical expertise.

In addition to TAM, Constructivism (Piaget, 1970; Vygotsky, 1978) highlights the significance of active engagement in learning. Constructivist theory suggests that while AI can provide technical assistance, students should remain active knowledge creators rather than passive consumers of AI-generated content. This perspective frames AI as a supportive tool that helps students refine their writing, rather than replacing critical thinking, creativity, and independent content creation. This study explores whether AI facilitates or hinders students' ability to engage with writing tasks and encourages original thinking.

Furthermore, Social Cognitive Theory (SCT) (Bandura, 1986) provides insight into how students and educators develop perceptions of AI tools through social interactions and observational learning. SCT posits that individuals learn not only through direct experience but also by observing others in their social environments. In this context, self-efficacy plays a crucial role, as students' belief in their ability to effectively use AI tools for writing improvement is shaped by their prior experiences and the support they receive. Additionally, observational learning suggests that students may be influenced by how peers and faculty use AI, which in turn shapes their attitudes and behavior toward AI adoption. By integrating these three theoretical perspectives, this research aims to examine the complex dynamics of AI adoption in academic writing and its impact on assessment practices in Pakistan.

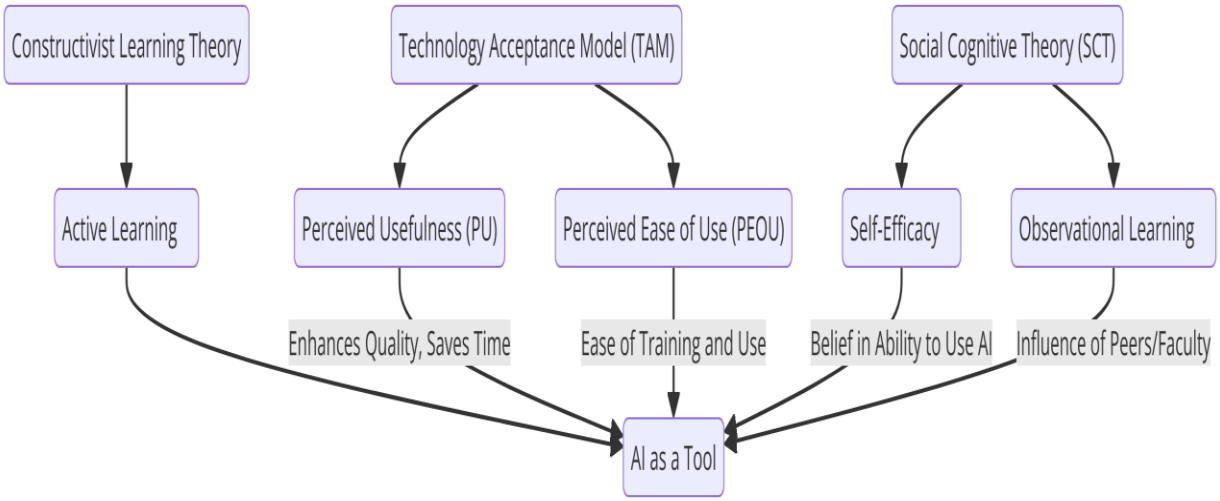

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Figure 1: Theoretical Framework

The integration of TAM, Constructivist Learning Theory, and SCT in this study allows for a comprehensive understanding of how students and educators in Pakistan perceive and use AI in academic writing. TAM provides insights into the adoption factors, Constructivism highlights the role of active engagement in learning, and SCT focuses on the social influences and self-efficacy involved in using AI tools for writing tasks. This theoretical framework enables a multifaceted exploration of AI's role in academic writing, with an emphasis on perceptions, adoption, and the potential for enhancing or hindering critical writing and thinking skills in Pakistani higher education.

## Methodology

The research employed a qualitative research design to explore the perceptions and experiences of undergraduate and postgraduate students in Pakistan regarding the use of Artificial Intelligence (AI) tools for academic writing. The study was guided by a thematic analysis approach, which was suitable for analyzing patterns and themes related to the influence of AI on academic writing skills, such as critical thinking, creativity, and originality. The methodology consisted of several stages, including the selection of participants, data collection, and data analysis.

### Research Design

The study utilized a case study approach, focusing on undergraduate and postgraduate students in various universities across Pakistan. The research aimed to provide an in-depth understanding of the use of AI tools in academic writing assessments within the Pakistani context. Given the qualitative nature of the study, the research focused on exploring students' perceptions and experiences, rather than quantifying results. The research sought to answer how AI tools were perceived and how they influenced academic writing skills.

### Participants

The participants for this research were selected using purposive sampling. The sample consisted of 30 undergraduate students and 30 postgraduate students from a range of public and private universities in Pakistan. These participants were chosen to provide insights from different academic levels, ensuring that the study captured a diverse range of experiences and perspectives. The selection criteria for participants were as follows:

- Participants must have had prior experience using AI tools for academic writing purposes.
- Participants must be enrolled in undergraduate or postgraduate programs in the fields of humanities, social sciences, or natural sciences.

The sample size was deemed sufficient for qualitative research, allowing for a rich exploration of the research questions through detailed interviews and thematic analysis.

Table 1: Population of the Study

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| Category | Sample Size (n) | Description |
|---|---|---|
| Undergraduate Students | 30 | Students enrolled in undergraduate programs across various disciplines in public and private universities in Pakistan. |
| Postgraduate Students | 30 | Students enrolled in postgraduate (Master's or MPhil) programs in public and private universities in Pakistan. |
| Total Participants | 60 | The combined total number of participants from both undergraduate and postgraduate categories. |

**Data Collection**

Data was collected using semi-structured interviews, which provided flexibility in exploring participants' perspectives while maintaining alignment with the research objectives. The interviews were conducted both face-to-face and online, depending on participants' availability and preferences. To guide the discussions, an interview guide was developed, focusing on three key areas: participants' perceptions of the usefulness and ease of use of AI tools in academic writing, the impact of AI tools on writing practices including critical thinking, creativity, and originality—and the challenges and benefits of using AI tools in academic assessments. Each interview lasted approximately 30 to 45 minutes and was audio-recorded with participants' consent to ensure accuracy in capturing responses. Additionally, field notes were taken during the data collection process to document relevant observations, such as participants' body language or hesitation in responding to specific questions, providing further contextual insights into the data.

**Data Analysis**

The collected data was analyzed using thematic analysis, a qualitative method suited for identifying key themes, patterns, and categories. The analysis followed the six-step framework outlined by Braun and Clarke (2006). First, the researchers familiarized themselves with the data by transcribing interviews verbatim and repeatedly reading the transcripts to immerse in the content. Next, initial coding was conducted by identifying key phrases, concepts, and ideas related to the research questions. These preliminary codes were then grouped into broader themes and subthemes, developed inductively from the data without a predefined framework, though some themes aligned with existing literature. The identified themes were then reviewed and refined to ensure they accurately captured the underlying patterns in participants' experiences and perspectives. Once finalized, each theme was defined and given a clear name that reflected its core meaning. The findings were then reported in a narrative format, with key themes supported by direct quotes from participants, providing a rich and detailed account of experiences and perceptions regarding AI use in academic writing.

**Ethical Considerations**

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Ethical considerations were a priority throughout the research process, ensuring compliance with institutional ethical guidelines. Participants provided informed consent after receiving a detailed explanation of the study's purpose, their involvement, and their right to withdraw at any time without penalty. Confidentiality was strictly maintained, with all collected data including interview transcripts securely stored and participant identities anonymized through the use of pseudonyms in reporting findings. Participation in the study was entirely voluntary, and participants were explicitly informed that they could withdraw from the study at any stage without facing any consequences. These ethical measures ensured that the study was conducted with integrity, protecting the rights and privacy of all participants.

**Limitations**

Although the study provided rich insights into students' perceptions of AI in academic writing, there were several limitations. First, the purposive sampling technique meant that the findings may not be generalizable to all students in Pakistan. Additionally, the study focused only on students' perceptions and did not examine the perspectives of faculty or administrators, which could provide a broader view of AI's role in academic writing.

Table 2: Thematic Analysis

| Codes | Sub-themes | Themes |
|---|---|---|
| Grammar corrections<br>Idea generation<br>Time-saving | Efficiency in academic writing | **Perceived Benefits of AI Tools** |
| Clarity improvement<br>Generating outlines<br>Enhancing structure<br>Language proficiency support | Improvement in academic work quality | |
| Plagiarism concerns<br>Over-reliance<br>Lack of originality | Ethical concerns | **Challenges of Using AI Tools** |
| Ethical misuse<br>Decrease in critical thinking<br>Limited creativity<br>Dependency on AI | Hindrance to skill development | |
| Limited access to tools<br>Digital divide<br>Knowledge gap | Accessibility issues | **Barriers to AI Adoption** |

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| Codes | Sub-themes | Themes |
|---|---|---|
| Lack of resources<br>Rural-urban disparity<br>Inconsistent internet | Equity challenges | |
| Cost of AI tools<br>Reduced critical thinking<br>Limited problem-solving | Impact on academic and cognitive skills | |
| Dependency issues<br>Enhanced creativity through AI<br>AI as a learning facilitator | Cognitive benefits | **Educational Implications** |
| Faculty guidance<br>Training sessions<br>Clear usage policies | Need for institutional support | |
| Ethical use guidelines<br>Lack of AI tool integration in curriculum<br>Inconsistent faculty practices | Institutional readiness for AI adoption | **Role of Institutions in AI Integration** |

The table 2 of thematic analysis highlights both benefits and challenges of AI tools in academic writing. Benefits include improved efficiency, such as grammar corrections, time-saving, and enhanced work quality. However, challenges involve ethical concerns (e.g., plagiarism), over-reliance on AI, and potential hindrance to critical thinking and creativity. Accessibility issues like the digital divide and knowledge gaps are also barriers to AI adoption. Educational implications suggest that AI can enhance creativity but may reduce problem-solving abilities. Lastly, the need for institutional support through faculty training and clear policies is crucial for effective AI integration in education, as shown in the figure 2 below.

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Figure 2: Thematic Analysis

**Perceived Benefits of AI Tools**

AI tools were largely perceived as transformative in improving academic writing. Participants emphasized how these tools enhanced their productivity and writing quality, particularly in correcting grammar, generating ideas, and improving clarity. AI tools were also seen as an effective means of overcoming writer's block and providing structure to assignments.

Efficiency in academic writing:

Many participants appreciated the time-saving aspect of AI tools. Grammar corrections, quick idea generation, and clarity improvements were frequently cited as major benefits. Students reported that AI tools allowed them to focus more on the content rather than struggling with language barriers.

> *"I could complete my assignments much faster because the AI tool helped me fix errors and provided suggestions for improvement." (Participant 9, Undergraduate)*

Improvement in academic work quality:

The ability of AI tools to enhance the structure and language of written work was another key benefit. Participants noted that these tools acted like virtual tutors, guiding them in organizing their thoughts and improving the overall presentation of their assignments.

> *"The tool helped me improve the language and structure of my paper, making it look more professional." (Participant 15, Postgraduate)*

**Challenges of Using AI Tools**

Despite the advantages, participants identified significant challenges associated with AI tools, particularly regarding ethics and developmental concerns. There was a strong sentiment that these tools could hinder critical thinking and originality, especially if used irresponsibly.

Ethical concerns:

Participants expressed concerns about plagiarism and ethical misuse. They highlighted the risk of AI tools generating content that might not be original or credible. Some felt uncertain about the boundaries between ethical use and misuse.

> *"Sometimes, the content generated by AI seems copied or unoriginal. It's hard to draw the line between assistance and cheating." (Participant 3, Postgraduate)*

Hindrance to skill development

A recurring theme was the potential for AI tools to diminish critical thinking and creativity. Many participants felt that over-reliance on these tools could lead to dependency, ultimately impairing their ability to develop independent problem-solving skills.

> *"I rely on AI for ideas, and it's making me less creative. I*

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*fear I'm losing my ability to think critically on my own." (Participant 7, Undergraduate)*

**Barriers to AI Adoption**

The accessibility and affordability of AI tools emerged as a major barrier, particularly in the Pakistani context, where infrastructural challenges and socio-economic disparities were highlighted.

Accessibility issues:

Limited access to reliable internet and knowledge gaps about how to use AI tools were frequently mentioned by participants from rural or underprivileged areas. Many struggled with a lack of resources, which restricted their ability to benefit from such tools.

*"In my hometown, we don't have consistent internet access, so I can't always use these tools effectively." (Participant 5, Undergraduate)*

Equity challenges:

Participants also emphasized the financial barriers associated with accessing premium AI tools. The rural-urban divide exacerbated this issue, leaving many students at a disadvantage.

*"Students from well-off backgrounds can afford these tools, but others like me can't. This creates a gap in academic opportunities." (Participant 18, Postgraduate)*

**Educational Implications**

AI tools were found to have significant implications for education, particularly in shaping cognitive and academic skills. While they enhanced certain aspects of learning, participants also noted some negative impacts.

Impact on academic and cognitive skills:

Several participants argued that AI tools could negatively affect critical thinking and problem-solving abilities. Over-reliance on these tools made students less inclined to engage deeply with their work, potentially limiting their intellectual growth.

*"AI tools solve problems for me, but I feel like I'm losing the ability to think critically or work out solutions on my own." (Participant 20, Undergraduate)*

Cognitive benefits:

On the other hand, some participants acknowledged that AI tools encouraged creativity by suggesting alternative perspectives and ideas. This was particularly beneficial for those who struggled with generating original ideas or organizing their thoughts.

*"AI helped me think creatively by showing different ways to approach my topic." (Participant 22, Postgraduate)*

**Role of Institutions in AI Integration**

Participants underscored the need for institutional guidance to ensure the ethical

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and effective use of AI tools in academia. They called for training programs, clear policies, and consistent practices across institutions.

Need for institutional support:
Many participants believed that universities should take an active role in educating students and faculty about AI tools. Training sessions, ethical guidelines, and faculty support were identified as critical elements for successful AI integration.

> *"Our institution needs to organize workshops to train us on using these tools effectively and ethically." (Participant 11, Undergraduate)*

Institutional readiness for AI adoption:
Participants also highlighted the lack of institutional readiness in terms of curriculum integration and faculty practices. This inconsistency often left students confused about the acceptable use of AI in academic settings.

> *"There's no clear policy in our university about using AI tools. Every teacher has their own opinion, which makes it difficult for us." (Participant 26, Postgraduate).*

**Main Findings**

The thematic analysis revealed several important findings regarding the use of AI tools in academic writing for undergraduate and postgraduate assessments in Pakistan. Participants highlighted the transformative potential of AI tools, emphasizing their ability to improve efficiency, enhance writing quality, and assist in overcoming language barriers. Students appreciated how these tools streamlined the writing process by generating ideas, correcting grammar, and improving structure. However, significant challenges were also identified, including ethical concerns related to plagiarism, dependency risks, and the potential negative impact on critical thinking and creativity.

Barriers to AI adoption were evident, particularly in the Pakistani context, where socio-economic disparities and infrastructural limitations hindered equitable access. Students from underprivileged backgrounds faced difficulties in affording or using AI tools effectively, further widening the academic gap. Educational outcomes associated with AI usage were mixed; while some participants benefited from cognitive and creative enhancement, others expressed concerns about the tools undermining independent learning and problem-solving abilities.

Additionally, the lack of institutional policies and support systems for AI integration in academic settings emerged as a critical issue. Participants emphasized the need for proper guidance, training, and clear policies to ensure the ethical and effective use of AI tools. The findings underscore the dual nature of AI tools in academic writing, highlighting their potential to transform education while drawing attention to the challenges and inequities that must be addressed for their effective implementation, as shown in figure 3 below.

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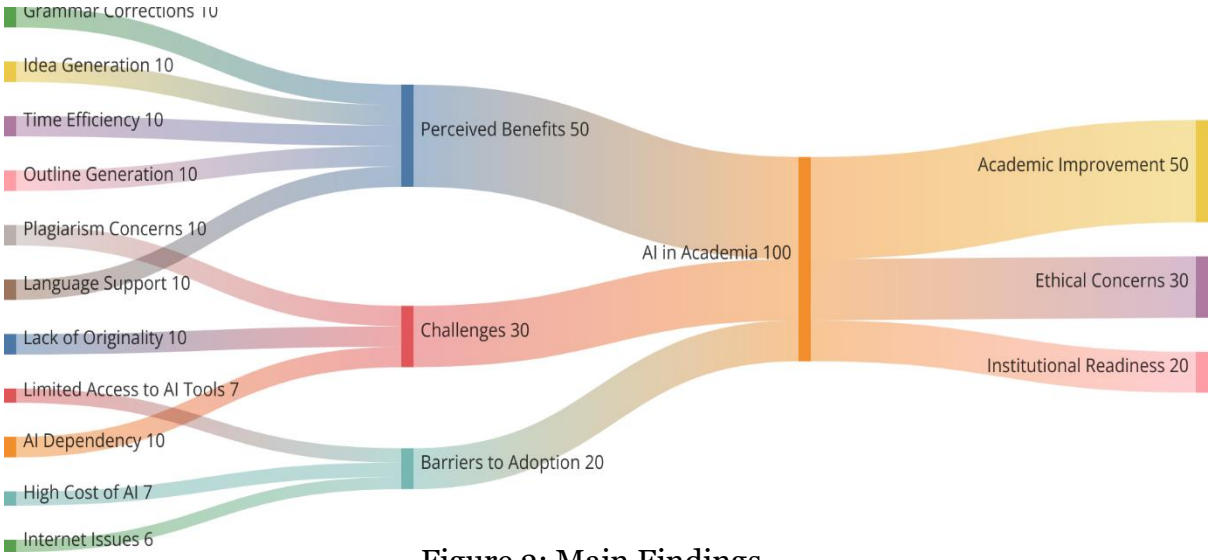


Figure 3: Main Findings

## Discussion

This research aimed to explore the role of AI tools in academic writing for undergraduate and postgraduate assessments in Pakistan, providing an in-depth understanding of their perceived benefits, challenges, and implications. The findings revealed a dual perspective on the integration of AI tools in academic writing, aligning with recent global studies while contextualizing the challenges specific to Pakistan's socio-economic and educational landscape. The perceived benefits of AI tools, such as improved efficiency, enhanced writing quality, and support for language-related challenges, mirror findings from recent studies emphasizing the role of AI in streamlining academic tasks (Xu et al., 2022; Zhang & Wang, 2023). Participants acknowledged that AI tools facilitated quicker generation of ideas and polished their academic work, consistent with the broader discourse on AI's capacity to enhance productivity and reduce the cognitive load in academic writing (Chew et al., 2021). However, this convenience also raised concerns about over-reliance on technology, which could undermine the development of critical academic skills.

Ethical concerns surrounding AI usage, particularly the potential for plagiarism and authenticity issues, were widely discussed by participants. These concerns align with those highlighted in global literature, where the misuse of AI tools has been linked to breaches of academic integrity (Dahl et al., 2023). In the Pakistani context, these issues are amplified by a lack of awareness and clear institutional policies on the ethical use of AI, further complicating its integration into academia. This underscores the need for comprehensive policies and training programs to ensure that students and educators use AI tools responsibly, as suggested by Alshahrani et al. (2023). The socio-economic and infrastructural barriers identified in this study reflect broader systemic issues in Pakistan's education sector. Limited access to reliable internet and the high cost of premium AI tools disproportionately affect students from rural or economically disadvantaged backgrounds,

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exacerbating existing inequalities in educational opportunities. These findings align with studies by Khan et al. (2022), which emphasize the digital divide as a significant barrier to technology adoption in Pakistan. Addressing these barriers requires targeted interventions at the policy level, including subsidies for AI tools and investment in digital infrastructure.

The mixed implications of AI tools on educational outcomes, particularly their impact on creativity and critical thinking, highlight the complexities of integrating technology into learning processes. While some participants reported cognitive and creative benefits, others expressed concerns about reduced engagement with independent learning and problem-solving. This duality has been echoed in recent studies, which argue that AI tools can either foster creativity by providing new perspectives or stifle it by offering ready-made solutions (Baker et al., 2023). This finding calls for a balanced approach to AI integration, where tools are used to complement rather than replace traditional learning methods.

The absence of institutional policies and support systems was a critical issue raised by participants. The lack of clear guidelines on AI usage created confusion and uncertainty among students and educators, underscoring the need for a structured framework to govern AI integration in academic settings. This aligns with recent calls in the literature for educational institutions to develop standardized policies and provide training to ensure ethical and effective AI usage (Lee et al., 2023). This study contributes to the growing body of literature on AI in education by providing a nuanced understanding of its role in academic writing within the Pakistani context. While AI tools offer significant potential to transform academic practices, their effective integration requires addressing ethical concerns, socio-economic barriers, and institutional gaps. Future research could explore the longitudinal impacts of AI usage in academia and examine how tailored policies and training programs influence the outcomes of AI integration in developing countries like Pakistan.

## Conclusion

This research explored the integration of AI tools in academic writing for undergraduate and postgraduate assessments in Pakistan, offering valuable insights into their perceived benefits, challenges, and implications within a developing country's context. The findings revealed that while AI tools have the potential to transform academic writing by enhancing efficiency, improving language quality, and fostering inclusivity, their integration is not without challenges. Ethical concerns, such as plagiarism and over-reliance on AI, were significant issues raised by participants, underscoring the need for proper guidelines and training. Additionally, socio-economic and infrastructural barriers, including limited access to AI tools for underprivileged students, further highlight the inequities in adopting such technologies. The research also emphasized the absence of institutional policies and frameworks for AI integration, which contributed to uncertainty and misuse among students and educators. Participants expressed the need for comprehensive training programs and structured policies to ensure the responsible and effective use of AI in academic settings. These findings

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align with global trends but are deeply rooted in the unique socio-economic and cultural challenges of Pakistan.

This study contributes to the growing discourse on AI in education by providing a nuanced understanding of its role in academic writing within a developing country's context. It highlights the dual nature of AI tools offering significant opportunities while posing challenges that need to be addressed for equitable and ethical integration. The study underscores the importance of striking a balance between leveraging AI for academic enhancement and fostering independent learning, creativity, and critical thinking. Future research should explore the long-term impacts of AI adoption on academic writing and assess the effectiveness of institutional policies in promoting ethical AI usage. By addressing these challenges and embracing the potential of AI tools, educational institutions in Pakistan can pave the way for a more inclusive and innovative academic environment.

**References**

Ahmed, S., & Rashid, T. (2024). Digital learning challenges in developing countries: A case study of post-COVID-19 Pakistan. Journal of Educational Technology, 18(2), 45-60.

Alshahrani, S., Al-Gahtani, J., & Abdulrahman, A. (2023). Ethical Challenges of AI Integration in Higher Education. *Journal of Educational Technology*, 39(1), 45–60.

Anderson, J., & Rainie, L. (2023). AI and education: The future of academic writing. *Journal of Educational Technology, 45*(3), 121-139.

Baker, R., Ellis, J., & Morgan, T. (2023). Creativity in the Age of AI: Balancing Assistance and Autonomy in Academic Writing. *International Journal of Educational Research*, 112, 102120.

**Bandura, A. (1986).** *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. DOI: 10.1191/1478088706qp063oa

Chew, E., Tan, L., & Wong, P. (2021). Exploring the Role of AI in Enhancing Academic Productivity: A Systematic Review. *Educational Review Quarterly*, 35(4), 98–115.

Dahl, A., Fischer, P., & Carter, J. (2023). AI, Plagiarism, and Academic Integrity: A Review of Emerging Trends. *Ethics in Education Journal*, 29(3), 71–85.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340. DOI: 10.2307/249008

Hao, S. (2022). AI-enhanced writing: A review of its impact on non-native English speakers. *International Journal of Writing Studies, 14*(2), 48-62.

Jabeen, S., & Khan, M. (2023). AI-enhanced learning in Pakistan: A case study of its role in online education. International Journal of Education and Development, 20(4), 135-150.

Khan, F., Ahmed, S., & Malik, R. (2022). The Digital Divide in Pakistan: Implications for Education and Technology Adoption. *Journal of Education*

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*and Development*, 40(2), 143–160.

Khan, N., Ali, R., & Farooq, A. (2023). Perceptions of AI in higher education: Insights from faculty and students in Pakistan. *Higher Education Perspectives*, 12(1), 98-112.

Kumar, P., Singh, R., & Lin, J. (2023). Enhancing academic writing with AI: Benefits and challenges. *Educational Innovations Quarterly*, 15(3), 67-82.

Lee, H., Park, Y., & Choi, S. (2023). Developing Institutional Policies for AI Integration in Education. *Policy Futures in Education*, 21(1), 21–37.

Piaget, J. (1970). *Science of education and the psychology of the child*. Viking.

Sadaf, A., Khan, F., & Rehman, H. (2021). The digital divide and educational challenges in Pakistan: The role of AI tools in higher education. *Journal of Educational Research and Practice, 19*(1), 77-90.

Stein, D., Patel, M., & Jackson, H. (2024). Ethical implications of AI in academic assessments: A global perspective. *Journal of Academic Ethics*, 21(1), 23-39.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Xu, H., Zhang, L., & Li, K. (2022). The Impact of AI on Academic Writing Practices: A Global Perspective. *Educational Innovations Journal*, 15(2), 63–78.

Zhang, J., & Wang, M. (2023). AI in Academic Writing: Opportunities and Challenges for Students and Educators. *Teaching and Learning Review*, 27(1), 12–29.

Zhao, Y., Li, C., & Wang, X. (2023). AI-assisted learning for non-native English speakers: Opportunities and limitations. *Journal of Applied Linguistics*, 29(4), 115-132.