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NAVIGATING AI-ASSISTED ACADEMIC WRITING: UNIVERSITY STUDENTS' PERSPECTIVES AND CHALLENGES

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Abstract:

The growing use of artificial intelligence (AI) tools in academic writing is transforming how university students approach their assignments. These technologies offer numerous advantages, including enhanced language accuracy, improved clarity, and time efficiency. However, they also raise important concerns about academic integrity, over-reliance, and the development of independent writing skills. This study investigates university students' perspectives on AI-assisted academic writing, aiming to understand their experiences, perceived benefits, challenges, and future intentions. Data was collected through qualitative interviews using Google Forms, involving university students across various academic disciplines. Thematic analysis revealed several key patterns: ChatGPT, QuillBot, and Grammarly were the most frequently used tools, mainly for grammar correction, paraphrasing, and idea generation. Many students reported increased confidence and clarity in their writing, with AI tools becoming integrated into their writing routines. Nevertheless, concerns were expressed regarding citation accuracy, misinformation, ethical use, and a growing dependence on AI-generated suggestions. Despite these limitations, most participants expressed intentions to continue using AI tools, particularly as aids for editing and organizing ideas rather than for full content generation. The findings provide valuable insights for educators and academic institutions seeking to support responsible AI integration in higher education. This study highlights the need for a balanced approach to AI use that promotes technological literacy alongside critical thinking and independent writing development.

Keywords:

AI Tools, Academic Writing, Educational Technology, University Students

Introduction

The emergence of artificial intelligence (AI) has profoundly influenced higher education, with one of the most visible impacts occurring in the domain of academic writing. In recent years, AI-assisted writing tools such as ChatGPT, Grammarly, Quillbot, and DeepSeek have become increasingly accessible to students. These technologies provide support in areas such as idea generation, grammar and syntax correction, manuscript editing, translation, and reference searching (Kholis, Lisan, & Azmi, 2024). Their convenience and efficiency have encouraged students across disciplines to incorporate AI into their academic tasks, reshaping the way writing is approached, learned, and produced in university settings. For students who face challenges in articulating ideas or adhering to academic writing conventions, these tools can function as valuable aids that reduce stress and enhance productivity. Despite these benefits, the rapid adoption of AI in higher education has generated significant debate. AI tools are considered instrumental in supporting students by helping them overcome linguistic and structural barriers (Kasneci et al., 2023).

Meanwhile, concerns persist about overreliance, which may compromise creativity, originality, and critical thinking. Khalifa and Albadawy (2024) believe that excessive dependence on AI-generated content risks undermining students' ability to think critically and develop independent academic voices. Similar concerns are expressed by Lund et al. (2023), who emphasize that while generative AI can scaffold learning, it should not replace the deeper intellectual processes that higher education seeks to cultivate. Ethical questions regarding plagiarism, authorship, and academic integrity further complicate these debates, as it is often difficult to distinguish between student-authored and AI-generated content. In addition to ethical concerns, the integration of AI into academic writing also raises pedagogical challenges. Some scholars argue that AI tools can be strategically incorporated into writing instruction as supportive learning companions (Li, 2023), while others worry that they may encourage shortcuts and superficial engagement with writing tasks. Dergaa et al. (2023) argued that dismissing AI completely is unrealistic and unhelpful; instead, the priority should be finding a balance between its benefits and potential risks.

Although research on AI in education is rapidly expanding, there remains a noticeable gap regarding students' perspectives. Much of the existing scholarship has concentrated on the technical features of AI tools or broader institutional responses (Zawacki-Richter et al., 2019; Cotton et al., 2023), with relatively limited attention given to how students themselves perceive and experience AI in their academic writing. Recent studies that do consider student perspectives reveal a mixture of enthusiasm and caution: some students report that AI enhances their confidence in writing and helps them manage academic workload (Almusharraf & Bailey, 2023), while others express uncertainty about ethical boundaries and the extent to which AI-generated text should be used in assignments (Susnjak, 2023).

Thus, the present study investigates university students' perspectives on AI-assisted academic writing, with a particular focus on the challenges they encounter when engaging with such tools. The study aims to explore how students perceive both the benefits and drawbacks of AI and how their experiences shape writing practices in higher education. By centering students'

voices, the research seeks to fill a gap in the literature and provide empirical insights into the lived realities of AI adoption. Ultimately, the findings are expected to guide educators and policymakers in formulating strategies that encourage ethical, balanced, and effective use of AI, ensuring that these technologies serve as valuable support systems rather than replacements for active learning, intellectual growth, and creativity.

Research Objectives

The primary objective of this study is to examine the role of artificial intelligence (AI) tools in academic writing, with a particular focus on students' perceptions, usage patterns, and the challenges they encounter. Specifically, this research aims to:

1. **Investigate students' usage and perceptions of AI tools in academic writing**, including their motivations for using such tools, the extent of their reliance on AI-generated content, and their overall attitudes toward its effectiveness in supporting academic writing.
2. **Identify the challenges students face when integrating AI tools into the academic writing process**, including concerns related to accuracy, acceptance, and the potential for misleading information.

Literature Review

AI-Assisted Writing in ESL Academic Contexts

The incorporation of artificial intelligence (AI) into English as a Second Language (ESL) academic writing contexts has attracted significant interest in recent years. AI-assisted writing tools, such as ChatGPT, Grammarly, and Quillbot, have shown the potential to transform how ESL learners approach writing tasks. These tools provide personalized feedback, immediate corrections, and structured assistance that lead to enhancement of learners' writing proficiency (Kohnke et al., 2023). Studies indicate that AI tools significantly improve task achievement, coherence, cohesion, lexicon, and grammatical accuracy—elements that are invaluable for ESL learners striving to master academic writing (Zhai, 2023). One of the most notable advantages of AI-assisted writing tools is their ability to increase student engagement and intrinsic motivation. Research highlights the improvement of learners' attitudes towards writing tasks, as these tools foster behavioural, emotional, and cognitive engagement (Huang & Chang, 2022). For example, students using AI tools reported higher levels of motivation and positive emotions, which are critical for sustained learning. Besides, the real-time feedback provided by AI tools allows students to revise their work promptly and enables continuous improvement (Sun & Chen, 2024). Meanwhile, tools like StructFeed exemplify this advantage by offering structured feedback aligned with learners' needs (Huang et al., 2022).

Although AI tools offer many benefits, there are still concerns about excessive dependence on them. Milton (2023) highlights that overreliance may hinder the development of independent writing skills and critical thinking. Teachers emphasize that human creativity and detailed feedback remain irreplaceable, particularly for less proficient learners (Zhai & Li, 2024). In addition, ethical issues, such as plagiarism and biases in AI-generated content, also pose significant challenges. Studies highlight concerns about academic integrity, as students may misuse AI tools to complete assignments without fully understanding the material (Stokel-Walker, 2023). Moreover, the consistency and reliability of these advanced tools can be questioned, as AI-generated feedback can vary depending on the prompts used (Kasneci et al., 2023). To address these challenges, researchers recommend a balanced approach that combines

AI tools with traditional teaching methods and teacher-guided assistance. Teacher involvement is crucial to ensure that students use AI tools effectively while maintaining academic integrity (Kasneci et al., 2023). Besides, educators can provide initial training and ongoing support to help students work through the complexities of AI tools, ensuring they complement rather than replace traditional instruction (Zhai & Li, 2024). Continuous professional development for teachers on AI literacy is also essential, equipping educators with the skills needed to integrate these tools seamlessly into their teaching practices (Kohnke et al., 2024). By blending AI with conventional methods, educators can create a supportive learning environment that maximizes the benefits of technology while mitigating its risks.

Impact of AI Tools on Academic Writing Skills

AI tools have demonstrated a transformative impact in enhancing grammar, vocabulary, and organization. Platforms like Grammarly and ChatGPT not only correct grammatical errors but also suggest vocabulary improvements (Kohnke et al., 2023; Ranalli, 2023). Additionally, AI tools assist in ensuring a well-structured and cohesive composition of written content by generating ideas and ensuring logical progression and connectivity. Tools such as QuillBot and ChatGPT enable students to structure their essays logically, making it easier to articulate complex thoughts effectively (Al-Salman & Al-Obaidi, 2024; Dizon, 2023). The use of AI tools has also been linked to increased writing confidence and reduced anxiety among ESL learners. By providing personalized feedback and enabling unlimited revisions, these tools empower students to take ownership of their learning process. These features also support learners' sense of autonomy and self-efficacy (Baidoo-Anu & Owusu, 2023; Zhang & Hyland, 2024). The interactive nature of AI tools further enhances engagement while creating a more enjoyable and less intimidating writing experience (Kohnke et al., 2023; Al-Jarf, 2024). As learners receive consistent support through AI-generated feedback, their confidence in tackling academic writing tasks grows and eventually improves their writing performance.

However, while AI tools excel at correcting surface-level errors, they may struggle to replicate the nuanced feedback provided by human instructors, especially in areas requiring higher-order thinking (Dizon, 2023). This limitation underscores the importance of balancing AI assistance with traditional teaching methods to ensure holistic skill development. Therefore, AI tools have a profound impact on academic writing skills by enhancing grammar, vocabulary, organization, and learner confidence. However, addressing the challenges of overreliance and ensuring a balanced integration of AI and human instruction is essential to maximize the benefits of these tools. By combining AI's strengths in providing immediate, personalized feedback with educators' expertise in fostering critical thinking and creativity, ESL learners can achieve significant improvements in their academic writing abilities (Zhai, 2023; Dizon, 2023).

Learner Autonomy and the Use of AI Tools

AI tools have emerged as powerful aids in fostering learner autonomy, particularly in writing contexts. However, their role must be carefully balanced to avoid issues of over-reliance. While AI systems like chatbots and generative AI provide personalized feedback and support, they can perpetuate algorithmic biases present in their training data, potentially leading to skewed learning outcomes (Lee & Chan, 2023). Excessive dependence on AI tools may reduce students' active involvement in their learning process, as learners might rely too heavily on AI for answers rather than engaging critically with the material (Xu et al., 2023). Ethical considerations, such as data privacy and transparency, further complicate the integration of AI into education. To mitigate these risks, students must develop the ability to critically evaluate

AI-generated content, ensuring they use these tools as supplements rather than replacements for independent thought (Wang & Chen, 2024).

Despite these challenges, AI-assisted writing tools have the potential to enhance student independence by providing tailored feedback and fostering self-directed learning. When used effectively, these tools empower students to take charge of their learning journey, offering resources that help them identify strengths and areas for improvement (Zhou et al., 2024; Niu et al., 2023). Research highlights that integrating AI into blended learning environments significantly improves learner autonomy by enhancing metacognitive skills, resource utilization, and psychological characteristics such as self-efficacy (Zhou et al., 2024). Students who strategically incorporate AI tools into their learning process, while remaining critically aware, demonstrate higher levels of independence and confidence.

Balancing AI use with learner autonomy requires thoughtful strategies to ensure these tools enhance rather than hinder independent learning. Encouraging critical engagement is essential; students should be trained to evaluate AI-generated content and use it as a supplementary resource rather than a definitive authority (Xu et al., 2023). Establishing ethical guidelines for AI use in education can address concerns related to bias, privacy, and transparency, fostering trust and responsible usage (Lee & Chan, 2023). Additionally, AI tools can be leveraged to provide personalized support, helping students focus on specific areas of improvement while promoting active learning strategies (Li et al., 2024). By using AI to enhance rather than replace their efforts, students can maintain control over their learning process and develop greater autonomy. AI tools hold significant promise for supporting learner autonomy in writing contexts, provided they are integrated thoughtfully and ethically. While concerns about over-reliance, algorithmic biases, and ethical considerations remain, these challenges can be mitigated through critical engagement, clear guidelines, and strategic use of AI as a supplementary resource. By fostering a partnership between learners and AI, educators can create an environment where students are empowered to take ownership of their learning while leveraging the benefits of technology (Hwang et al., 2023).

Perceptions, Challenges, and Limitations of AI in Academic Writing

Students' attitudes toward AI tools in academic writing are generally positive, as they recognize the benefits these tools offer. Many appreciate how AI enhances grammar, spelling, and structural coherence while improving efficiency and idea generation (Wang et al., 2024; Baidoo-Anu & Owusu, 2023). For instance, AI tools like Grammarly and ChatGPT streamline the writing process, making it easier for students to produce polished work (Dizon, 2023). Similarly, studies indicate that ESL learners value AI's role in providing immediate feedback and promoting a stress-free writing experience (Stokel-Walker, 2023). However, concerns persist about over-reliance on AI, which may hinder the development of creativity, critical thinking, and originality (Rasul et al., 2024).

While AI tools offer numerous advantages, their integration into academic writing comes with challenges. Technical problems like inconsistent AI-generated outputs often irritate students attempting to integrate ideas into their work (Cotton et al., 2023). In addition, ethical and legal concerns arise from the potential misuse of AI, including plagiarism, bias, and the lack of transparency in how AI-generated content is produced (Floridi et al., 2023; Umar et al., 2024). These issues highlight the need for clear guidelines on the ethical use of AI in academic settings. Moreover, there is growing concern that over-dependence on AI tools may negatively

impact students’ learning and the development of essential writing skills, such as critical analysis and argumentation (Mollick & Mollick, 2024).

Moreover, the accuracy and reliability of AI tools remain significant concerns for students and educators alike. While AI excels in producing linguistically accurate content, it often falls short in tasks that demand in-depth research, data analysis, or sophisticated comprehension (Kasneci et al., 2023). This limitation can lead to inaccuracies or incomplete information, particularly in complex academic writing tasks. Therefore, students and educators emphasize the need for clear guidelines on how to use AI ethically, including proper attribution of AI-generated content (Kim, 2023). Ethical concerns also extend to the propagation of biases present in AI training data, which can perpetuate stereotypes or unfair outcomes (Shin, 2024).

To fully implement the benefits of AI tools while addressing their limitations, it is crucial to adopt a balanced approach. Educators play a key role in guiding students to use AI as a supportive tool rather than relying on it as their primary source of content (Mollick & Mollick, 2024). In this regard, fostering critical awareness is essential, as students need to evaluate AI-generated content before integrating it into their work. Moreover, incorporating AI literacy into the curriculum can help students not only understand the ethical implications of using these tools but also develop strategies to minimize potential risks (Chiu et al., 2024). By blending AI assistance with traditional teaching methods, educators can create a learning environment where students remain actively engaged and in control of their learning process while still benefiting from technological advancements.

Notably, AI tools have transformed academic writing by offering improved efficiency, grammar, and idea generation, earning positive perceptions from students. However, challenges such as technical difficulties, ethical concerns, and the risk of over-reliance underscore the need for careful management. Ensuring transparency, fostering trust, and addressing ethical considerations are crucial for the responsible use of AI in academic writing. By balancing AI assistance with human creativity and critical thinking, educators can help students harness the full potential of these tools while mitigating their limitations. As AI continues to evolve, ongoing research and dialogue will be essential to navigate its implications effectively.

Past Findings and Theoretical Framework

Table 1: Summary of Past Findings, Theoretical Frameworks, and Relevance to the Present Study

Study	Focus / Key Findings	Theoretical Framework	Relevance to Present Study
Kohnke et al. (2023)	AI tools improve grammar, cohesion, and task achievement	SLA Theory	Supports investigation of linguistic improvements via AI tools
Zhai (2023)	AI enhances coherence and accuracy	Process Writing Approach	Highlights importance of revision and feedback in AI use

Huang & Chang (2022)	& AI fosters engagement and motivation	Self-Determination Theory	Relates to how AI enhances learner motivation and autonomy
Sun (2024)	& Chen Real-time feedback aids continuous improvement	Formative Assessment Framework	Aligns with study’s focus on feedback loops in AI use
Milton (2023); Zhai & Li (2024)	Risks of overreliance on AI	Critical Pedagogy	Underlines teacher’s role in balancing AI with learner independence
Kasneci et al. (2023)	Reliability of AI feedback questioned	AI Literacy Framework	Highlights ethical/accuracy concerns relevant to this study
Zhou et al. (2024)	AI fosters self-directed learning	Self-Regulated Learning (SRL) Theory	Provides lens for autonomy in AI-assisted writing
Wang & Chen (2024)	Critical engagement with AI is essential	Critical Digital Literacy	Informs guidelines for responsible AI use in ESL contexts

Past studies collectively highlight the transformative role of AI in enhancing ESL learners’ writing proficiency, confidence, and engagement, while also revealing critical gaps that warrant further exploration. Research on AI-powered grammar and vocabulary tools (Abduljawad, 2024; Wei et al., 2023) shows consistent improvements in linguistic accuracy, aligning with the current study’s aim of examining language development. Similarly, studies on learner autonomy and self-efficacy (Corbita et al., 2024; Aladini et al., 2025; Niu et al., 2024) emphasize how AI tools can foster independent learning, resonating with this paper’s interest in how students negotiate control over their writing processes. At the same time, concerns regarding overreliance on AI and its impact on critical thinking and originality (Lee et al., 2024; Milton et al., 2024; Rafida et al., 2024) directly inform the present study’s investigation into students’ perceptions of challenges. Ethical and integrity issues (Junio & Bandala, 2023; Kim, 2024; Ugwu et al., 2024) also relate closely to this research by framing students’ concerns about responsible AI use in academic writing. By integrating these perspectives, the current paper situates itself within a growing body of literature that recognizes AI’s benefits but also acknowledges the pedagogical, ethical, and cognitive complexities that accompany its adoption in ESL contexts.

Methodology

This study employed a qualitative research design to gain in-depth insights into university students’ perceptions and experiences of using AI tools in academic writing. A qualitative approach was selected because it enables researchers to capture students’ personal interpretations and lived experiences, which cannot be meaningfully represented through numerical data alone. This study was conducted at Universiti Teknologi MARA (UiTM), Kedah Branch, as it offered access to a population of students who were actively involved in academic writing tasks and demonstrated varying levels of exposure to AI technologies. The population of this study consisted of undergraduate students from UiTM Kedah. Fifteen participants were chosen using a purposive sampling technique, which is commonly employed in qualitative studies to ensure that participants have direct experience with the phenomenon

under investigation. The study specifically targeted students who had used AI-assisted writing tools such as ChatGPT, Grammarly, and Quillbot, as their familiarity with these platforms would provide rich and relevant insights.

Data was collected through a semi-structured interview, distributed via Google Forms. This format allowed participants to respond at their own pace and convenience, reducing time and logistical barriers while maintaining flexibility in response depth. The interview comprised fifteen open-ended questions designed to explore several dimensions, including the frequency and purpose of AI tool usage, the perceived benefits, the challenges encountered, and students' future intentions regarding AI use. The questions were adapted from prior studies on AI in education (Kasneci et al., 2023; Almusharraf & Bailey, 2023) and refined to reflect the local context of Malaysian higher education. The collected responses were analyzed using thematic analysis.

Findings and Discussion

AI Tool Usage Among ESL Learners

The findings reveal that the most frequently used AI-assisted writing tools among ESL learners are ChatGPT, QuillBot, and Grammarly. ChatGPT and QuillBot appear to be the most commonly mentioned, with students utilizing them primarily for paraphrasing, grammar correction, and generating ideas. As one respondent shared, *"I always use ChatGPT to generate ideas and refine my writing structure,"* highlighting its role in brainstorming and content development. Another mentioned, *"Grammarly helps me correct grammar mistakes before submission,"* emphasizing its role in error correction.

The table below illustrates that ChatGPT was the most used AI tool (12 mentions), followed by QuillBot (10) and Grammarly (6). This suggests that students favor AI tools that provide both content generation and language refinement features. Additionally, students' motivations for using AI tools include saving time, improving grammar accuracy, generating structured ideas, and enhancing overall writing clarity. These findings align with Jamshed et al. (2024), who reported that AI-assisted tools provide immediate corrections and structured assistance, enhancing writing proficiency for ESL learners. Similarly, Wei et al. (2023) emphasized that AI significantly improves coherence, cohesion, and grammatical accuracy, which are essential for academic writing.

Table 2: AI Tool Usage among ESL Learners

AI Tools Used	Number of Mentions	Example Quotes
ChatGPT	12	<i>"I always use ChatGPT to generate ideas and refine my writing structure."</i>
QuillBot	10	<i>"QuillBot helps me rephrase sentences while maintaining meaning."</i>
Grammarly	6	<i>"Grammarly helps me correct grammar mistakes before submission."</i>

Frequency of AI Tool Usage

As shown in the table below, most students use AI-assisted writing tools regularly, with 6 using them very frequently, 5 often, and 4 occasionally. This indicates that AI is becoming an integral part of students' writing processes, though some may use it more selectively.

One respondent noted, *"I use AI tools every time I write an assignment,"* demonstrating how AI has become an essential part of their writing routine. Meanwhile, another shared, *"I only use them when I need help with complex sentences,"* indicating selective usage based on writing difficulty. Additionally, some students reported that their usage is task-dependent, with AI tools being more frequently used for assignments requiring extensive writing or research. These findings support research by Nazari et al. (2021), who found that AI tools increase student engagement and motivation in academic writing, particularly by reducing cognitive load and providing immediate feedback.

Table 3: Frequency of AI Tool Usage

Usage Frequency	Number of Mentions	Example Quotes
Very frequent	6	<i>"I use AI tools every time I write an assignment."</i>
Often	5	<i>"I often use them for grammar correction and sentence improvement."</i>
Occasionally	4	<i>"I only use them when I need help with complex sentences."</i>

Perceived Benefits of AI Tools

The table below summarizes the key benefits reported by respondents, with grammar correction being the most frequently mentioned (10), followed by vocabulary enhancement (7), organization improvement (6), clarity enhancement (5), idea generation (4), and writing independence (4). These results suggest that while AI significantly aids in language accuracy, its impact on deeper writing skills, such as argumentation and critical thinking, may be more limited.

As one participant stated, *"I think AI is most useful for grammar correction and rewording sentences,"* reinforcing AI's function in refining language accuracy. Another respondent shared, *"It helps with vocabulary, but sometimes the suggestions feel unnatural,"* acknowledging both the advantages and the limitations of AI-generated recommendations. Some students also highlighted that AI tools help them write more independently, as they no longer need to constantly seek external assistance for proofreading or idea structuring. One respondent explained, *"AI helps me structure my thoughts better, so I feel more confident writing on my own."* These findings align with Corbita et al. (2024), who reported that AI tools contribute to learner confidence by providing unlimited revisions and personalized feedback. Similarly, Al-Shaboul et al. (2024) noted that AI enhances writing fluency by assisting students in structuring their ideas more effectively.

Table 4: Perceived Benefits of AI Tools

Benefit	Number of Mentions	Example Quotes
Grammar Correction	10	<i>"I think AI is most useful for grammar correction and rewording sentences."</i>
Vocabulary Enhancement	7	<i>"It helps with vocabulary, but sometimes the suggestions feel unnatural."</i>
Organization Improvement	6	<i>"AI tools help me structure my ideas more clearly."</i>
Clarity Enhancement	5	<i>"Using AI makes my writing clearer and easier to read."</i>
Idea Generation	4	<i>"AI gives me ideas when I'm stuck and don't know how to start."</i>
Writing Independence	4	<i>"AI helps me structure my thoughts better, so I feel more confident writing on my own."</i>

Confidence in Academic Writing

According to the table below, 10 respondents indicated that AI tools have improved their confidence in academic writing, while 5 did not share the same sentiment. This improvement is attributed to AI's ability to provide instant feedback and corrections, helping students identify and rectify errors more effectively. The ability of AI to offer real-time suggestions aligns with findings by Corbita et al. (2024) and Aladini et al. (2025), who highlight that AI tools empower learners by allowing unlimited revisions and fostering self-efficacy. Similarly, Jamshed et al. (2024) found that AI-assisted writing significantly reduces anxiety among ESL learners, making the writing process more approachable and engaging.

One student remarked, *"Yes, I feel more confident because AI helps me check errors before submission,"* underscoring the role of AI in self-editing and independent revision. Another respondent noted, *"I still need to review AI suggestions carefully, but it makes writing easier,"* showing that AI serves as a support tool rather than a complete writing substitute. However, despite the increased confidence, some students remained cautious about over-reliance on AI, echoing concerns raised by Marzuki et al. (2023), who argue that AI tools may not fully develop higher-order writing skills, such as argumentation and critical thinking.

These findings suggest that while AI enhances writing confidence by providing immediate feedback, students should still engage critically with AI-generated suggestions to develop long-term writing competence.

Table 5: Confidence in Academic Writing

Confidence Improved?	Number of Mentions	Example Quotes
Yes	10	<i>"Yes, I feel more confident because AI helps me check errors before submission."</i>
No	5	<i>"I still need to review AI suggestions carefully, but it makes writing easier."</i>

Challenges and Limitations of AI Tools

The table below highlights the main challenges reported by respondents, with citation issues being the most frequently cited limitation (4 mentions), followed by concerns over over-reliance on AI (4 mentions), misinformation (2 mentions), and uncertainty about institutional acceptance (2 mentions). These findings suggest that while AI tools enhance efficiency, they may also lead to challenges if students do not critically assess their outputs.

The concerns regarding over-reliance on AI align with Milton et al. (2024), who warned that excessive dependence on AI tools might hinder the development of independent writing skills and critical thinking. Additionally, Tran (2024) emphasizes the irreplaceable role of human creativity and feedback, particularly for less proficient learners. Junio & Bandala (2023) also caution that AI-generated content can lead to issues of academic integrity, particularly when students overuse AI tools without engaging critically with their work.

Table 6: Challenges and Limitations

Limitation	Number of Mentions	Example Quotes
Citation Issues	4	<i>"AI tools can be misleading in areas like citations and fact-checking."</i>
Over-Reliance Risk	4	<i>"AI helps a lot, but I sometimes find myself relying on it instead of improving my own writing skills."</i>
Misinformation	2	<i>"Sometimes I need to verify AI-generated content because it's not always accurate."</i>
Institutional Acceptance	2	<i>"I am unsure if my university allows AI use for writing assignments."</i>

These findings emphasize the importance of a balanced approach to AI integration, where human instruction complements AI assistance (Kurt & Kurt, 2024). Researchers recommend structured guidance to help students critically engage with AI feedback while maintaining academic integrity (Kohnke et al., 2025).

Future Use of AI Tools in Academic Writing

When asked whether they would continue using AI tools for academic writing in the future, most respondents indicated that they plan to do so. The reasons cited include time efficiency, enhanced clarity, and improved writing confidence. As one student shared, *"AI saves me time and helps me organize my writing better, so I will keep using it."* Another respondent noted, *"I feel more confident with AI assistance because it gives me instant feedback on grammar and structure."*

However, a few respondents expressed concerns about ethical considerations and over-reliance, stating that they would limit their AI usage. One student mentioned, *"I will use AI, but only for checking my work, not for writing everything,"* highlighting a conscious effort to maintain academic integrity. These responses align with Rafida et al. (2024), who emphasized that while students recognize AI's benefits, concerns about originality and dependence remain significant factors influencing its adoption.

Table 7: Future Intentions

Future AI Use?	Number of Mentions	Example Quotes
Yes	10	<i>"AI saves me time and helps me organize my writing better, so I will keep using it."</i>
Maybe/Limited Use	3	<i>"I will use AI, but only for checking my work, not for writing everything."</i>
No	2	<i>"I am worried about relying too much on AI, so I prefer not to use it for academic writing."</i>

These findings suggest that while AI tools are generally viewed as beneficial, students also recognize the importance of balancing their use with independent writing development. Kim (2024) recommends that AI literacy should be incorporated into academic settings to ensure students use these tools ethically and responsibly.

Conclusion

This study set out to examine the role of artificial intelligence (AI) tools in academic writing, specifically focusing on university students' perceptions, usage patterns, and the challenges they encounter. These objectives have been fully achieved by exploring how students engage with AI writing assistants such as ChatGPT, QuillBot, and Grammarly. The findings provide a nuanced understanding of students' motivations for using AI tools, the extent of their reliance on AI-generated content, their attitudes toward its effectiveness, and the key obstacles they face in integrating these technologies into their academic work.

The primary objective of this study was to investigate students' usage and perceptions, which was successfully accomplished. The study revealed that AI tools are widely used for grammar correction, paraphrasing, idea generation, and improving clarity in writing. Most participants reported positive experiences, noting enhanced writing efficiency, increased confidence, and greater independence in their writing processes. These insights confirm that AI tools are not merely supplementary but have become embedded in students' academic practices.

The second objective was to identify challenges related to accuracy, acceptance, and potential misinformation, which was also effectively addressed. Students expressed significant concerns about citation inaccuracies, the reliability of AI-generated information, and the risk of over-reliance, which may compromise critical thinking and originality. Moreover, the absence of clear institutional policies on AI use has created ambiguity, leading to ethical uncertainty among students regarding acceptable and responsible usage.

This study makes a meaningful contribution to educational theory by advancing the conceptualization of learner autonomy in digitally mediated environments. It challenges the traditional notion of autonomy as complete independence, proposing instead a model of collaborative autonomy, where human agency and technological support coexist in a dynamic balance. The findings highlight that while AI tools can enhance self-directed learning through immediate, personalized feedback, their passive use may erode deep cognitive engagement. Furthermore, the study underscores the growing importance of critical digital literacy as a core competency, emphasizing the need for students to critically evaluate, interpret, and ethically integrate AI-generated content rather than accept it uncritically.

On a practical level, the study offers actionable insights for educators and academic institutions. It calls for the development of clear, transparent policies on the ethical use of AI in academic writing, including guidelines on citation, acceptable levels of assistance, and mandatory disclosure of AI use. Rather than adopting prohibitive approaches, institutions are encouraged to embrace AI as a pedagogical tool. Integrating AI literacy into curricula can empower students to use these technologies responsibly while preserving the development of essential writing and analytical skills. Educators should guide students in leveraging AI for brainstorming, editing, and structuring tasks, while reinforcing the value of original thought, personal voice, and intellectual integrity in academic work. Despite its contributions, the study has limitations. The relatively small sample size and single-institution context may affect the generalizability of the findings. Additionally, relying on self-reported data from online interviews may introduce social desirability bias. Given the rapid evolution of AI technologies, longitudinal and cross-contextual research is needed to capture changing usage patterns and impacts over time.

Future studies should explore longitudinal trajectories of AI use and writing skill development, compare experiences across diverse institutions and cultural settings, and evaluate the effectiveness of pedagogical interventions designed to foster responsible AI integration. Research should also examine how educators adapt to these technological shifts and how institutional policies evolve in response. Ultimately, as AI continues transforming academic writing practices, this study affirms the necessity of ongoing dialogue, evidence-based policy-making, and pedagogical innovation. By aligning technological advancement with educational values, stakeholders can ensure that AI is supportive in cultivating meaningful learning, intellectual growth, and academic integrity.

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