

# Perceptions and Extent of Utilization of Generative Artificial Intelligence (AI) among Filipino Students

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## Abstract

This study examines Filipino students' perceptions and use of Generative AI in academic writing. An online survey of senior high school and college students in Region I assessed demographics, attitudes, beliefs, preferences, and AI tool usage. Data analysis used descriptive statistics and Pearson's correlation coefficient.

Findings indicate neutral attitudes towards AI in academic writing, with a strong positive correlation between attitudes and AI usage. Preferred tools include Grammarly, Quillbot, and Google Docs, favoring grammar checking, content generation, and collaborative writing. Valued features include text summarization and style enhancement.

The study highlights the need for AI literacy programs in curricula and for developers to tailor AI tools to Filipino students' needs. Policymakers should promote responsible AI use in education. This research guides future educational practices and policies in the Philippines regarding AI in academic writing.

**Keywords:** Generative AI, Academic Writing, Filipino Students, Perceptions, Utilization

## 1. Introduction

The realm of scholarly communication rests upon academic writing, acting as the conduit for the exchange of ideas, critical discourse, and intellectual engagement within academic circles. This encompasses a diverse array of written formats—essays, research papers, literature reviews, and dissertations—spanning across myriad academic disciplines. However, mastering the craft of academic writing presents a myriad of challenges for students (Lopres et al., 2023; Tocalo et al., 2022). From navigating intricate citation styles to crafting coherent arguments that align with disciplinary conventions, students encounter multifaceted hurdles on their academic writing journey (Saavedra, 2020). Therefore, to foster academic success, it is imperative for educators and students alike to comprehend the inherent obstacles intrinsic to academic writing. This understanding forms the bedrock for developing effective strategies to navigate and surmount these challenges, thereby fostering meaningful engagement with scholarly discourse and advancing knowledge within academic communities (Bond & Bedenlier, 2019; Fabro et al., 2023).

Academic writing serves as a vital conduit through which individuals can articulate their thoughts and ideas cohesively, facilitating meaningful cognitive exchange (Knoch et al., 2016). Despite its paramount significance, academic writing poses considerable challenges for students, particularly in mastering grammatical rules and structures (Pratama, 2021). The intricate conventions inherent in academic writing, including citation guidelines and stylistic expectations, often present formidable obstacles for students, leaving them grappling to meet rigorous standards (Tocalo et al., 2022). Conquering these hurdles is crucial for students to engage actively in disciplinary discussions and contribute significantly to scholarly dialogues.

In recent years, Artificial Intelligence (AI) has emerged as a transformative force in academic and professional writing, offering innovative solutions to support writers throughout the writing process. AI-

powered writing assistants, armed with advanced natural language processing algorithms and machine learning techniques, have revolutionized writing practices by providing assistance in idea generation, language refinement, grammar enhancement, and document formatting. Abdullayeva and Musayeva (2023) emphasized the significant impact of AI on students' writing abilities. However, while integrating AI into writing instruction offers potential benefits, concerns persist regarding its potential negative effects on learning and academic writing development. Responsible and thoughtful use of AI is crucial, considering both its advantages and disadvantages. The objective should be to utilize AI as an additional tool to enhance writing instruction, complementing traditional approaches rather than replacing them entirely. In the research of Kurniati and Fithriani (2022), they highlighted the global concern over writing skills, with numerous studies addressing challenges in higher education. These AI tools analyze extensive datasets to identify patterns, correct errors, and provide contextually relevant suggestions, ultimately improving writers' skills and enhancing overall writing quality (Smith & Johnson, 2020).

The integration of AI into academic writing practices has significantly broadened access to writing assistance, extending its benefits to a diverse spectrum of writers, including professionals, students, and non-native language speakers (Khalifa & Albadawy, 2024). However, while AI-driven writing tools offer substantial advantages in terms of efficiency, effectiveness, and inclusivity, they also raise ethical concerns related to algorithmic bias, data privacy, and the potential displacement of human labor (Sharma, 2024). Therefore, integrating AI into academic writing demands thoughtful reflection on its societal and ethical consequences. This entails creating robust governance structures and ethical standards to guarantee the responsible advancement and use of AI technologies in writing assistance.

As AI continues to advance, it holds immense potential to enhance writing and language skills across various industries, including education, marketing, journalism, and customer service. However, the integration of AI must be approached judiciously to mitigate potential risks and ensure alignment with human interests and values (Gabriel, 2020). By grasping the role and influence of AI in academic writing, educators, researchers, and practitioners can harness its advantages while tackling its obstacles, fostering ethical, responsible, and inclusive writing practices in the digital age.

In the context of Filipino students, the perceptions and utilization of AI tools in academic writing represent an intriguing area of inquiry. With the recent implementation of the K-12 educational system in the Philippines, senior high school students are increasingly exposed to academic writing tasks as part of their curriculum. Senior High School students in the Philippines regularly participate in academic writing tasks, which encompass a variety of activities such as essays, research papers, and project reports (Cano, 2022; Roxas, 2020; Tipon et al., 2021). Similarly, at the college level, academic writing becomes even more prominent, with students required to produce a higher volume of scholarly work across various disciplines (Budjalemba & Listyani, 2020; Francisco et al., 2023; Wannemacher, 2023). A study conducted by Santiago Jr et al. (2023) found that most college-level students rely on writing assistance tools to cope with the demands of academic writing assignments.

Taking this into account, understanding how Filipino students perceive and employ AI writing assistants can yield invaluable insights into their efficacy, usability, and impact on writing practices within this specific context. Consequently, this research endeavors to delve into the perceptions and extent of utilization of AI among Filipino students, shedding light on their experiences, challenges, and preferences regarding AI-powered writing tools. By examining Filipino students' attitudes, beliefs, preferred AI tools and utilization patterns concerning AI writing assistants, this study aims to contribute to a deeper understanding of the role and impact of AI in academic writing among Filipino students, thereby providing valuable insights for educators, researchers, and policymakers.

## **2. Literature Review**

This section presents a review of literature and studies related to the study which served as the guide of the researchers in the conceptualization and in the conduct of the study.

### **2.1. Capabilities of Current AI Writing Technologies**

AI, a branch of research focused on creating computer systems that perform human-like functions, has emerged as a pivotal technological advancement in education (Dwivedi et al., 2021; Rodrigo, 2023). Educational institutions worldwide are embracing AI to streamline tasks and enhance teaching, leading to

reduced paperwork and workload for instructors (Alam, 2021). AI implementation enriches the learning experience by facilitating intelligent training systems and personalized content (Chen et al., 2020). AI technologies, often referred to as machines capable of human-like thinking and decision-making (Russel & Norvig, 2016), have permeated education, with students preferring free AI writing tools (Zulfa et al., 2023). However, concerns arise about equitable access and the need for inclusivity (Al Mahmud, 2023). The emergence of AI in education is transformative, mirroring human-like thinking processes (Popenici & Kerr, 2017). Despite potential benefits, concerns persist about AI's impact on learning and writing development (Abdullayeva & Musayeva, 2023).

Recent studies conducted by Adams and Chuah (2022) highlight the role of AI-powered tools like Quillbot and WordTune in enhancing writing skills (Kurniati & Fithriani, 2022), while acknowledging limitations and the need for human guidance (Algaraady & Mahyoob, 2023). Studies by Al Mahmud (2023), Abdul Rahman et al. (2022), and Chong (2021) demonstrate the positive impact of AI tools on students' writing abilities, language accuracy, and self-assurance. Although AI-assisted language teaching is still in its early stages, it provides technical support for advancing mixed education models in English writing.

In conclusion, AI technologies offer opportunities and challenges in academic writing instruction. Collaboration between educators and developers is essential to maximize benefits while ensuring responsible and effective use (Abdullayeva & Musayeva, 2023). Understanding the strengths and weaknesses of AI writing tools empowers writers to make informed decisions about their integration into the writing process.

## **2.2. Use of AI Writing Assistants in Academic Contexts Globally**

AI has already made its way into education, proving helpful when paired with high-quality learning materials (Lee et al., 2020). AI writing assistants have revolutionized academic writing practices, offering tools to boost productivity and quality. This review analyses the integration of AI writing assistants in academic environments worldwide, investigating adoption rates, usage patterns, and perceived effects on writing methods and educational achievements.

Llego (2023) emphasizes the importance of preserving a synergy between human expertise and AI technologies, while Sharma (2024) highlights the need for responsible integration and a balance between human-guided learning and AI support. Adoption of AI writing assistants varies across regions and disciplines (Lee et al., 2024), with some institutions embracing them and others proceeding cautiously due to concerns about academic integrity and learning outcomes. However, there is a noticeable inclination towards incorporating AI writing tools into curricula. Students and academics employ AI writing assistants for diverse purposes, from grammar correction to content generation, particularly to enhance writing skills, manage workloads, and meet deadlines (Abbasi et al., 2024). Educators also utilize these tools to streamline grading and provide personalized feedback (Singh & Ram, 2024).

Studies on the perceived impacts of AI writing assistants yield mixed findings (Malik et al., 2023), with some reporting positive effects on productivity and quality, while others express concerns about overreliance and the erosion of essential writing skills (Mogavi et al., 2023). Questions arise regarding the efficacy of AI tools in fostering critical thinking and originality (Carobene et al. 2024; Raheem et al., 2023). Despite challenges, many view AI writing assistants as valuable supplements to traditional instruction, offering immediate feedback, personalized support, and access to advanced resources (Maphoto et al., 2024). These tools can also promote inclusivity and accessibility in higher education (Beyene, 2023).

The integration of AI writing assistants presents both challenges and opportunities (Pedro et al., 2019). Addressing concerns about academic integrity, privacy, and ensuring responsible use is crucial. However, leveraging AI technology can enhance writing instruction, support student learning, and foster innovation. Critical dialogue, collaborative research, and evidence-based practice are essential to maximize the potential of AI writing assistants in academia and empower students as effective writers and thinkers in the digital age.

## **2.3. Academic Writing Challenges of Filipino Students**

Academic writing serves as a fundamental pillar of research and education, distinguished by its methodical presentation of ideas, evidence-based arguments, and coherent logic. It also functions as a

crucial channel for scholars to convey their research discoveries and showcase their critical thinking and analytical abilities (Hyland, 2021; Kellogg, 2008). However, mastering academic writing poses significant challenges for students, particularly in handling vast amounts of information and complex ideas (Hyland, 2021).

The emergence of GAI-powered writing assistants is causing disruptive changes in academic writing in higher education. The integration of AI into academic writing has emerged as a promising solution to these challenges (Schcolnik, 2018; Strobl et al. 2019), providing scholars with tools to streamline their research, writing, and composition processes (Khalifa & Albadawy, 2024). These digital innovations, including digital libraries, online collaboration platforms, and specialized writing software, are revolutionizing how academic writing is produced and disseminated. AI-powered writing assistants are reshaping academic writing practices in higher education, offering students new opportunities to enhance their writing skills and productivity (Schcolnik, 2018; Strobl et al., 2019). Students can access advanced tools for grammar correction, plagiarism detection, and content generation, empowering them to overcome common writing challenges and produce high-quality academic work. However, students must also develop their critical thinking and analytical capabilities to excel in academic writing (Fabro et al., 2023).

The use of AI has become a game-changer in education, particularly in shaping academic writing practices among Filipino students. AI-powered writing assistants like Grammarly, Turnitin, and Google Translate have become indispensable companions for Filipino students in tackling the intricacies of academic writing tasks (Eslit et al., 2023). Golan et al. (2023) advocate for the widespread adoption of AI-based tools for scientific writing, citing AI as one of the most important and transformative technologies of the present time. Despite their remarkable capabilities, AI writing technologies face notable limitations, such as contextual understanding of language, which underscores the indispensable role of human intervention and critical thinking skills (Marzuki et al., 2023). Overreliance on AI writing assistants may stifle students' creativity and critical thinking abilities. Therefore, educators and institutions must emphasize the importance of balanced use, encouraging students to view AI as a supportive tool rather than a substitute for authentic learning experiences.

The challenges faced by Filipino students in academic writing are multifaceted and diverse, reflecting the complexities of the writing process and the unique educational context of the Philippines. Language proficiency issues, limited access to resources and support services, and the need for equitable access to technological tools are among the challenges that need to be addressed. Studies by Malik et al. (2023) and Lipalam et al. (2023), suggest that AI writing tools have the potential to enhance the academic writing performance of Filipino students, particularly in terms of grammar, syntax, and overall writing quality. However, further research is required to comprehensively understand their long-term effects on learning outcomes and address potential issues related to over-reliance and plagiarism (Estrellado & Miranda, 2023; Herminigildo et al., 2024; Obenza et al., 2024).

### **3. Methodology**

This section discusses the methodology of the study which includes the research design, locale of the study, population and sampling procedure, research instrument, data gathering procedure, and statistical treatment.

#### **3.1. Research Design**

This study used descriptive-correlational research to explore how Filipino students interact with Generative AI in academic writing.

The research questions covered various aspects, including the participants' socio-demographic details like age, gender, school types, and geographical locations. Additionally, the researchers examined Filipino students' preferences regarding AI tools used for academic writing. This entailed two main inquiries: firstly, an investigation into the different types of AI tools they are familiar with, and secondly, an analysis of the particular features of these tools that appeal to the students.

The research then shifted focus to the perceptions of Filipino students regarding the integration of AI into academic writing tasks. This involved assessing their attitudes towards the use of AI in academic contexts and gaining insight into the underlying beliefs that influence their perspectives on AI. Moreover,

the study aims to uncover the self-perceived level of utilization of AI tools for academic writing tasks among Filipino students. This self-assessment provides valuable insights into the students' perceived efficacy and comfort in incorporating AI into their writing processes.

To understand the connections among different variables, the researchers investigated potential correlations. Specifically, they examined the significant relationships between the socio-demographic characteristics of the students and their perceptions of AI in academic writing, as well as their actual utilization of AI tools. Finally, the interplay between perceptions and utilization is further probed, with an inquiry into whether the perceptions of Filipino students regarding AI have a significant relationship with their actual level of utilization of AI tools in academic writing.

### **3.2. Locale of the Study**

The study was conducted in areas in Region I, Philippines. Region 1 consists of four (4) provinces namely: the province of Ilocos Norte, Ilocos Sur, La Union and Pangasinan.

Region 1, also known as the Ilocos Region, is located in the northern part of the Philippines. In terms of education, Region 1 has a significant number of students across various educational levels, including senior high schools, and colleges.

In terms of senior high schools, Region 1 boasts a considerable number of public and private secondary schools offering education from Grades 11 to 12. These institutions provide comprehensive academic programs and extracurricular activities to prepare students for higher education or entry into the workforce. Furthermore, Region 1 is home to numerous colleges and universities known for their academic excellence. These higher education institutions (HEIs) offer a wide range of undergraduate and graduate programs across various disciplines, including arts and sciences, engineering, education, business, and healthcare.

Overall, Region 1 Philippines has a rich educational landscape with a diverse array of institutions catering to students of all ages and interests. The region is known for its commitment to providing quality education and fostering academic excellence among its students.

To this end, site recruitment involved identifying public and private intermediate, senior high schools, and college levels in the whole of Region 1. The wide distribution of locales enhanced the representation of the target population of Filipino students utilizing AI for academics across the country. These locations provided a diverse and representative sample for the study, allowing for a comprehensive investigation into the research topic.

### **3.3. Population and Sampling Procedure**

The target population for this study comprised Filipino students enrolled in senior high school and college levels in Region I who have utilized AI technologies to assist with their academic writing tasks. Academic writing tasks encompass a wide range of assignments that students undertake as part of their academic studies such as essays, reports, term papers, research papers, case studies, reflection papers, theses etc. that are required by schools and universities. By specifically targeting senior high school and college levels, the study aimed to provide a comprehensive insight into the utilization of AI among students at different stages of their academic journey. Moreover, focusing on these levels allowed for a thorough examination of how AI tools contribute to enhancing academic writing skills among students transitioning from secondary to tertiary education. Given the significance of senior high school and college levels in the Philippine education system, understanding the role of AI in academic writing tasks at these levels is essential for informing educational practices and policies. Table 1 provides detailed demographic information about the participants.

Out of 1200 online users engaged in the survey, only 886 users met the criteria and qualified as participants. The exclusion of 314 individuals resulted from non-compliance with the set criteria. To be eligible in this study, participants had to meet the following criteria: 1) be a Filipino student; 2) be currently enrolled for the academic year 2023-2024; 3) utilize AI tools and platforms for academic writing engagements; and 4) provide consent to participate in the study.

All of the participants are enrolled in the second semester SY 2023-2024. The majority of respondents are in the age range of 19-21 years old (37.80%), followed closely by the age range of 22-24 years old (33.20%). Meanwhile, there are more female respondents (66.70%) compared to male respondents



(30.5%). A majority of respondents attend public schools (63.40%) and they come from urban areas (59.50%).

Table 1. Demographic information of the participants (N = 886)

Demographic	Value	f	%
Age	16 - 18	225	24.70
	19 - 21	345	37.80
	22 - 24	303	33.20
	25 and older	13	1.40
Sex	Male	278	30.5
	Female	608	66.70
Educational Level	Senior High School	225	24.70
	College	661	72.50
Type of School	Public	578	63.40
	Private	308	33.80
School Location	Urban	543	59.50
	Rural	343	37.60

Note: f=frequency; % =percentage

### 3.4. Research Instrument

A researcher-developed survey questionnaire served as the principal instrument for data collection in this study, which was composed of six distinct parts.

The first part of the survey included the informed consent form. The second part of the survey focused on the Respondents' Socio-Demographic Profile and aimed to provide a contextual understanding of the participants. This includes demographic details such as age, sex, parent's monthly income, educational level, type of school, and school location. The objective was to comprehend the background and context within which the participants engage with AI, thereby facilitating nuanced insights into potential variations, patterns, or correlations influenced by socio-demographic factors.

The third part, Familiarity with the Types and Features of AI, sought to gauge the participants' depth of familiarity with various aspects of AI. This section aimed to explore the extent to which respondents are acquainted with different types and features of AI, providing insights into their knowledge base and potential impact on their perceptions and utilization.

The fourth part, Perceptions of Students on the use of AI, delves into two components: attitudes towards AI use and beliefs towards AI. This section aimed to describe the subjective experiences, opinions, and sentiments of respondents regarding the integration of AI in academic contexts. This involved understanding the positive and negative attitudes, as well as beliefs, to unravel the complex web of perceptions that students associate with AI. The survey used a 5-point rating scale from Strongly Agree to Strongly Disagree. For the 10-attitude towards AI use statements, five are positive, and five are negative, with ratings ranging from 1 to 5, and 5 being the highest. The score represents agreement or disagreement. Negative items have reversed scoring. On the beliefs scale, there are 7 positive and 3 negative items, also scored from 1 to 5. Ratings indicate the degree of belief, with reversed scoring for negative items.

The last part is the Extent of Utilization of AI, which is composed of ten statements, aiming to quantify the depth and breadth of participants' engagement with AI. This section sought to elucidate the extent to which students actively incorporate AI tools in their academic writing tasks. Responses to the extent of AI utilization items were "Never", "Sometimes", "Often" and "Always".

The researchers diligently crafted the questionnaire, drawing on insights from extensive literature reviews (e.g., Chan & Hu, 2023; Kim et al., 2020; Lu, 2019; Malik et al., 2023; Shoufan, 2023). The questionnaire remained accessible for responses throughout a five-month duration, spanning from January to May 2024, which corresponded to an entire semester, allowing for optimal participation and ample time for questionnaire completion. Participation in the study was entirely voluntary.

The researcher-developed survey questionnaire underwent pilot testing before being used for data collection. It also underwent face and content validation to ensure participants could understand it and provide the necessary data to address the research problem. All feedback and recommendations from validators were incorporated into the final instrument.

### **3.5. Data Gathering Procedure**

The data collection process involved utilizing an online self-administered structured questionnaire. This instrument employed a quantitative 5-point Likert scale to assess students' perceptions of AI use and the extent of AI utilization in academic writing tasks. Participants were also prompted to indicate their preferred types and features of AI tools for academic writing.

To reach potential participants, the researchers leveraged their professional networks, particularly individuals currently employed as educators in academic institutions. The survey link was disseminated via various communication channels such as Viber, WeChat, and Facebook pages. This widespread outreach aimed to gather responses from a diverse pool of students, maximizing participation among online users and ensuring data collection from various locations across the region.

The extensive internet connectivity and widespread ownership of mobile phones among Filipinos facilitated broad access to the survey invitation. Consequently, respondents from different geographical locations within Region 1 were able to participate, contributing to a more comprehensive and representative dataset.

In the online survey questionnaire, participants were presented with ethical considerations and guidelines relevant to their involvement in the research. The purpose of obtaining informed consent was to ensure participants' full understanding of the study and its implications before deciding to participate. Participants were required to review and agree to the content of the protocol by clicking a button in Google Forms to signify their willingness to participate in the study.

### **3.6. Statistical Treatment**

The researchers utilized descriptive statistics such as frequencies, percentages, and means to summarize the socio-demographic profiles, familiarity, perceptions, and utilization of AI among Filipino students. Additionally, Pearson's  $r$  correlation coefficient was employed as an inferential statistic to explore relationships between variables.

For data analysis, the researchers employed Statistical Package for the Social Sciences (SPSS) version 27. To ensure accuracy, they first transferred responses from Google Forms to Microsoft Excel for comprehensive data inspection and cleansing. Subsequently, the cleaned data was imported into SPSS for coding and further analysis. This meticulous process aimed to maintain data integrity and enhance the reliability of the study's findings.

## **4. Results**

### **4.1 Preferred Types of AI tools in Academic Writing**

The data illustrated in Figure 1 shows the preferred AI tools for academic writing by Filipino students reveals interesting insights into their usage patterns and preferences. Among the various AI tools listed, Grammarly and Quillbot emerge as the most favored, with 75% of respondents indicating their preference for these platforms.

The high preference for Grammarly and Quillbot could be attributed to their versatility and effectiveness in assisting students with grammar checking, proofreading, and generating content. These tools offer comprehensive features that address common writing issues and provide valuable suggestions for improvement. Additionally, their user-friendly interfaces and accessibility across different devices make them convenient choices for students.

Following closely behind is ChatGPT, with a preference of 74%, indicating its effectiveness in assisting with academic writing tasks. ChatGPT provides AI-powered writing assistance, facilitating brainstorming, providing writing suggestions, and enhancing productivity during the writing process.

Google Docs' popularity, with a preference of 67% can be attributed to its collaborative features, ease of use, and integration with other Google services. As a cloud-based platform, Google Docs allows

students to work on their documents seamlessly, share them with peers or teachers, and access them from any device with an internet connection. Meanwhile, the preference for the Scribbr Plagiarism Checker (57%) indicates that Filipino students prioritize originality and academic integrity in their writing. This tool helps students detect and prevent plagiarism by comparing their work against a vast database of academic sources. This implies that students recognize the importance of citing sources properly and avoiding plagiarism, thereby upholding academic standards and ethics in their writing. It's also noteworthy that plagiarism checkers like Turnitin (46%), EndNote (46%), and Citation Machine (46%) have moderate preference rates. This indicates that Filipino students recognize the importance of academic integrity and value tools that help them ensure the originality of their work.

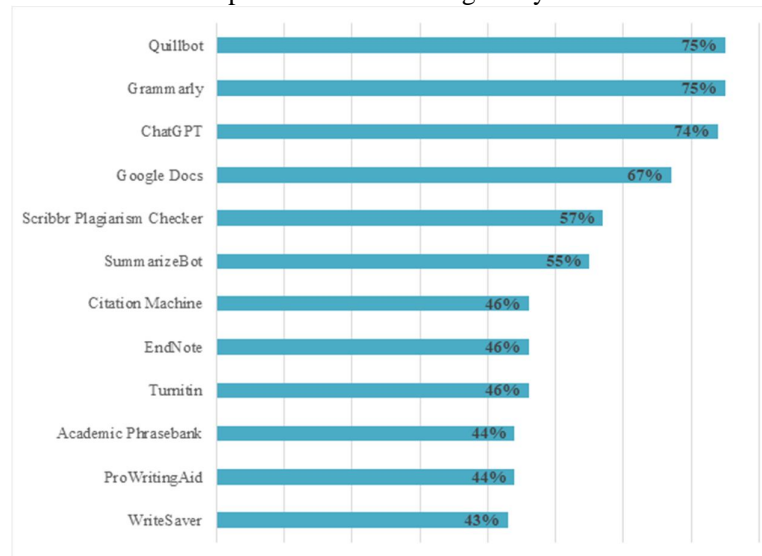


Figure 1. Preferred Types of AI tools in Academic Writing

On the other hand, tools like ProWritingAid (44%), Academic Phrasebank (44%), and WriteSaver (43%) have lower preference rates compared to others. This could be due to factors such as limited functionality, complexity, or lack of awareness among students. While these tools may offer specific features or functionalities, they may not meet the broader needs of students or provide the same level of usability as more popular options.

In conclusion, the data underscores the importance of AI tools in supporting students' academic writing endeavors. These AI tools significantly contribute to students' academic success as it offers valuable support, from grammar checks to plagiarism detection, enhancing writing skills and workflow efficiency.

#### 4.2. Preferred Features of AI tools in Academic Writing

The data in Figure 2 indicates high preferences among Filipino students for various functionalities offered by AI tools for academic writing. Grammar and spelling checks are the most favored functionalities, with 82% of respondents indicating their preference, closely followed by plagiarism detection, which garnered an 80% preference rate. These findings underscore the importance placed by students on accuracy, originality, and adherence to language conventions in their academic writing.

Additionally, citation and referencing assistance (79%), vocabulary and synonym suggestions (78%), readability analysis (78%), language translation (78%), and research assistance (78%) are the second most favored features of AI tools in academic writing. This suggests that students appreciate tools that help them enhance the quality and credibility of their academic work by providing accurate citations, suggesting appropriate vocabulary, improving readability, and aiding in the research process. Text summarization (77%), and style and clarity enhancement (77%) functionalities, despite being slightly less favored compared to other functionalities, still garner significant interest among students. These features provide valuable support by aiding students in condensing complex information and overcoming language barriers, thus facilitating their academic writing process while also refining their writing style, ensuring clarity, and enhancing the overall quality of their academic work. Similarly, content generation



(76%) functionality is popular among students, reflecting their desire to produce well-written and engaging content that effectively communicates their ideas and arguments.

In conclusion, the high preference rates across various functionalities indicate the growing reliance of Filipino students on AI tools to assist them in different aspects of academic writing. By leveraging these tools, students can improve the quality, accuracy, and efficiency of their writing, ultimately enhancing their academic performance and learning outcomes.

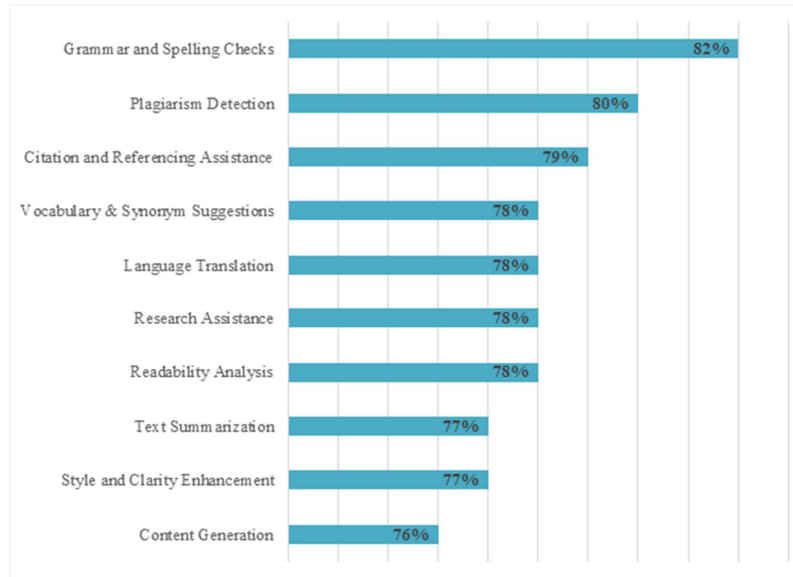


Figure 2. Preferred Features of AI tools in Academic Writing

#### 4.3. Perceptions of Filipino Students on the use of AI in Academic Writing Tasks

Table 2 shows the results on the Filipino students' perceptions of AI use in academic writing tasks, encompassing attitudes and beliefs, reveals a composite mean of 3.18 for attitudes and 3.25 for beliefs, both falling within the neutral range. This indicates an overall lack of strong inclination towards or against AI integration in academic writing.

Table 2. Perceptions of Filipino Students on the use of AI in Academic Writing Tasks

<b>Attitudes towards AI use in Academic Writing Tasks</b>	<b>Mean</b>	<b>DI</b>
I am not enthusiastic about incorporating AI into my academic writing.	3.01	Neutral
I embrace AI as a valuable tool for enhancing my writing skills.	3.47	Neutral
I have a positive outlook on the potential benefits of using AI in my academic writing.	3.45	Neutral
I am not open to and welcoming of AI technology for my academic writing.	2.78	Neutral
I am eager to explore AI tools that can assist and enhance my academic research writing processes.	3.54	Agree
I don't see AI as a helpful resource for proofreading and editing my academic writing.	2.62	Neutral
I am confident that AI can simplify the content of my academic writing.	3.29	Neutral
I am worried that AI might not be able to identify and correct grammatical errors in my academic writing.	3.14	Neutral
I appreciate the convenience AI offers for summarizing lengthy texts in my academic writing.	3.51	Agree
I have a negative view of AI's contribution in suggesting relevant keywords for academic writing.	3.00	Neutral
<b>Composite Mean</b>	<b>3.18</b>	<b>Neutral</b>
<b>Beliefs towards AI use in Academic Writing Tasks</b>		
AI cannot fully enhance the overall quality of my academic writing.	2.89	Neutral
AI cannot save me time during the academic research and writing processes.	2.74	Neutral
AI can help me generate well-structured and organized academic writing.	3.46	Neutral
AI's grammar and spelling checks will improve the accuracy of my academic writing.	3.53	Agree
AI cannot provide constructive feedback on my academic writing.	2.87	Neutral
AI's organized content suggestions will enhance my academic writing more efficiently.	3.38	Neutral
AI can simplify the complex task of summarizing lengthy texts in my academic writing.	3.39	Neutral
AI can assist me in finding relevant and appropriate research keywords for my academic writing.	3.46	Neutral
AI can help me adhere to academic writing guidelines.	3.39	Neutral
AI can contribute to better time management in academic writing tasks.	3.41	Neutral
<b>Composite Mean</b>	<b>3.25</b>	<b>Neutral</b>
<b>Overall Mean</b>	<b>3.22</b>	<b>Neutral</b>

Note: DI- Descriptive Interpretation, 4. 50 - 5.00 Strongly Agree; 3.50 - 4.49 Agree; 2.50 - 3.49 Neutral; 1.50 – 2.49 Disagree; 1.00 – 1.49 Strongly Disagree

In terms of attitudes, the respondents exhibit a neutral stance, with a mean of 3.18. The findings suggest that while some students are open to exploring AI tools for academic writing enhancement (mean = 3.47), others express reservations about its effectiveness, particularly in tasks like proofreading (mean = 2.62) and identifying grammatical errors (mean = 3.14). However, there is moderate agreement regarding the convenience AI offers for summarizing lengthy texts (mean = 3.51).

Regarding beliefs, the respondents also maintain a neutral position, with a mean of 3.25. While there is agreement on AI's potential to improve grammar and spelling accuracy (mean = 3.53) and help generate well-structured writing (mean = 3.46), uncertainty persists regarding its overall capacity to enhance academic writing quality (mean = 2.89) and provide constructive feedback (mean = 2.87). However, respondents

generally agree that AI can assist in adhering to academic writing guidelines (mean = 3.39) and contribute to better time management (mean = 3.41).

The overall mean, which combines both attitudes and beliefs, stands at 3.22, reinforcing the neutral stance of Filipino students towards AI use in academic writing tasks. These findings underscore the importance of addressing students' concerns and reservations while highlighting the potential benefits and opportunities that AI tools can offer in academic writing.

#### 4.4. Utilization of AI tools in Academic Writing Tasks

Table 3 shows the results on the utilization of AI tools in academic writing tasks. It reveals an overall mean of 3.13, indicating that respondents utilize AI tools sometimes, reflecting a moderate frequency of integration.

Among the various applications of AI tools, the respondents show a higher propensity for utilizing AI-based plagiarism detectors (mean = 3.51), suggesting that ensuring the originality of academic work is a priority for them. Similarly, respondents frequently incorporate AI-driven grammar checkers (mean = 3.31) to enhance the quality of their writing by identifying and correcting spelling and grammatical errors.

However, there is less frequent utilization of AI tools for other purposes, such as leveraging AI applications for real-time feedback on language learning assignments (mean = 3.04) and creating well-organized and concise reports (mean = 2.84). This suggests a less established pattern of utilization for tasks beyond basic grammar and plagiarism checks.

Overall, the data indicates that while Filipino students do utilize AI tools in academic writing tasks, the frequency varies across different functionalities. The moderate mean score suggests that while there is some degree of integration, there is room for further exploration and adoption of AI technologies to enhance various aspects of academic writing.

Table 3. Utilization of AI tools in Academic Writing Tasks

Statements	Mean	DI
I incorporate AI-driven grammar checkers to enhance the quality of my writing	3.31	Sometimes
I integrate AI-powered content generators for quick idea generation and outline creation.	3.29	Sometimes
I utilize AI-based plagiarism detectors to ensure the originality of my academic work.	3.51	Often
I rely on AI algorithms to provide instant feedback on my writing style and structure.	2.98	Sometimes
I employ AI tools to proofread and edit my documents for spelling and grammatical errors.	3.30	Sometimes
I seek inspiration and overcome writer's block by using AI for creative writing tasks.	3.16	Sometimes
I leverage AI applications for real-time feedback on language learning assignments.	3.04	Sometimes
I depend on AI tools for creating well-organized and concise reports.	2.84	Sometimes
I use AI to craft compelling personal statements and essays for various applications.	2.83	Sometimes
I incorporate AI technologies to assist in the preparation of visually engaging presentations.	3.07	Sometimes
<b>Overall Mean</b>	<b>3.13</b>	<b>Sometimes</b>

Note: 4. 50 - 5.00 Always; 3.50 - 4.49 Often; 2.50 - 3.49 Sometimes; 1.50 - 2.49 Rarely; 1.00 - 1.49 Never

#### 4.5. Relationship between each of the socio-demographic characteristics of the students and their Perceptions of AI in Academic Writing

Table 4 reveals the correlation coefficients between socio-demographic characteristics and perceptions of AI in academic writing among Filipino students, providing valuable insights into the relationship between these variables. Firstly, there is a statistically significant positive correlation between age and perceptions of AI in academic writing ( $r = 0.128$ ,  $p < 0.001$ ), indicating that older students tend to hold slightly more positive views towards AI in academic writing tasks compared to younger counterparts. Conversely, no significant correlation was found between sex and perceptions of AI ( $r = -0.033$ ,  $p = 0.326$ ), suggesting that gender does not play a significant role in shaping students' perceptions of AI in academic writing. However, a notable positive correlation exists between educational level and perceptions of AI ( $r = 0.099$ ,  $p = 0.003$ ), indicating that students at college levels exhibit more favorable perceptions of AI in academic writing compared to those at senior high school levels. Additionally, students from private schools demonstrated a slightly stronger positive correlation with perceptions of AI ( $r = 0.136$ ,  $p < 0.001$ ) compared to those from public schools. This indicates that students in private schools have greater access to technology and resources, including AI tools, which could influence their perceptions and familiarity with AI technology. Conversely, school location (urban or rural) did not significantly correlate with perceptions of AI ( $r = -0.035$ ,  $p = 0.294$ ), suggesting that geographical location does not heavily influence students' perceptions of AI in academic writing.

These nuanced findings underscore the importance of considering socio-demographic factors when designing interventions to promote the integration of AI in academic writing practices among Filipino students.

*Table 4. Coefficients of correlation between each of Filipino Students' socio-demographic characteristics and their Perceptions of AI in Academic Writing*

<b>Profile of Respondents</b>	<b>Pearson's r</b>	<b>p-value</b>	<b>Interpretation</b>
Age	.128**	.000	Significant
Sex	-.033	.326	Not significant
Educational Level	.099**	.003	Significant
Type of School	.136**	.000	Significant
School Location	-.035	.294	Not significant

*Note: \*\* Significant at 0.01 probability level (2-tailed)*

The data presented in Table 5 reveals the coefficients of correlation between socio-demographic characteristics and the utilization of AI in academic writing among Filipino students. Analysis of the findings indicates several noteworthy observations. First, regarding age, the correlation coefficient of 0.011 with a p-value of 0.745 suggests an insignificant positive correlation, indicating that age has little influence on the frequency of AI tool utilization for academic writing tasks among Filipino students. Similarly, gender, as indicated by a correlation coefficient of -0.035 and a p-value of 0.303, demonstrates a weak negative correlation with AI utilization, suggesting that gender has minimal impact on students' engagement with AI tools in writing tasks. Educational level exhibits a slightly positive correlation ( $r = 0.035$ ,  $p = 0.301$ ), hinting at a slightly increased tendency for AI utilization among students at higher educational levels, although not statistically significant. Moreover, the type of school (public or private) and school location (urban or rural) both show negligible correlations with AI utilization, with coefficients of -0.002 ( $p = 0.960$ ) and 0.024 ( $p = 0.480$ ) respectively. These results collectively suggest that socio-demographic characteristics have limited influence on the extent of AI utilization in academic writing among Filipino students, with factors beyond demographics likely playing a more significant role in shaping their engagement with AI tools.

Table 5. Coefficients of correlation between each of Filipino Students' socio-demographic Characteristics and their Utilization of AI in Academic Writing

Profile of Respondents	Pearson's r	p-value	Interpretation
Age	0.011	0.745	Not Significant
Sex	-0.035	0.303	Not significant
Educational Level	0.035	0.301	Not Significant
Type of School	-0.002	0.960	Not Significant
School Location	0.024	0.480	Not significant

The correlation analysis presented in Table 6 examines the relationship between Filipino students' perceptions of AI in academic writing and their actual utilization of AI tools. The findings reveal notable insights into this relationship. Firstly, concerning attitude towards AI, a strong positive correlation coefficient of 0.587 with a p-value of 0.000 indicates a significant and positive relationship between students' attitudes towards AI and their utilization of AI tools in academic writing. This suggests that students with more positive attitudes towards AI are more likely to engage with AI tools in their writing tasks. Conversely, beliefs towards AI show a weaker correlation coefficient of 0.049, albeit with a non-significant p-value of 0.142. This indicates a negligible relationship between students' beliefs about AI and their actual utilization of AI tools in academic writing. While positive attitudes towards AI strongly align with increased AI utilization, beliefs about AI may not play as significant a role in influencing students' actual engagement with AI tools. These findings underscore the importance of students' attitudes towards AI as a potential predictor of their willingness to adopt and utilize AI technologies in academic writing tasks.

Table 6. Coefficients of correlation between Fil students' perceptions of AI and Utilization of AI in academic writing

Utilization of AI in Academic Writing		
Perceptions of AI in Academic Writing	Correlation Coefficient (r)	Probability
Attitude towards AI	0.587**	0.000
Belief towards AI	0.49	0.142

Note: \*\* Significant at 0.01 probability level (2-tailed)



## 5. Discussion

The integration of Generative AI into education signifies a profound shift in the learning environment, presenting novel opportunities for students and educators alike. AI's capacity to emulate human cognitive processes and decision-making underscores its transformative impact on education (Popenici & Kerr, 2017). As technology advances rapidly, AI tools and applications are increasingly leveraged to enrich the learning journey, streamline administrative tasks, and personalize instructional approaches. In today's digital era, students actively participate in integrating technologies like AI into the educational process.

Alammar and Amin (2023) conducted a study on EFL students' perceptions of Automated Paraphrasing Tools (APTs) in academic writing, aiming to address gaps in existing literature by exploring the roles, effectiveness, advantages, and limitations of APTs. The research revealed a positive reception of APTs among students, recognizing their value in academic writing while cautioning against overreliance. Notably, the incorporation of AI and technology tools in teaching writing skills has been emphasized as pivotal, as demonstrated by Zulfia et al. (2023), who showcased the positive impact of various tech tools on language structures, progress tracking, and referencing in academic English writing.

In this study, Filipino students' perceptions and utilization of AI in academic writing tasks were investigated. Employing a descriptive-correlational research design, data were collected using a survey questionnaire covering socio-demographic profiles, types of AI tools used, attitudes, beliefs, and actual utilization of these tools. Students' perceptions of AI in academic writing tasks encompass attitudes and beliefs, shaping their views on AI technology. Attitudes reflect students' emotional responses towards AI, influencing their actions and motivations (Chauhan & Jaiswal, 2016). Beliefs encompass students' understanding of AI's capabilities, benefits, limitations, and risks, guiding their expectations and decisions (Allehyani & Algamdi, 2023). By examining attitudes and beliefs towards AI use, researchers gain comprehensive insights into Filipino students' holistic perceptions of AI integration into academic writing.

Findings revealed that Filipino students generally held neutral attitudes and beliefs regarding AI use in academic writing. Notably, a positive correlation was observed between favorable attitudes towards AI and its utilization, suggesting that students with positive attitudes were more inclined to use AI tools. However, beliefs about AI showed a negligible relationship with actual tool usage, indicating that attitudes exert a stronger influence on engagement than beliefs. Such studies in educational psychology and technology adoption highlight the pivotal role of attitudes in shaping behavior towards new technologies (Nazir & Khan, 2024; Saif et al., 2024). Specifically, research on the Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB) underscores the influence of attitudes on behavioral intentions and subsequent actions (Sanusi et al., 2024). Although AI integration in higher education is on the rise, gaps remain in understanding how students plan and perceive AI use in academic tasks (Ng & Ravana, 2024).

Furthermore, this study identified preferred AI tools for academic writing, including Grammarly, Quillbot, and Google Docs, emphasizing functionality in grammar checks, spelling, and plagiarism detection. The frequency of tool use influences students' perceptions of effectiveness and drawbacks (Miranty & Widiati, 2021). Additionally, socio-demographic factors such as age, educational level, and school type were correlated with attitudes towards AI, highlighting the need for tailored interventions and support systems based on students' backgrounds.

In conclusion, this study sheds light on AI utilization among Filipino students, emphasizing the significance of addressing attitudes, beliefs, and socio-demographic factors to facilitate effective AI integration in academic writing contexts.

## 6. Conclusion

This study sheds light on the perceptions and utilization of AI among Filipino students in academic writing tasks. Through a descriptive-correlational research design and survey questionnaire, various aspects such as socio-demographic profiles, attitudes, beliefs, familiarity and utilization of AI tools were explored.

In terms of familiarity with AI tools, students preferred AI tools for academic writing tasks such as Grammarly, Quillbot, and Google Docs being among the top choices. Grammar and spelling checks, as well

as plagiarism detection, emerged as the most favored functionalities, highlighting the importance of accuracy and originality in academic writing.

The findings indicate that Filipino students generally hold neutral attitudes and beliefs towards AI use in academic writing. While attitudes towards AI showed a strong positive correlation with its utilization, beliefs towards AI demonstrated a negligible relationship with actual AI tool usage. This suggests that students' attitudes play a more significant role in influencing their engagement with AI tools compared to their beliefs.

Moreover, socio-demographic factors such as age, educational level, and type of school were found to have significant correlations with attitudes towards AI. This underscores the need for tailored interventions and support systems based on students' backgrounds to effectively integrate AI technologies into academic writing contexts.

Overall, the study provides valuable insights into the landscape of AI utilization among Filipino students and emphasizes the importance of addressing attitudes, beliefs, and socio-demographic factors in promoting effective integration of AI technologies in academic writing. These findings are important for teachers, policymakers, and technology developers. They help guide the creation of educational strategies and policies that suit the preferences and needs of Filipino students. Teachers can use these insights to design lessons that integrate AI tools in ways that engage students effectively. Policymakers can develop policies that promote responsible AI use in education, while technology developers can tailor AI tools to better suit Filipino students. Overall, these efforts can create a more inclusive and effective learning environment for students in the Philippines.

## **7. Implication**

The implications of this study are wide-ranging and offer valuable insights for various stakeholders involved in education, technology development, and policymaking in the Philippines. Firstly, educational institutions can benefit by integrating AI literacy and training programs into their curricula. Equipping students with the skills to navigate and utilize AI tools effectively will better prepare them for the demands of the digital age. Secondly, teachers can adapt their teaching methodologies and assignments based on students' preferences and needs regarding AI tools. By incorporating AI technologies into teaching practices, teachers can enhance student engagement, promote critical thinking skills, and facilitate personalized learning experiences.

In addition, technology developers of AI tools for academic writing can use the findings to tailor their products to better meet the needs and preferences of Filipino students. Understanding the functionalities and features valued by users can lead to the design of more user-friendly and effective AI tools that contribute to improved writing outcomes. Moreover, policymakers can leverage the study's insights to develop policies and regulations promoting the responsible and ethical use of AI technologies in education. By ensuring equitable access to AI tools and fostering digital literacy, policymakers can empower students to thrive in a technology-driven world.

Furthermore, the research community benefits from this study as it contributes to the growing body of literature on AI adoption and utilization in education, particularly in the context of Filipino students. Researchers can build upon these findings to explore factors influencing AI acceptance and usage among diverse student populations. Ultimately, by leveraging the insights gained from this research, stakeholders can work towards harnessing the potential of AI to enhance learning outcomes and foster digital literacy among Filipino students.

## **8. Recommendations**

Based on the findings and conclusion of this study, several recommendations emerge for various stakeholders.

Educational institutions should integrate AI literacy and training programs into curricula, equipping students with the necessary skills for utilizing AI tools in academic writing. They should also provide professional development opportunities for educators to enhance their understanding and integration of AI technologies in teaching practices.

Educators, in turn, should adapt teaching methodologies and assignments to incorporate AI tools based on students' preferences and needs. They should foster a supportive learning environment that encourages experimentation and exploration with AI technologies, providing guidance and support to students in navigating these tools effectively.

For technology developers, the recommendation is to tailor AI tools for academic writing to better meet the needs and preferences of Filipino students. This includes prioritizing user-friendly interfaces, functionalities aligned with academic requirements, and language support for diverse user populations. Continuously gathering feedback from users is essential for iterating and improving upon existing AI tools.

Policymakers should develop policies and regulations that promote the responsible and ethical use of AI technologies in education. They should ensure equitable access to AI tools for all students, regardless of socio-economic background, and foster partnerships between government agencies, educational institutions, and technology companies to facilitate AI integration into education.

Finally, the research community should conduct further studies to explore the factors influencing AI acceptance and usage among diverse student populations. Investigating the long-term impact of AI integration on learning outcomes, student engagement, and digital literacy is crucial. Sharing findings and best practices will inform future initiatives and interventions in the field of AI in education, ultimately working towards enhancing learning outcomes and fostering digital literacy among Filipino students

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