

An Investigation into University Teachers and Students’ Perceptions of
Using Artificial Intelligence as a Writing Assistant Tool

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Abstract

This study investigates university students’ familiarity with and usage of AI-driven writing tools, as well as their perceptions of their educational value. It also examines university instructors’ views and pedagogical concerns related to the integration of such tools in academic contexts. Adopting a sequential explanatory mixed-methods design, the study collected quantitative data from 120 students via a structured questionnaire grounded in the Technology Acceptance Model (TAM), followed by qualitative interviews with 20 students and 10 teachers. The results revealed widespread student adoption of AI driven tools, strong perceived usefulness, and positive behavioral intentions to continue usage, although concerns about overreliance and ethical boundaries were also reported. Instructors acknowledged the pedagogical potential of AI tools but expressed concern regarding academic integrity and institutional preparedness. The findings support the development of strategic recommendations for responsibly integrating AI writing assistants into university curricula, emphasizing ethical use, critical engagement, and digital literacy training.

Keywords: AI Writing Assistant, Chatgpt, Co-Pilot, Meta AI, Technology Acceptance Model, Student Perception, Higher Education, Academic Writing

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INTRODUCTION

In this globalized world English language has acquired fame for international communication and trade. In Pakistan, proficiency in English, especially for students is essential for their academic pursuits, and it also opens doors for opportunities in the future. Previously, for language learning memorization, rote learning and monotonous exercises were used, but now everything is transforming, and innovation has been seen, especially the use of AI-driven tools in education. Increased fascination with the utilization of AI driven tools in the field of education has made researchers and scholars more interested in understanding its use among students and teachers.

Aside from the possible advantages, there are concerns about an excessive dependence on AI, a decline in critical thinking, and academic integrity (McCarthy, 2018). Understanding how university instructors and students feel about AI writing assistance is essential to knowing how these technologies can be successfully incorporated into learning environments (Hea & Carroll, 2021).

Artificial intelligence (AI) has started affecting a vast scope of academic activities, especially those of writing. Such tools as Grammarly and Turnitin are increasingly popular in higher educational establishments and help with writing skills. These applications usually give grammatical advice, style adjustments, content layout feedback, and sometimes, real-time feedback. To the students, they act as a medium of bridging language barriers to create clarity. In their turn, educators can use such tools to generate more efficient and individual feedback to their students (Chew et al., 2016; Wilson & Czik, 2016).

The given research addresses the question of perceptions of university students and university faculty towards the role of AI-driven writing assistants in academia. Probing into their experiences, opinions and concerns, the study will be able to determine the advantages and possible shortcomings of introducing such tools into the writing process. The methodology is based upon a mixed-methodology, where quantitative data regarding the student surveys will be accompanied by qualitative data retrieved through the interviews with the teachers and students. Such a design enables a better comprehension of the current application of AI driven tools and the way their application can be enhanced. Despite the extensive discussions from previous years, most of the research on the topic of AI in education is either technical in its approach, including the capabilities of tools, or focuses on the general acceptance of the technology, which is limited, as a rule, to the student population. What is not reflected upon is how students and teachers can interact with AI-backed writing aids in a practical and long-term manner. Nor is there much examination of how such tools are adapted to coursework, or the nature of any difficulties that are experienced in practice in an actual academic environment. This endeavour fills those gaps to the extent that it can provide a more comprehensive evaluation of AI-assisted writing in higher learning institutions.

Research Questions

1. What is the current level of familiarity and usage of AI-driven writing assistant tools among university students?
2. What are the perceptions of university students towards AI-driven writing assistant tools?
3. What are the perceptions of university teachers towards AI-driven writing assistant tools?
4. What suggestions can be made to improve the utilization of AI-driven writing assistant tools for university students?

Literature Review

Understanding Artificial Intelligence in Education

Broadly speaking, Artificial Intelligence (AI) could be discussed as the capacity of the machine to emulate smart human actions. As Sebastian Thrun points out, AI represents the potential of a machine that can simulate the intelligent behavior of a human (Troyanskaya et al., 2020). Likewise, Eric Horvitz refers to AI as a branch of computer science dealing with cognitive issues such as perception, reasoning, learning, and language comprehension (Fast & Horvitz, 2017).

With the development of education throughout the 21st century, AI has also gained increased popularity in classrooms and learning environments. The technology has personalized instruction and feedback, and encourages complex problem-solving (Lee & Johnson, 2020; Jones, 2023). Within the framework of English Language Teaching (ELT), AI-driven technology does more than motivate the learners and make their experience more interactive; it also contributes to better comprehension and fills knowledge gaps (Baidoo-Anu & Ansah, 2023).

Role of AI in Teaching and Learning Practices

Artificial intelligence is the main driver that has changed the interaction between students and teachers with educational content. The game-changing potential of AI in transforming the nature of delivery and the recipient of the instruction is brought to the fore by Mushthoza et al. (2023). With the rise in the presence of AI, studies are beginning to look at its viable use and solutions more often, specifically including in language learning and writing improvement.

AI applications in education include language learning platforms, evaluation software, adaptive learning tools, text-to-speech engines, NLP-based grammar checkers, and intelligent tutoring systems. Some of them, such as ChatGPT and Grammarly, being AI-powered writing assistants, are particularly popular in assisting with writing activities. Such websites assist students in thinking, paraphrasing, editing, and refining their writings.

AI and Language Learning: Motivation and Skills Development

The research indicates that AI contributes to motivation and engagement among students. As an example, Moybeka et al. (2023) reveal that adaptive feedback and contextual learning also allow AI to engage English as a Foreign Language (EFL) learners more actively due to the interactive characteristics of this technology. According to reported results by Rusmiyanto et al. (2023), the overall results of students who used AI driven tools in the form of virtual assistants and speech recognition technologies reflected improved speaking performance accuracy and elocution.

AI driven Tools in Writing Instruction

One important tool that is helpful in making better writing in educational life is artificial intelligence. Writing becomes less daunting as ChatGPT, Grammarly, and Turnitin provide specific recommendations, improve fluency and reduce mechanical mistakes (Chew et al., 2016; Wilson & Czik, 2016). Chen (2025) found that students appreciate the depth and clarity of input that AI feedback allows them to give. Nevertheless, others say that there is less originality and excessive dependency.

Barrett & Pack (2023) explored how both students and educators perceive these tools. While students appreciated their ability to accelerate drafting and revising, teachers worried about plagiarism and the erosion of critical thinking skills. Similarly, Gustilo et al. (2024) highlighted how the lack of institutional guidance on AI usage creates confusion and risk around academic integrity.

Pedagogical Implications and Institutional Readiness

Educators such as Hossain & Al Younus (2025) underline the necessity to redesign pedagogy in order to integrate AI in a meaningful way. They endorse the movement to writing that is more focused on creativity, developing original arguments, and critical thinking. This is in line with greater attempts to make the use of AI more humanized in education as opposed to becoming an alternative to human thinking. According to a study conducted in Indonesia by Utami & Winarni (2023), Grammarly helped improve academic writing, especially in such aspects as coherence, structure and vocabulary of the students. The latter, Solak (2024) adds, are students who actively practised with AI outputs, editing, reflecting, and questioning, demonstrating the highest learning gains, which means that AI may be used to foster metacognitive development.

Research from Indonesia by Utami & Winarni (2023) found that Grammarly enhanced students' academic writing, particularly in areas like coherence, structure, and vocabulary. Solak (2024) adds that students who actively engaged with AI outputs—editing, reflecting, and questioning—showed the greatest learning gains, suggesting AI can support metacognitive development.

Navigating Ethical Concerns and Power Dynamics

Despite the authority over the learners that AI presents, authorship and authority remain to be problems than solutions in the classroom. Nelson et al. (2025) warn that an excessive use of AI may damage the student-teacher relationship so that one will not know who owns the process of learning. This evidence accentuates the significance of plain, moral structures to manage the suitable implementation of AI.

Studies collectively make a valuable portrait of how AI can be used both effectively in learning as a type of aid to students and as a learning issue to teachers as well. Although the gains in writing fluency, motivation, and language acquisition are self-evident, the process of implementation requires subtle steps to ensure that academic integrity levels and respect for human agency during the learning process are adhered to. The now-widely-held view of researchers is no longer to abandon AI, but to educate students to use it, not as a crutch but as a scaffold.

Collectively, these studies present a balanced perspective on the instructional benefits and ethical considerations of AI writing tools. However, gaps remain concerning how students and teachers practically engage with these tools in real academic settings. The following section outlines the methodological framework adopted to address these gaps.

Methodology

Research Design

This study adopts a sequential explanatory mixed-methods design, which involves two distinct phases: an initial quantitative phase followed by a qualitative phase. This design was selected for its ability to offer both breadth and depth of understanding—quantitative results establish general trends, while qualitative insights help interpret and expand upon those findings. The approach also supports data triangulation, increasing the reliability and validity of the overall results.

Participants and Sampling

Participants were selected across multiple proficiency levels to ensure diversity, and the sample included both students and teachers actively engaged with AI writing tools.

Instruments

Student Questionnaire

The student survey instrument was based on the **Technology Acceptance Model (TAM)** and included four main constructs:

- Perceived Usefulness (PU)
- Perceived Ease of Use (PEOU)
- Attitude Toward Use (ATU)
- Behavioral Intention to Use (BI)

Each construct was assessed through a **multiple-choice grid using a 5-point Likert scale** ranging from “1 – Strongly Disagree” to “5 – Strongly Agree.” Open-ended questions were also included to capture students’ subjective experiences, challenges, and recommendations.

Semi-Structured Interviews

Qualitative data were collected through interviews with:

- **20 students**, to explore their motivations, habits, and nuanced views about AI writing tools.
- **10 teachers**, to gain insight into their perceptions, concerns, and recommendations regarding the integration of AI-driven tools in teaching and assessment practices.

The interview protocols were designed to complement the questionnaire themes, allowing for **elaboration, clarification, and triangulation** of key findings.

Data collection procedure

- **Quantitative data** from the Likert-scale items were analyzed using **descriptive statistics** (mean, standard deviation, frequency) and **inferential tests** such as Chi-square and Kruskal-Wallis to examine relationships between course level and usage patterns.
- **Qualitative data** from the interviews were subjected to **thematic analysis**, following Braun and Clarke’s (2006) six-phase framework. Themes were coded inductively and iteratively to identify common patterns and divergent views.

Ethical Considerations

Ethical approval was obtained from the institutional review board. All participants were informed of the purpose of the study, assured of the confidentiality of their responses, and given the option to withdraw at any time. Informed consent was collected from all interview participants prior to recording. With a robust and ethically sound methodological foundation, the study proceeded to data collection and analysis. The results of both the quantitative survey and qualitative interviews are presented in the following section.

Data Analysis

Participant Demographics

Student Participants

A total of 120 students participated in the survey, distributed across three CEFR-aligned proficiency levels: B2.1 (n = 40), B2.3 (n = 36), and C1.2 (n = 44). These levels reflect the students’ official placement in academic English courses at their institution. Participants were between 18 and 25 years old, with a gender distribution of 52% female and 48% male. All respondents reported sufficient internet access and demonstrated basic digital literacy. For the qualitative phase, 20 students were purposively selected to represent diverse proficiency levels and varying patterns of AI tool usage. This sampling strategy enabled a

deeper exploration of their writing behaviors and contextual experiences with AI-based writing assistants.

Teacher Participants

Ten university teachers participated in semi-structured interviews. They had an average of 8.4 years of teaching experience and demonstrated familiarity with AI writing tools through personal use, classroom observation, or scholarly discussion.

Awareness and Utilization of AI Writing Tools (RQ1)

General Familiarity

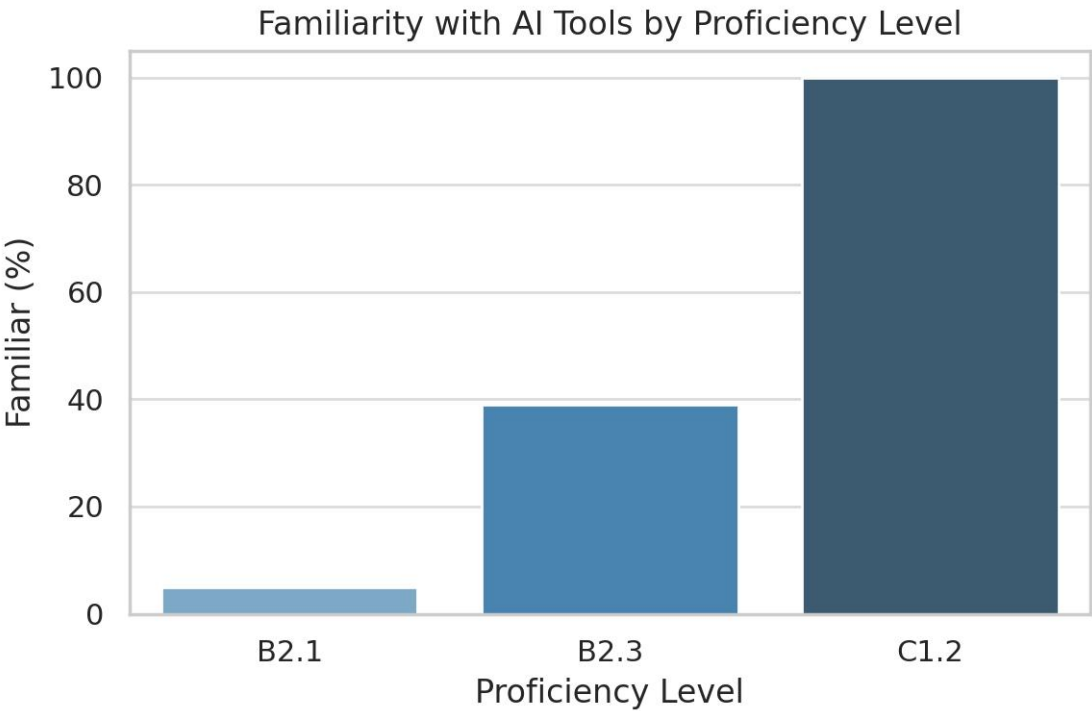
Survey data revealed that 96% of student participants had used AI driven tools such as ChatGPT at least once, indicating widespread familiarity with generative AI driven tools in academic contexts. Only 4% had no prior experience with AI driven tools, underscoring its growing presence in higher education settings.

Proficiency-Level Differences in Use

Familiarity with AI driven tools varied significantly by proficiency level:

- B2.1: 5% (2 out of 40 students)
- B2.3: 39% (14 out of 36 students)
- C1.2: 100% (44 out of 44 students)

A chi-square test of independence indicated a statistically significant relationship between language proficiency and AI driven tools usage, $\chi^2(2, N = 120) = 64.83, p < .001$. These results suggest that students with higher English proficiency are more likely to engage with AI writing tools.

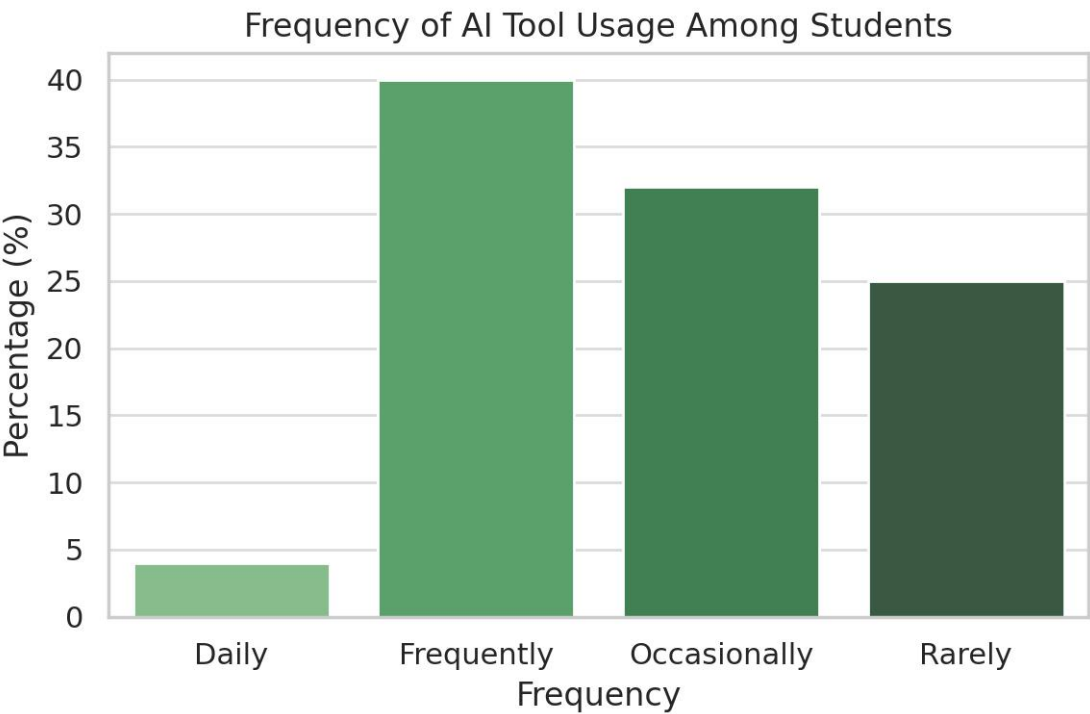


Frequency of Use

Reported usage frequency among students was as follows:

- Daily: 4%
- Frequently: 40%
- Occasionally: 32%
- Rarely: 25%

A Kruskal-Wallis test revealed significant differences in usage frequency across proficiency groups, $H(2) = 13.72, p < .01$, with C1.2 students exhibiting the most consistent and frequent usage patterns.

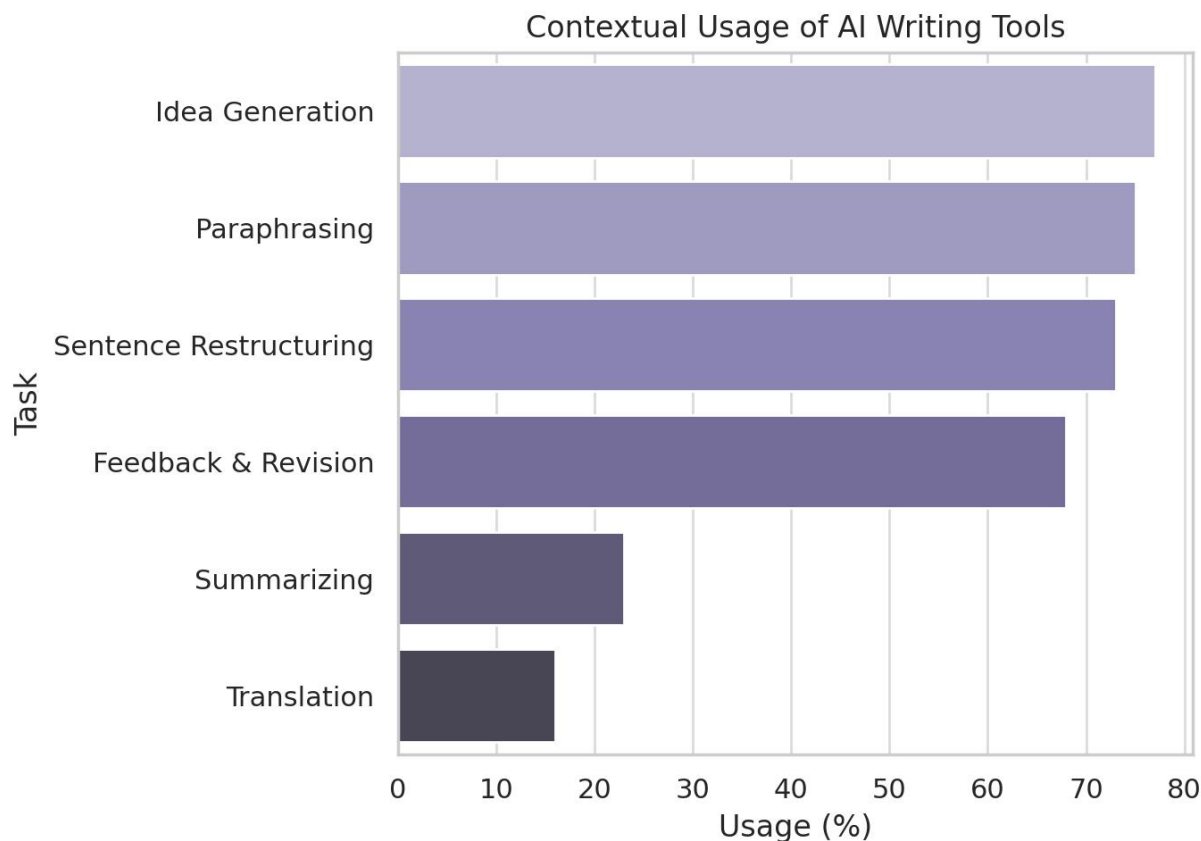


Contextual Usage

Students primarily utilized AI driven tools such as ChatGPT for:

- Idea generation (77%)
- Paraphrasing (75%)
- Sentence restructuring (73%)
- Feedback and revision suggestions (68%)
- Summarizing (23%)
- Translation (16%)

The tool was most commonly used for formal writing tasks such as argumentative or opinion essays (95%), followed by formal letters (64%) and informal letters (39%). Some students avoided using AI driven tools for personal writing due to concerns about tone and authenticity. These findings indicate that students predominantly used AI driven tools during pre-writing and revision phases, rather than for generating complete texts.



Perceptions of AI Writing Tools (RQ2)

Student perceptions were measured using the constructs of the Technology Acceptance Model (TAM): Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude Toward Use (ATU), and Behavioral Intention (BI). Results from 120 surveys were triangulated with insights from 20 student interviews.

Perceived Usefulness (PU)

Students largely viewed ChatGPT as a performance-enhancing tool:

- Increased productivity (M = 3.89, SD = 0.69; 82% agreement)
- Made writing easier (M = 4.05, SD = 0.77; 84%)
- Added academic value (M = 3.75, SD = 0.75; 73%)

Perceived Ease of Use (PEOU)

Perceptions of usability were moderately positive:

- Required minimal effort (M = 3.39, SD = 1.13; 52%)
- Easy to use without prior knowledge (M = 3.61, SD = 0.75; 57%)
- Able to deliver needed results (M = 3.27, SD = 1.01; 45%)

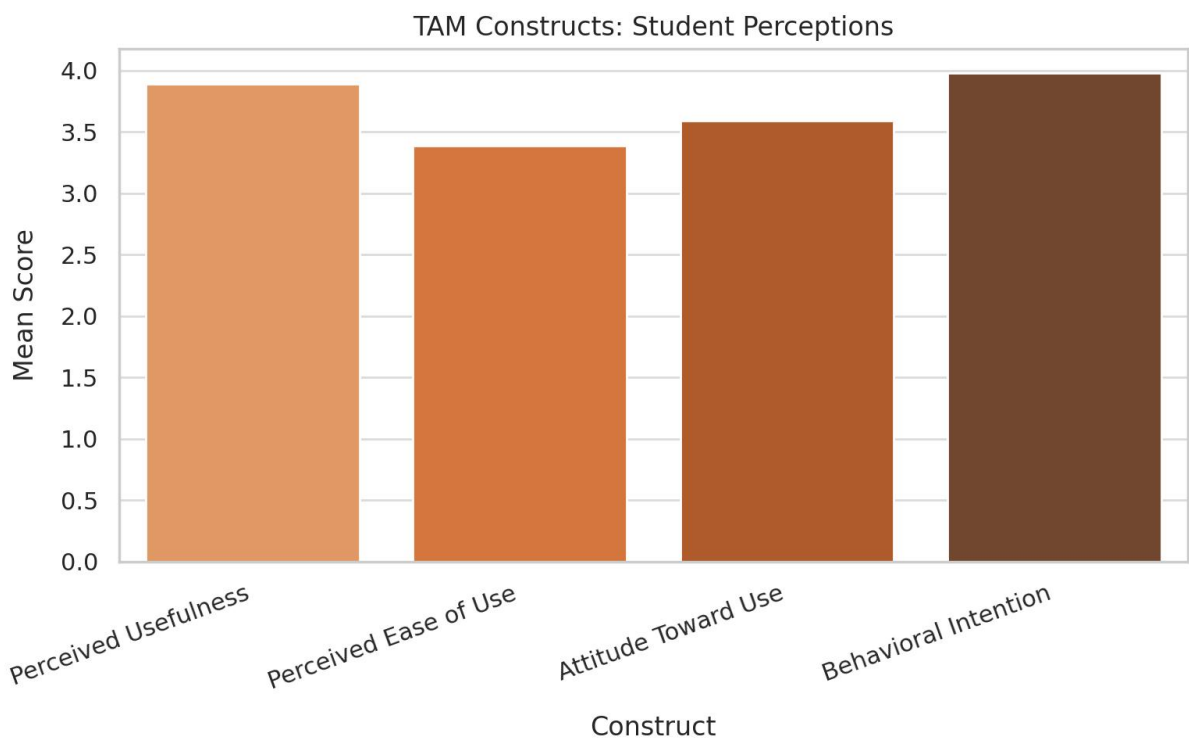
While most students found AI-driven tools accessible, several cited difficulties with prompt formulation and achieving contextually accurate outputs. This points to the importance of prompt engineering education.

Attitudes and Behavioral Intention (ATU, BI)

Overall, student attitudes were favorable:

- Felt good using AI-driven tools (M = 3.59, SD = 0.87; 64%)
- Comfortable using it effectively (M = 3.70, SD = 0.73; 70%)
- Intend to continue using it (M = 3.98, SD = 1.02; 77%)
- Will recommend to peers (M = 4.00, SD = 0.96; 80%)

• Plan to use it in future assignments ($M = 3.68$, $SD = 0.91$; 64%)
These findings suggest strong behavioral intentions for continued use of AI in academic writing.



Insights from Teacher Interviews (RQ3)

Interviews with university teachers revealed both enthusiasm and concern. Common themes included:

- Academic integrity and plagiarism: Teachers were wary of unacknowledged AI-generated content.
- Overreliance on AI: They observed that students might depend too heavily on AI, reducing engagement with the writing process.
- Erosion of critical thinking: Some feared that AI might diminish students' ability to think and write independently.

Despite these concerns, teachers recognized that AI could scaffold struggling writers, support idea generation, and enhance vocabulary development. There was strong consensus on the need for institutional policy development and staff training to ensure responsible integration of AI driven tools.

Recommendations for Improved Utilization (RQ4)

Based on participant feedback, the following strategies are proposed for the effective and ethical integration of AI writing tools:

1. Prompt Engineering Training: Conduct workshops to help students formulate effective prompts and better utilize AI outputs.
2. Transparency and Declaration: Require students to disclose the extent and nature of AI tool usage in assignments.
3. Curriculum Integration: Embed AI-human text comparison activities in writing instruction to build critical evaluation skills.
4. Policy Frameworks and AI Literacy Programs: Develop institutional policies, training modules, and ethical guidelines for both students and faculty.



These measures aim to promote informed, ethical, and pedagogically aligned use of AI in academic contexts.

The analysis presented above uncovers diverse patterns in AI usage, perceptions, and concerns. The following discussion section interprets these findings in light of existing literature and pedagogical theory.

Construct	Mean	Standard Deviation	Agreement %
Perceived Usefulness (PU)	3.89	0.69	82%
Perceived Ease of Use (PEOU)	3.39	1.13	52%
Attitude Toward Use (ATU)	3.59	0.87	64%
Behavioral Intention (BI)	3.98	1.02	77%

Test	Dependent variable	Grouping variable	Test statistic	P value	significant
Chi-square Test of Independence	Use of AI tools (Yes/No)	Proficiency Level	$\chi^2(2, N=120) = 64.83$	< .001	yes
Kruskal-Wallis H Test	Frequency of AI tools Usage	Proficiency Level	$H(2) = 13.72$	< .01	yes

Discussion

The current research studies the example of how undergraduate students and the university faculty use AI-based writing tools, outlining the concepts of familiarity, impressions, and considerations of responsible use. Findings highlight an entangled landscape willing to ascend dependency on such platforms as ChatGPT, changing perceptions, and teaching difficulties.

The RQ₁ was: What is the prevalence of current use of AI-based writing assistants among university students? According to the survey findings, 96 % of the responders utilized AI-driven tools like ChatGPT; the language proficiency also showed a strong correlation with the level of use. The students at the C 1.2 level have reported full acquaintance but the students at the B 2.1 level reported very little. This trend means that the high level of confidence in both language proficiency and digital literacy could be the foundation of the desire to implement AI in the process of academic writing.

RQ₂ focuses on the perceptions of students toward AI-based writing tools. Based on survey results, the majority seemed to hold a positive view, with a mean score of 3.89 for Perceived Usefulness (PU) and 3.39 for Perceived Ease of Use (PEOU). The respondents admitted that AI can make their lives more productive and that a regular text writing activity is made easier with its help; generally, ChatGPT is seen as a confidence-building, time-saving tool.

There is discernment within this wide-sweeping optimism as revealed in qualitative interviews, however. Although students admit the effectiveness of AI driven tools, they also notice errors in the results, clashing tones and risks of over-reliance. It is noteworthy that some interviewees also said that the interactive use of AI driven tools led to a more profound contemplation, since they criticized, corrected, or discarded what the model created, and as a consequence gained significantly more metacognitive awareness that literature has not spoken much about.

Taken together, these results show a complex and nuanced terrain. The increasing adoption of automated writing tools, combined with changing pedagogical concerns and attitudes, suggests that the use of AI in academia cannot be seen through a straightforward dichotomy. Rather, it ought to be viewed as a complex, context-dependent issue.

This chapter explores the ambivalence of respondents to the use of AI writing assistants by students (RQ3). Statistics indicate that although the teachers indicated that AI-driven tools like ChatGPT would be beneficial in scaffolding weak writers, they had strong concerns about the plagiarism issue, surface writing, and whether critical thinking can be avoided. Another interesting observation is that there is not enough institutional clarity to make it feel like most instructors are unprepared to encounter AI situations and in need of training, policy formulation, and ethics advice. Some respondents achieved punitive or inconsistent responses from the administration, while others highlighted the need to redefine pedagogical goals to focus on higher order skills such as argumentation, synthesis and originality.

The above observations correspond with current changes in the pedagogy of the higher education setting, in which digital fluency and AI literacy have become critical learning outcomes (Dehouche, 2021).

Analysis related to Research Question 4 (RQ4) sheds light on actionable strategies for promoting transparent, ethical, and pedagogically aligned use of AI writing tools in higher education. To promote the transparent use of AI, students proposed quick engineering consultations, clear guidelines on the time and specifications of the working with AI, and assignment structure that facilitates clear use of this tool. Curriculum-level reforms were suggested by teachers such as AI literacy sessions, critical evaluation activities, and code of conduct on an institutional level. Collectively, these results promote a strategy that does not rule out AI completely or fully endorses the concept without deliberation. Instead, the findings point to the necessity of practicing informed, ethically sound, pedagogically aligned practices, which is congruent with constructivist learning theory because ChatGPT can be regarded as a mediational tool, as long as it is suggested that students question, criticize, and contextualize the text produced.

Conclusion

By exploring the generative AI within the context of education, the present study addresses the issue from two sides, which determines the perspective of both students and teachers, thus expanding the scope of expanding literature on the topic. The results indicate that students are already extensively using AI-powered writing assistants like ChatGPT in their writing and especially those students who have more experience with this kind of technology. Students see these tools as a good means of generating ideas, refining the language and using editorial tools. Though professors express appropriate expectations about its positive aspects, they are concerned with the integrity of the academic discipline and the consistency of instructions.

The findings highlight the need for university institutions to design effective research-based policies and pedagogy of AI integration urgently. Learning institutions should no longer be focused on detection and prohibition; they should encourage AI literacy, moral reasoning, and critical usage. This goal mandates the joint efforts of learners, educators, curriculum developers and academic administration.

The studies investigating the generalizability of these findings should be conducted in other institutional settings, in other disciplines and with other sets of students to expand these results. The longitudinal research may explore the implications of the

prolonged use of AI in influence on the student learning outcomes, quality of writing, or academic integrity.

With the fast- changing technological environment, the advent of the AI is no longer a question of whether they will use it, but how teachers will lead students to use it in a smart manner.

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