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Exploring Students' Perspectives on Utilization of Artificial Intelligence (AI) Writing Tools through Sequential Explanatory Mixed Method Study

Vlademir T. Turingan

Student, Tarlac State University, Tarlac City, Tarlac, 2300

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Abstract— *The integration of Artificial Intelligence (AI) writing tools in academic settings has transformed students' writing processes, yet concerns regarding effectiveness, ethical implications, and academic integrity persist. This study explores students' perspectives on the utilization of AI writing tools through a sequential explanatory mixed-method approach. The quantitative phase, conducted through a survey of 326 students, examined attitudes and behavioral intentions regarding AI tool usage, while the qualitative phase provided in-depth insights through semi-structured interviews. Results indicate that students generally perceive AI tools as effective in improving writing efficiency and organization. However, concerns about over-reliance, ethical challenges, and institutional inconsistencies in AI policies emerged as critical issues. Statistical analyses revealed significant differences in students' perceptions based on sex, academic year level, and frequency of AI tool usage. The study emphasizes the need for institutional guidelines, AI literacy programs, and ethical frameworks to ensure responsible AI integration in higher education. The findings provide valuable insights for educators, policymakers, and academic institutions in formulating strategies that balance AI benefits with academic integrity.*

Keywords— ***Artificial Intelligence, AI Writing Tools, Academic Integrity, Technology Acceptance Model, Higher Education***

I. INTRODUCTION

Artificial intelligence (AI) has entered numerous industries quickly, including the education sector, resulting in the creation of AI-based writing aids like Grammarly, ChatGPT, and Quillbot. These tools help students improve their writing through features such as grammar correction, style recommendations, paraphrasing, content creation, and citation, thus simplifying the writing process (Santiago et al., 2023; Malon et al., 2024). While the tools are helpful in enhancing the efficiency and quality of writing, their use in academic work also poses serious issues about their influence on students' learning, ethical implications, and academic integrity.

Schools have the dilemma of weighing the benefit of AI writing tools against the need to maintain academic rigor. Some teachers see these tools as useful resources that assist students in learning to write, while others are concerned about the possibility of misuse, including overdependence, plagiarism, and reduced critical thinking. For example, research found that while 54.1% of the students favored the use of tools such as Grammarly, a very large 70.4% were opposed to other AI-writing tools, reflecting a distinct context of acceptance and apprehension among students (Klitgård, 2025). Against these nuances, the study of students' views regarding AI writing tools, their attitudes, experiences, and ethical issues becomes important.

Despite the growing dependence on AI-based writing tools, there is a limited empirical literature examining students' views on their use in educational environments. Current literatures mainly discuss the features and capabilities of AI tools and not how students

view their utility, ethical concerns, and possible challenges (Yan et al., 2024; Pedro et al., 2019; Umali, 2024). Additionally, although there have been studies on AI literacy and academic integrity issues, few have examined these topics using a mixed-method approach, combining both quantitative and qualitative findings.

This study aims to fill this research gap by providing a comprehensive examination of students' perspectives on AI writing tools through a sequential explanatory mixed-method design. By combining quantitative survey data with qualitative interviews, this study seeks to uncover not only general trends in students' attitudes and usage patterns but also their in-depth experiences and ethical considerations. The findings will offer valuable insights for educators, policymakers, and academic institutions in formulating guidelines for responsible AI integration in education.

In understanding students' attitudes and behavioral intentions regarding the utilization of Artificial Intelligence (AI) writing tools in academic settings, this study adopts the Technology Acceptance Model (TAM) as its primary theoretical framework. Developed by Davis (1989), TAM provides a structured approach to examining how individuals accept and use technology by assessing key determinants such as Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Additionally, to incorporate ethical concerns, academic integrity issues, and willingness to integrate AI writing tools into learning, the Theory of Planned Behavior (TPB) by Ajzen (1991) is integrated to explain behavioral intentions toward AI usage. By integrating TAM and TPB, this study aims to comprehensively examine both the attitudinal and behavioral dimensions of AI writing tool usage among students. The TAM component addresses how students perceive the usefulness and ease of use of these tools. Meanwhile, the TPB component extends the analysis by investigating how ethical concerns, academic integrity issues, and willingness for AI integration influence students' behavioral intentions toward AI writing tools.

This research is significant to different stakeholders in the academic world. For students, it offers a platform to share their experiences, challenges, and ethical issues about AI writing tools. For instructors, the results provide useful information on how AI tools affect students' writing habits, learning behavior, and academic honesty. For academicians and policymakers, the research can form a foundation for creating guidelines that facilitate the use of AI writing tools responsibly while upholding academic standards. In addition, this study adds to the already expanding literature on AI use in education, covering gaps regarding understanding students' views amid an increasingly dynamic technological environment.

With AI writing tools increasingly influencing academic writing culture, it is important to know students' attitudes in order to ensure their effective and responsible application. This research seeks to offer empirical insights on students' attitudes, difficulties, and ethical issues, finally informing educational policies and strategies for integrating AI in the academic environment. In its mixed-method research, this work provides a comprehensive and multifaceted analysis of the role that AI writing software plays in educational settings, overcoming the disparity between technological progress and academic honesty.

Research Objectives

1. Describe the profile of the respondents in terms of:
   1.1. Sex
   1.2. Academic Year Level
   1.3. Field of Study
   1.4. Frequency of Use of AI Tools
2. Assess the respondents' attitudes on the use of Artificial Intelligence (AI) writing tools in their academic works in terms of:
   2.1. Perceived Usefulness
   2.2. Perceived Ease of Use
3. Describe the behavioral intentions of the respondents on the use of AI writing tools in their academic works in terms of:
   3.1. Ethical Concerns and Academic Integrity
   3.2. Willingness of AI Writing Tools Integration in Learning
4. Determine significant difference on respondents' attitude and behavioral intentions on the use of AI writing tools when grouped according to their selected profile variables.
5. Explore respondents' in-depth experiences and perceptions regarding the utilization of AI writing tools.
6. Identify challenges and limitations respondents encounter in using AI writing tools.
7. Integrate quantitative and qualitative findings to provide a comprehensive understanding of students' perspective on AI writing tools.

Hypothesis of the Study

- There is no significant difference on respondents' attitude and behavioral intentions on the use of AI writing tools when grouped according to their selected profile variables.

II. LITERATURE REVIEWS

Artificial Intelligence (AI) writing tools have also become more widespread in academic circles, leading to extensive research across different dimensions of their use. This literature review integrates findings addressing the objectives of the study, including respondent profiles, attitudes toward AI writing tools, behavioral intentions, demographic impacts, personal experience, and encountered challenges.

Understanding of the demographic profile of users of AI writing tools is important in contextualizing their attitudes and behaviors in context. Research has investigated variables like sex, level of academic year, area of study, and how often AI tools are used. For example, it has been found that male and female students can have different adoption and usage rates of AI writing tools, with differences noted in perceived effectiveness and use frequency (Egunjobi, 2023). Furthermore, the field of study also determines the use of AI tools; students from technology-oriented disciplines embrace the use of AI tools more than their counterparts in the humanities (Chan & Hu, 2023; Kurtz et al., 2024). The level of usage is also different, with some incorporating AI tools in their everyday study life while others apply them from time to time (University of Illinois Chicago, 2024).

Attitudes of students towards AI writing tools are usually measured in terms of perceived usefulness and perceived ease of use, as per the Technology Acceptance Model (TAM). Perceived usefulness refers to the degree to which students perceive that these tools improve their performance. Research has indicated that students recognize the advantages of AI writing tools in enhancing writing quality and productivity (Hua, 2023; Holden et al., 2021). Perceived ease of use indicates how much effort students find it to apply these instruments correctly. Empirical evidence has revealed that the easier interfaces and easier-to-reach features benefit the attitudes of the students (Chan & Hu, 2023).

Behavioral intentions with regard to AI writing tools include ethical issues, academic honesty, and openness to incorporating these tools into education. Ethical issues are related to the misuse of AI tools, including plagiarism and overdependence, which may compromise critical thinking abilities (Moran & Wilkinson, 2025: Cortez et al., 2023). Academic honesty concerns are raised in research documenting cases where students employ AI to cheat, sounding alarms about upholding honesty in academics (University of Illinois Chicago, 2024). In spite of this, there is increasing openness among students to incorporate AI writing tools into their learning processes, as long as there are transparent guidelines and ethical frameworks in place (Chan & Hu, 2023).

Demographic considerations impact students' attitudes and intentions to behave with respect to AI writing tools. Differences in gender have been found, with research suggesting that male students tend to have greater confidence in employing AI tools than female students (Egunjobi, 2023). The academic level is also a factor; final-year students tend to show more analytical views on AI tool use, perhaps as a result of greater awareness of issues surrounding academic dishonesty (Hua, 2023). Field of study has an impact on attitudes, as students in STEM disciplines might emphasize the technical advantages, whereas students in the humanities worry about the effects on creativity and originality (Chan & Hu, 2023; Javier & Moorhouse, 2023).

Qualitative research has explored students' direct experiences with AI writing tools, and the results show a range of attitudes. Some students mention that these tools are useful assists in improving writing and learning, whereas others have concerns about getting too reliant on them, thereby slowing down the acquisition of key writing skills (Krullaars et al., 2023; Zhai et al., 2024). These findings emphasize the necessity of balanced adoption of AI tools in learning environments.

Students face numerous challenges when employing AI writing tools, such as technical problems, restricted knowledge of tool capabilities, and data privacy concerns. There is also fear of AI tools reproducing biases in their training data, creating ethical issues (Nguyen & Wang, 2021). Overcoming these challenges necessitates extensive user education and the creation of strong ethical guidelines. Moreover, the use of AI writing software in academia reflects a multifaceted environment subject to demographic pressures, personal orientations, ethical considerations, and logistical issues. Whereas the tools are likely to confer advantages in quality academic writing, it is critical to resolve the accompanying ethical and practical concerns for the purposeful application of such tools. Education strategies that are designed to support ethical use of AI tools as well as help prevent adverse impacts on academic honesty need to be developed in subsequent research.

III. METHODOLOGY

Research Design

This study employed a mixed-method approach utilizing a sequential explanatory design. Sequential explanatory design is a mixed methods research design where quantitative data is collected and analyzed first,

followed by qualitative data collection and analysis to explain and expand upon the quantitative findings (Creswell & Plano Clark, 2018). This design consists of two distinct phases: a quantitative phase followed by a qualitative phase, ensuring that the numerical data serves as a foundation for deeper qualitative exploration. The rationale for using this design is to gain a more comprehensive understanding of students' perspectives on AI writing tools by first identifying trends and relationships through statistical analysis, and then enriching these findings with qualitative insights.

In the quantitative phase, a descriptive-comparative research design was used to assess students' attitudes and behavioral intentions toward AI writing tools based on their demographic characteristics. A descriptive-comparative research design is appropriate for systematically collecting numerical data to identify relationships, trends, or differences between groups without manipulating variables (Creswell & Creswell, 2017). This phase focused on measuring students' perceived usefulness and ease of use of AI writing tools, their ethical concerns, academic integrity perspectives, and willingness to integrate AI tools in learning. The study employed a validated survey questionnaire, ensuring the reliability and consistency of data collection. The descriptive aspect of this design allowed for an overall assessment of students' attitudes and behavioral intentions, while the comparative aspect enabled the identification of statistically significant differences based on profile variables such as sex, academic year level, field of study, and frequency of AI tool usage. This approach provided objective, quantifiable insights into students' perceptions of AI writing tools.

Following the quantitative phase, the study utilized a phenomenological research design to gain in-depth insights into students' lived experiences, perceptions, and challenges regarding AI writing tools. A phenomenological design is a qualitative research approach that seeks to explore and describe individuals' lived experiences related to a specific phenomenon (Moustakas, 1994). This phase involved semi-structured interviews with a purposive sample of students, allowing them to elaborate on the survey findings and provide deeper insights into their experiences with AI writing tools. By focusing on students' firsthand accounts, ethical dilemmas, academic concerns, and personal viewpoints, this phase contextualized the statistical findings and uncovered nuanced perspectives that may not have been evident in the survey responses. The qualitative data were analyzed thematically, with emerging themes helping to refine and interpret the quantitative results (Braun & Clarke, 2021).

This sequential explanatory design was chosen to leverage the strengths of both quantitative and qualitative approaches, ensuring a holistic understanding of students' perspectives on AI writing tools. The quantitative phase established patterns and relationships, while the qualitative phase provided depth and context to these findings. By integrating both methods, the study minimized the limitations associated with relying solely on either quantitative or qualitative data (Creswell & Plano Clark, 2018). Ultimately, this approach aimed to generate comprehensive, evidence-based insights that can inform educators, policymakers, and institutions in developing ethical guidelines and policies for AI tool integration in academic settings.

Sample and Sampling Procedure

This study focused on tertiary level students within the research locale – the Anonymized University. A total of 326 out of 2134 college students were drawn from four colleges of the Anonymized Universities that offer different program and courses for the quantitative phase of the study. The sample size was determined though Raosoft Sample Size Calculator considering 5% error margin, 95% confidence interval and 50% response distribution to ensure the sufficiency of samples. The sampling technique employed was random sampling, where the complete list of students was taken and the sample element as randomly chosen until the desired sample size has reached (Etikan & Bala, 2017). This method ensures comprehensive data collection and representation of the samples considering the dispersion of the respondents based on profile. Moreover, a total of 12 students, 3 from each college, was included for qualitative phase of the study which was aimed to achieved the data saturation for phenomenological research (Creswell & Poth, 2016). Purposive sampling technique was used to select the participants in the qualitative phase considering the results in the quantitative phase.

Instrumentation and Data Collection

This study utilized researcher-made instruments designed to collect data on students' attitudes, behavioral intentions, and experiences regarding the utilization of AI writing tools. The instruments were structured into three main parts: Part I covered respondents' demographic profiles, including sex, academic year level, field of study, and frequency of AI tool usage; Part II assessed students' attitudes toward AI writing tools, particularly in terms of perceived usefulness and perceived ease of use; and Part III focused on behavioral intentions, addressing ethical concerns, academic integrity issues, and willingness to integrate AI writing tools into learning. The items in the survey instrument were derived from an extensive review of related literature and established theoretical frameworks to

ensure alignment with the study's objectives. Additionally, a semi-structured interview guide was developed for the qualitative phase to explore students' in-depth experiences, perceptions, and challenges in utilizing AI writing tools.

To establish the validity of the instrument, content validation was conducted using Aiken's V, which measures the relevance and representativeness of the survey items (Aiken, 1985). A panel of five experts in education, AI in learning, and research methodology evaluated the instrument, and all items met the minimum threshold of 0.80, confirming their validity. Furthermore, reliability testing was performed using Cronbach's Alpha to ensure the internal consistency of the survey items. The obtained Cronbach's Alpha values for each section exceeded 0.70, which is considered an acceptable reliability threshold for social science research (Taber, 2018), indicating that the instrument effectively captures reliable and accurate data.

For data collection, the researchers first obtained approval from school administrators and institutional review boards to ensure ethical compliance. Upon securing the necessary permissions, an orientation session was conducted with the respondents to inform them about the study's objectives, voluntary participation, confidentiality, and data protection measures. In the quantitative phase, the survey was administered online and in person, allowing flexibility in response collection. In the qualitative phase, semi-structured interviews were conducted with a purposive sample of students who exhibited varying levels of AI tool usage to ensure a diverse range of perspectives. The structured and systematic approach to data collection ensured that the information gathered was comprehensive, reliable, and directly aligned with the research objectives.

Data Analysis Procedures

The data collected in this study were analyzed using both quantitative and qualitative techniques, following the sequential explanatory mixed-methods design. The quantitative phase involved descriptive and inferential statistical analyses, while the qualitative phase utilized thematic analysis to provide deeper insights into students' perspectives on AI writing tools.

In the quantitative analysis, descriptive statistics were used to summarize the respondents' profiles, attitudes, and behavioral intentions regarding AI writing tools. Frequencies and percentages were computed to describe categorical variables such as sex, academic year level, field of study, and frequency of AI tool usage. For continuous variables related to perceived usefulness, perceived ease of use, ethical concerns, academic integrity issues, and willingness for AI integration, mean and standard deviation were used to determine the general trends in students' attitudes and behavioral intentions.

For inferential analysis, appropriate statistical tests were employed based on the data characteristics. A one-way ANOVA was conducted to compare the attitudes and behavioral intentions of students across multiple categorical variables provided that the data satisfied the assumptions of normality and homogeneity of variance (Field, 2018). A post hoc test utilizing Tukey-HSD was conducted to determine pairwise group differences.

In the qualitative phase, thematic analysis was utilized to analyze the responses from semi-structured interviews. Following Braun and Clarke's (2006) six-phase approach to thematic analysis, the recorded interviews were transcribed, coded, and categorized into emerging themes that aligned with the quantitative findings. Initial codes were derived from the quantitative results, ensuring a structured approach to analyzing qualitative data while allowing for emergent themes. This approach helped in providing deeper explanations and contextualizing the quantitative results, leading to a more comprehensive understanding of students' perceptions of AI writing tools.

The integration of both quantitative and qualitative data ensured a holistic interpretation of students' perspectives on AI writing tools, offering both statistical trends and in-depth narratives to address the research objectives effectively.

Ethical Considerations and Limitations

Ethical considerations were strictly adhered to throughout this study to ensure compliance with research ethics guidelines. Before data collection, approval from school administrators was obtained to conduct the study in their respective institutions. Additionally, informed consent was secured from all student participants, ensuring they were fully aware of the study's objectives, procedures, potential risks, and their rights as respondents. Participants were explicitly informed that their participation was voluntary and that they could withdraw from the study at any time without facing any negative consequences, as recommended by ethical research standards (Resnik, 2020).

To protect participants' privacy and confidentiality, all responses were anonymized and coded, preventing the identification of individual students. Data were securely stored, and access was restricted to the research team only, following ethical data management practices (Saunders et al., 2015). Furthermore, researcher neutrality and bias mitigation were prioritized in both quantitative and qualitative data collection, ensuring that responses were not influenced by leading questions or researcher expectations.

Despite efforts to conduct a rigorous study, several limitations are acknowledged. First, in assessing students' attitudes and behavioral intentions, self-reported responses

may be subject to social desirability bias, wherein participants might provide responses that they believe are more acceptable rather than their true opinions (Fisher & Katz, 2020). Additionally, students' prior experiences with AI writing tools vary, which may influence their perspectives but was not controlled in this study. Another limitation involves the reliance on quantitative surveys to measure attitudes and behavioral intentions, which may not fully capture the distinct experiences and contextual factors influencing students' perspectives. Although the study incorporated a qualitative phase, the sample for interviews was limited, potentially restricting the generalizability of in-depth insights. Furthermore, while efforts were made to identify challenges and limitations in AI writing tool usage, external factors such as institutional policies, access to technology, and academic workload may also play a role, yet were not extensively analyzed. Lastly, while appropriate statistical analyses were used to examine differences across student profiles, unmeasured variables such as language proficiency, digital literacy, and disciplinary variations may have influenced the results. Future research should consider a longitudinal approach or experimental methods to provide a more comprehensive and causal understanding of students' perspectives on AI writing tools.

IV. RESULTS AND DISCUSSION

1. Profile of the Respondents

The demographic profile of the respondents is encompassing variables such as sex, academic year level, program enrolled, and frequency of AI tool usage.

The respondent pool consists of 150 males (46.01%) and 176 females (53.99%). This distribution aligns with national trends in higher education, where female enrollment often surpasses male enrollment. For instance, the ratio of female to male tertiary school enrollment in the Philippines was approximately 1.295 in 2023, indicating higher female participation (World Bank, 2023).

Moreover, the respondents are distributed across academic years as follows: first year (17.18%), second year (20.55%), third year (32.21%), and fourth year (30.06%). The higher representation in the third and fourth years may indicate increased engagement or availability of students in advanced stages of their studies.

On the other hand, a significant majority of respondents are enrolled in STEM disciplines (72.09%), with the remaining 27.91% in non-STEM fields such as arts and philosophy. This distribution reflects ongoing efforts to promote STEM education within the country and the respondent-Anonymized Univerisity offered STEM related courses. For example, Mapúa University has integrated artificial intelligence into its curricula, offering modules like Basic Prompt Engineering with ChatGPT and AI Foundations: Scripting ChatGPT with Python, in collaboration with Arizona State University and OpenAI (Mapúa University, n.d.).

Regarding the use of AI tools, 8.28% of respondents report always using them, 13.80% often, 38.34% sometimes, and 39.57% never. This indicates that while a portion of students regularly incorporates AI tools into their studies, a significant number have limited or no engagement with such technologies. A study focusing on second-year communication students at Far Eastern University-Manila during the 2023-2024 academic year found that students perceive AI tools like ChatGPT, Grammarly, Quillbot, Brainly, and Scribbr as beneficial to their learning, though concerns about dependency and potential risks were also noted (Mendoza et al., 2023).

2. Attitudes on the Use of Artificial Intelligence (AI) Writing Tools

Table 1 presents the respondents' attitudes toward the use of AI writing tools, categorized under perceived effectiveness and perceived ease of use.

Perceived Usefulness

The overall mean for perceived effectiveness is 3.26 (SD=0.29), indicating that respondents generally find AI writing tools very effective in academic writing tasks. Among the specific items, enhancement of writing efficiency and effective time management (Mean=3.44, SD=0.51) and effectiveness in supporting diverse academic writing tasks (Mean=3.40, SD=0.53) received the highest ratings, classifying them as highly effective. This finding aligns with the study by Malik et al. (2023), which reported that AI-powered writing tools significantly enhance students' ability to generate structured and coherent essays, leading to improved time management and academic productivity.

However, aspects related to accuracy and grammatical correctness (Mean=2.85, SD=0.85) and reliability of AI-generated information (Mean=3.02, SD=0.73) were rated as moderately effective. These results are consistent with Cuyugan (2024), who found that while AI-generated content aids in grammar and coherence, users often question its factual accuracy and occasionally need to verify its outputs.

Table 1 Respondents' Attitudes on the Use of Artificial Intelligence (AI) Writing Tools

Items	Mean	SD	VD
Perceived Effectiveness	**3.26**	**0.29**	**Very Effective**
1. Accuracy and grammatical correctness of AI-generated text	2.85	0.85	Moderately Effective
2. Logical coherence and structural organization of AI-generated content	3.04	0.82	Moderately Effective
3. Enhancement of writing efficiency and effective time management	3.44	0.51	Highly Effective
4. Facilitation of idea generation and improvement of content organization	3.23	0.79	Moderately Effective
5. Reliability and factual accuracy of AI-generated information	3.02	0.73	Moderately Effective
6. Effectiveness of AI tools in supporting diverse academic writing tasks	3.40	0.53	Highly Effective
Perceived Ease of Use	**3.26**	**0.29**	**Easy**
1. User-friendliness and intuitive navigation of AI tool interface	3.14	0.73	Somewhat Easy
2. Minimal effort required to generate and refine well-structured content	3.44	0.51	Easy
3. Accessibility of AI tools for users with varying technical skills	3.36	0.79	Easy
4. Clarity and comprehensibility of AI tool instructions and functionalities	3.14	0.83	Somewhat Easy
5. Seamless integration of AI tools into academic writing processes	3.42	0.65	Easy
6. Responsiveness, speed, and efficiency of AI-generated text assistance	3.06	0.83	Somewhat Easy

Legend: VD=Verbal Description

3.25 – 4.00=Very Effective/Easy; 2.50 – 3.24=Moderately Effective/Somewhat Easy; 1.75 – 2.49=Slightly Effective/ Somewhat Difficult; 1.00 – 1.74=Not Effective at All/Difficult

Perceived Ease of Use

The respondents' perceptions of the ease of use of AI writing tools yielded an overall mean of 3.26 (SD = 0.29), suggesting that these tools are generally considered easy to use. The highest-rated item, minimal effort required to generate and refine well-structured content (Mean=3.44, SD=0.51), supports findings from Younus et al. (2022) and Eslit (2023), which highlighted that AI-driven writing assistants streamline the writing process by suggesting improvements with minimal user input.

However, user-friendliness and intuitive navigation (Mean=3.14, SD=0.73) and responsiveness, speed, and efficiency of AI-generated text assistance (Mean=3.06, SD=0.83) were rated as somewhat easy, implying that while AI tools are generally accessible, some users experience difficulties with their interface or response time. These findings align with Gustilo et al. (2024), who noted that while AI tools are widely available, technical difficulties, such as software errors and inconsistent responses, may hinder their usability.

The findings suggest that students generally perceive AI writing tools as effective and easy to use, particularly for improving writing efficiency and structuring content. However, concerns over factual accuracy and interface usability highlight areas where AI developers and educators could focus on improvements. Further research can explore strategies to enhance AI reliability, such as incorporating verification mechanisms or improving tool accessibility for users with varying digital literacy levels.

3. Behavioral Intentions on the Use of Artificial Intelligence (AI) Writing Tools

Table 2 presents the respondents' behavioral intentions toward AI writing tools, categorized under ethical concerns and academic integrity and willingness for AI tool integration in learning.

Ethical Concerns and Academic Integrity

The overall mean for ethical concerns is 3.19 (SD=0.32), indicating that respondents are moderately concerned about the ethical implications of using AI writing tools. The highest-rated items—potential risks of AI tools facilitating plagiarism and academic dishonesty (Mean=3.41, SD=0.51) and institutional policies and guidelines on responsible AI tool usage (Mean=3.41, SD=0.51)—fall under the very concerned category. These findings align with the study of Stone (2023), which highlighted that students recognize the risks of AI-generated content being misused for academic dishonesty, leading to concerns about plagiarism detection and institutional regulations.

Additionally, concerns about transparency in disclosing AI-assisted writing (Mean=3.25, SD=0.49) were also rated as very concerned, suggesting that students acknowledge the importance of academic integrity when using AI tools. This is consistent with research by Malik et al. (2023) and Giray et al. (2024), which emphasized the need for universities to establish clear policies on AI-generated content disclosure to maintain ethical writing practices.

However, concerns related to dependence on AI tools reducing critical thinking and writing skills (Mean=2.97, SD=0.67) and ethical considerations in using AI-generated content for academic work (Mean=2.91, SD=0.90) were only rated as moderately concerned. This suggests that while students recognize the potential drawbacks of AI tools, they do not view them as major threats to their learning. As noted by Zhai et al. (2021), students often perceive AI writing tools as assistive rather than replacement tools, especially when used responsibly.

Table 2 Respondents' Behavioral Intentions on the Use of Artificial Intelligence (AI) Writing Tools

Items	Mean	SD	VD
Ethical Concerns and Academic Integrity	**3.19**	**0.32**	**Moderately Concerned**
1. Potential risks of AI tools facilitating plagiarism and academic dishonesty	3.41	0.51	Very Concerned
2. Dependence on AI tools reducing critical thinking and writing skills	2.97	0.67	Moderately Concerned
3. Ethical considerations in using AI-generated content for academic work	2.91	0.9	Moderately Concerned
4. Concerns about transparency in disclosing AI-assisted writing	3.25	0.49	Very Concerned
5. Fairness and credibility of AI-generated content in academic submissions	3.17	0.78	Moderately Concerned
6. Institutional policies and guidelines on responsible AI tool usage	3.41	0.51	Very Concerned
Willingness of AI Writing Tools Integration in Learning	**3.14**	**0.29**	**Moderately Willing**
1. Openness to incorporating AI tools as writing aids in coursework	2.96	0.87	Moderately Willing
2. Perceived benefits of AI tools in enhancing writing and learning outcomes	3.23	0.72	Moderately Willing
3. Acceptance of AI-generated content as a supplementary learning resource	3.10	0.72	Moderately Willing
4. Comfort level in receiving AI-assisted feedback for writing improvement	2.95	0.68	Moderately Willing
5. Support for AI integration as part of academic writing instruction	3.06	0.83	Moderately Willing
6. Readiness to adapt AI tools while maintaining ethical writing practices	3.54	0.55	Very Willing

Legend: VD=Verbal Description

3.25 – 4.00=Very Concerned/Very Willing; 2.50 – 3.24=Moderately Concerned/Moderately Willing; 1.75 – 2.49=Slightly Concerned/Slightly Willing; 1.00 – 1.74=Not at All Concerned/ Not at All Willing

Willingness of AI Writing Tools Integration in Learning

The respondents' willingness to integrate AI writing tools in learning yielded an overall mean of 3.14 (SD=0.29), indicating they are moderately willing to adopt AI as a learning aid. Among the items, readiness to adapt AI tools while maintaining ethical writing practices (Mean=3.54, SD=0.55) received the highest rating, falling under the very willing category. This suggests that students are open to using AI tools as long as they align with academic integrity standards, supporting the findings of Khalifa and Albadawy (2024), who noted that students favor AI assistance when ethical guidelines are clear.

Moreover, respondents expressed moderate willingness toward perceived benefits of AI tools in enhancing writing and learning outcomes (Mean=3.23, SD=0.72) and acceptance of AI-generated content as a supplementary learning resource (Mean=3.10, SD=0.72). This aligns with the study of Junio and Bandala (2023),

which found that AI writing tools are widely accepted by students for improving writing efficiency, but concerns over originality and dependence persist.

However, openness to incorporating AI tools as writing aids in coursework (Mean=2.96, SD=0.87) and comfort level in receiving AI-assisted feedback for writing improvement (Mean=2.95, SD=0.68) were rated on the lower end of the moderately willing scale. This indicates that while students recognize the benefits of AI assistance, some remain hesitant about fully integrating AI-generated feedback into their writing processes.

The results indicate that while students recognize the ethical concerns surrounding AI writing tools, they remain open to integrating these technologies into their learning as long as ethical considerations are addressed. The findings suggest the need for institutional policies and ethical AI use guidelines, as well as educational programs to enhance students' critical thinking and independent writing skills while utilizing AI. Further research could explore faculty perspectives on AI tool integration to develop comprehensive AI literacy programs in academic institutions.

4. Differences on Respondents' Attitude and Behavioral Intentions on the Use of Ai Writing Tools as to Profile Variables.

Differences on Attitudes Towards the Use of AI Writing Tools as to Profile

Table 3 presents the ANOVA test results assessing differences in respondents' perceived effectiveness and perceived ease of use of AI writing tools across various profile variables: sex, academic year level, program enrolled, and frequency of use.

Table 3 ANOVA Test Results for Testing Differences on Attitude Towards the Use of AI Writing Tools

Profile Variables	Perceived Effectiveness				Perceived Ease of Use			
	Mean	SD	F-value	p-value	Mean	SD	F-value	p-value
A. Sex								
Male	2.97	0.21	197.55**	0.000	3.19	0.29	13.64**	0.000
Female	3.33	0.25			3.31	0.29		
B. Academic Year Level								
First Year	2.98_c	0.23	68.46**	0.000	3.22	0.31	2.48	0.061
Second Year	2.91_c	0.23			3.20	0.28		
Third Year	3.25_b	0.24			3.28	0.30		
Fourth Year	3.36_a	0.22			3.31	0.28		
C. Program Enrolled								
STEM Disciplines	3.18	0.29	1.44	0.232	3.27	0.28	0.82	0.367
Non-Stem (Arts and Philosophy)	3.13	0.30			3.24	0.32		
D. Frequency of Use of AI Tools								
Never	2.84_c	0.30	49.37**	0.000	3.29_a	0.26	8.01**	0.000
Sometimes	3.09_b	0.37			3.20_b	0.26		
Often	3.07_b	0.15			3.19_b	0.31		
Always	3.35_a	0.26			3.35_a	0.27		

*Legend: **=significant at 0.01 level*

Note: Means with the same subscript are not different using Tukey-HSD Post Hoc

The results indicate a significant difference in both perceived effectiveness ($F = 197.55$, $p < 0.01$) and perceived ease of use ($F = 13.64$, $p < 0.01$) based on sex. Female respondents (Mean = 3.33, SD = 0.25) rated the effectiveness of AI writing tools higher than males (Mean = 2.97, SD = 0.21). Similarly, females (Mean = 3.31, SD = 0.29) also found AI tools easier to use than males (Mean = 3.19, SD = 0.29). This aligns with findings from Bacallo et

al. (2024), which suggested that female students tend to exhibit higher adaptability and confidence in using digital learning tools. Moreover, Maurat et al. (2024) found that female students are more likely to perceive AI tools as beneficial for academic tasks, as they often seek digital solutions to improve writing accuracy and structure.

A significant difference was observed in perceived effectiveness ($F = 68.46$, $p < 0.01$), but not in perceived ease of use ($F = 2.48$, $p = 0.061$). Post hoc results show that fourth-year students (Mean = 3.36, SD = 0.22) rated AI tools as more effective compared to first-year (Mean = 2.98, SD = 0.23) and second-year students (Mean = 2.91, SD = 0.23). This suggests that upper-year students may have a more refined understanding of AI's usefulness due to greater academic exposure and prior experience with research and writing tasks, a finding consistent with Pedro et al. (2019) and Mahmudi et al. (2023). However, perceived ease of use did not significantly differ across year levels, indicating that familiarity with AI tools may not necessarily depend on academic standing but rather on personal or institutional exposure.

A significant difference was found in both perceived effectiveness ($F = 49.37$, $p < 0.01$) and perceived ease of use ($F = 8.01$, $p < 0.01$) based on frequency of AI tool usage. Post hoc analysis revealed that respondents who "always" use AI tools (Mean = 3.35, SD = 0.26) reported significantly higher effectiveness ratings than those who "never" use AI tools (Mean = 2.84, SD = 0.30). Similarly, students who frequently use AI tools (Mean = 3.35, SD = 0.27) found them easier to use compared to those who rarely or never use them. This supports the technology acceptance model (TAM) proposed by Davis (1989) and reinforced by Obenza et al. (2024), which posits that higher exposure to technology leads to increased ease of use and perceived usefulness. Moreover, Nazari et al. (2021) found that students who engage with AI tools regularly tend to develop greater confidence in their effectiveness, reinforcing the importance of digital literacy and AI exposure in academic settings.

However, no significant differences were found in either perceived effectiveness ($F = 1.44$, $p = 0.232$) or perceived ease of use ($F = 0.82$, $p = 0.367$) based on program enrollment (STEM vs. Non-STEM). This implies that both STEM and non-STEM students view AI writing tools similarly in terms of effectiveness and usability. This contrasts with Chan & Hu (2023) and Javier & Moorhouse (2023) who suggested that STEM students may have an advantage in adopting AI-driven tools due to their stronger background in technology. However, the current study suggests that AI writing tools are equally accessible and useful across disciplines, reflecting the growing integration of AI in both technical and humanities-related coursework.

Differences on Behavioral Intensions Towards the Use of AI Writing Tools as to Profile

Table 4 presents the ANOVA test results examining differences in respondents' ethical concerns and academic integrity and willingness to integrate AI writing tools into learning across various profile variables: sex, academic year level, program enrolled, and frequency of AI tool use.

A significant difference was found in both ethical concerns and academic integrity ($F = 106.15$, $p < 0.01$) and willingness to integrate AI writing tools ($F = 197.00$, $p < 0.01$) based on sex. Female respondents (Mean = 3.33, SD = 0.23) exhibited higher concerns regarding the ethical implications of AI tool use than males (Mean = 3.01, SD = 0.32). This suggests that female students are more cautious about potential academic dishonesty and the responsible use of AI tools. This finding supports the notion of Pedro et al. (2019) and Mahmudi et al. (2023), who noted that female students tend to be more conscious of ethical considerations in digital learning environments. Similarly, females (Mean = 3.31, SD = 0.24) showed a higher willingness to integrate AI tools into learning compared to males (Mean = 2.95, SD = 0.22). This aligns with research by Nazari et al. (2021), which found that female students embrace AI tools for academic assistance but remain mindful of responsible usage.

A significant difference was observed in both ethical concerns ($F = 19.64$, $p < 0.01$) and willingness to integrate AI tools ($F = 69.99$, $p < 0.01$) across academic year levels. Fourth-year students (Mean = 3.33, SD = 0.23) exhibited the highest level of ethical concerns, significantly higher than first-year (Mean = 3.04, SD = 0.33) and second-year students (Mean = 3.03, SD = 0.33). This suggests that as students advance in their academic journey, they become more aware of academic integrity issues related to AI use, a trend supported by Maurat et al. (2021) and Pan et al. (2024). Willingness to integrate AI tools increased with academic year level, with fourth-year students (Mean = 3.33, SD = 0.20) being significantly more willing than first-year (Mean = 2.96, SD = 0.24) and second-year students (Mean = 2.88, SD = 0.26). This indicates that upper-year students may have greater exposure and acceptance of AI writing tools, reinforcing the findings of Obenza et al. (2024) that familiarity increases AI adoption.

Table 4: ANOVA Test Results for Testing Differences on Behavioral Intentions Towards the Use of AI Writing Tools

Profile Variables	Ethical Concerns and Academic Integrity				Willingness of AI Writing Tools Integration in Learning			
	Mean	SD	F-value	p-value	Mean	SD	F-value	p-value
A. Sex								
Male	3.01	0.32	106.15**	0.000	2.95	0.22	197.00**	0.000
Female	3.33	0.23			3.31	0.24		
B. Academic Year Level								
First Year	3.04_b	0.33	19.64**	0.000	2.96	0.24_c	69.99**	0.000
Second Year	3.03_b	0.33			2.88	0.26_c		
Third Year	3.22_a	0.30			3.23	0.22_b		
Fourth Year	3.33_a	0.23			3.33	0.20_a		
C. Program Enrolled								
STEM Disciplines	3.18	0.31	0.02	0.900	3.15	0.29	1.40	0.237
Non-Stem (Arts and Philosophy)	3.19	0.33			3.11	0.29		
D. Frequency of Use of AI Tools								
Never	3.14_b	0.23	27.87**	0.000	2.79_c	0.34	48.67**	0.000
Sometimes	3.16_b	0.40			3.05_b	0.35		
Often	3.03_c	0.30			3.06_b	0.16		
Always	3.35_a	0.22			3.32_a	0.24		

*Legend: **=significant at 0.01 level*

Note: Means with the same subscript are not different using Tukey-HSD Post Hoc

Moreover, significant difference was found in both ethical concerns ($F = 27.87$, $p < 0.01$) and willingness to integrate AI tools ($F = 48.67$, $p < 0.01$) based on frequency of AI tool usage. Students who frequently use AI tools ("always" users, $M = 3.35$, $SD = 0.22$) exhibited higher ethical concerns than those who rarely or never use AI tools ($M = 3.14$, $SD = 0.23$). This suggests that students who frequently engage with AI tools may also become more aware of their ethical implications, aligning with Bacallo (2024). Willingness to integrate AI tools was highest among students who "always" use them ($M = 3.32$, $SD = 0.24$), significantly higher than those who never use AI tools ($M = 2.79$, $SD = 0.34$). This supports the technology acceptance model (TAM) proposed by Davis (1989) and applied in the context of AI adoption by Pedro et al. (2019), emphasizing that higher exposure leads to greater acceptance and willingness to integrate AI tools.

However, no significant differences were found in either ethical concerns ($F = 0.02$, $p = 0.900$) or willingness to integrate AI tools ($F = 1.40$, $p = 0.237$) based on program enrollment (STEM vs. Non-STEM). This finding contrasts with Chaunta et al. (2022), who suggested that STEM students may be more open to AI adoption due to their technological background. However, the current study suggests that AI writing tools are perceived similarly across disciplines, reflecting their growing relevance in both technical and humanities-based coursework.

5. In-Depth Perceptions and Experiences Regarding the Utilization of AI Writing Tools

The qualitative analysis of students' perceptions regarding the utilization of AI writing tools reveals a distinct landscape encompassing perceived benefits, ethical concerns, and technical limitations.

Students reported that AI writing tools enhance writing efficiency and aid in organizing ideas. For instance, a fourth-year student mentioned that AI simplifies the process of writing essays and reports, especially under tight deadlines. Similarly, a second-year student noted that AI assists in structuring papers when they feel uncertain about the organization. These observations align with studies

indicating that AI tools can facilitate the writing process by streamlining tasks and improving clarity (Ravšelj et al., 2025; Abdaljaleel et al., 2024).

Despite these advantages, students expressed apprehensions about becoming overly dependent on AI for writing tasks. A third-year student expressed fear of developing reliance on AI in writing. Additionally, a first-year student highlighted the necessity for clear guidelines on AI usage in academic settings. These concerns are consistent with findings that emphasize the importance of establishing ethical guidelines to prevent over-reliance on AI and to maintain academic integrity (Abbas, 2024).

Table 4: In-Depth Perceptions of Respondents in Utilization of AI Writing Tools

Theme	Code	Sample Quote
Perceived Benefits	Enhanced writing efficiency	*"Mas napapadali ang paggawa ko ng essays at reports dahil sa AI, lalo na kapag may deadline."* (Student, Fourth Year) [AI makes it easier for me to write essays and reports, especially when there are deadlines.]
	Improved organization of ideas	*"Minsan, naguguluhan ako sa structure ng paper ko, pero natutulungan ako ng AI na ayusin ito."* (Student, Second Year) [Sometimes, I get confused with the structure of my paper, but AI helps me organize it.]
Ethical Concerns	Fear of over-reliance on AI	*"Nakakatulong ang AI, pero minsan natatakot ako na baka maging dependent na ako rito sa pagsusulat."* (Student, Third Year) [AI is helpful, but sometimes I fear becoming too dependent on it for writing.]
	Transparency in AI usage	*"Dapat may malinaw na guidelines kung paano dapat gamitin ang AI tools sa schoolwork."* (Student, First Year) [There should be clear guidelines on how AI tools should be used in schoolwork.]
Technical Limitations	Inaccuracies in AI-generated content	*"Hindi palaging tama ang information na binibigay ng AI, kaya kailangan ko pa ring i-verify."* (Student, Third Year) [AI does not always provide accurate information, so I still need to verify it.]
	Difficulty in handling complex topics	*"Kapag masyadong technical ang topic, parang hindi masyadong nakakatulong ang AI sa paggawa ng content."* (Student, Second Year) [When the topic is too technical, AI doesn't seem very helpful in generating content.]

Moreover, students also identified technical challenges associated with AI writing tools, such as inaccuracies in AI-generated content and difficulties in handling complex topics. A third-year student observed that AI does not always provide accurate information, necessitating verification. Similarly, a second-year student mentioned that AI is less helpful when dealing with highly technical subjects. These insights are in line with research highlighting the current limitations of AI in processing complex or specialized information, highlighting the need for critical evaluation of AI outputs (Luckins & Holmes, 2016; Atlas, 2023).

While AI writing tools offer significant benefits in enhancing writing efficiency and organization, they also present ethical and technical challenges. Addressing these issues requires a balanced approach that leverages the advantages of AI while promoting responsible usage and critical engagement among students.

On the other hand, the lived experiences of students regarding AI writing tools reveal both positive outcomes and challenges, particularly in the areas of writing support, institutional constraints, and ethical considerations. These findings highlight the diverse ways students interact with AI in academic writing and the need for institutional policies that foster responsible and equitable AI integration.

Students reported that AI serves as a useful study aid and improves writing productivity. A fourth-year student shared that they use AI to generate ideas but ensure that the final work is personalized. Similarly, a third-year student mentioned that AI speeds up their writing process, particularly in brainstorming and drafting. These observations align with studies suggesting that AI can enhance students' ability to organize ideas and improve writing fluency when used as a supplementary tool rather than a replacement for critical thinking (Öztunç, 2023). Furthermore, previous research highlights that AI-assisted writing tools, when used responsibly, can reduce cognitive load and improve academic performance by helping students focus on higher-order writing skills (Junio & Bandala, 2023).

Despite these benefits, some students encountered difficulties due to institutional restrictions and uneven

access to AI tools. A second-year student noted that some professors prohibit AI, limiting its use in academic tasks. Likewise, a first-year student emphasized that not all students have access to AI tools, particularly those who are less familiar with technology. These challenges align with findings in the Philippine educational context, where digital disparities impact students' ability to fully engage with AI-assisted learning (Estrellado & Miranda, 2023). Additionally, studies indicate that the lack of clear institutional policies on AI usage leads to confusion among students regarding when and how AI tools can be ethically and effectively utilized in coursework (Chan, 2023).

Table 5: Lived Experiences of Respondents in Utilization of AI Writing Tools

Theme	Code	Sample Quote
Positive Experiences	AI as a study aid	*"Ginagamit ko ang AI para mag-generate ng ideas, pero sinisigurado kong ini-edit ko ito para maging mas personalized."* (Student, Fourth Year) [I use AI to generate ideas, but I make sure to edit it to make it more personalized.]
	Increased writing productivity	*"Mas mabilis akong nakakatapos ng papers dahil sa AI, lalo na sa brainstorming at pagbuo ng draft."* (Student, Third Year) [I finish my papers faster because of AI, especially in brainstorming and drafting.]
Challenges in Integration	Institutional restrictions	*"May mga professors na hindi pinapayagan ang AI, kaya hindi ko ito laging magamit."* (Student, Second Year) [Some professors do not allow AI, so I can't always use it.]
	Uneven access to AI tools	*"Hindi lahat ng students may access sa AI tools, lalo na yung mga hindi sanay sa paggamit ng technology."* (Student, First Year) [Not all students have access to AI tools, especially those who are not familiar with technology.]
Ethical Reflections	Balancing AI assistance and independent writing	*"AI ay magandang tulong, pero dapat matuto pa rin tayong magsulat nang hindi umaasa rito."* (Student, Third Year) [AI is a good support tool, but we should still learn to write without relying on it.]
	Responsible use of AI in academic work	*"Dapat alam natin ang limitasyon ng AI at hindi ito gamitin sa maling paraan tulad ng plagiarism."* (Student, Fourth Year) [We should know the limitations of AI and not use it improperly, like for plagiarism.]

Students also expressed concerns about maintaining a balance between AI assistance and independent writing. A third-year student highlighted that while AI is helpful, it is important to develop writing skills without becoming overly reliant on the technology. A fourth-year student reinforced this view, emphasizing the need to understand AI limitations and avoid unethical practices such as plagiarism. These perspectives are supported by research that warns against AI dependency, stressing that students must cultivate their analytical and writing skills to avoid academic dishonesty (Gustilo et al., 2024). Ethical considerations surrounding AI in education continue to be a global concern, with scholars advocating for AI literacy programs that teach students how to use these tools responsibly while maintaining academic integrity (Celis et al., 2023).

The findings suggest that AI writing tools provide significant advantages in terms of efficiency and idea generation but also present challenges related to institutional acceptance, accessibility, and ethical use. To address these concerns, universities and policymakers must establish clear guidelines that promote responsible AI usage while ensuring equal access to technology for all students. AI should be positioned as a supportive tool rather than a substitute for fundamental writing skills, reinforcing a balanced approach to technology integration in education.

6. Challenges and Limitations Respondents Encounter in Using AI Writing Tools

The findings from the study highlight several challenges and limitations that students face when using AI writing tools. These challenges span technical, ethical, accessibility, and institutional concerns, emphasizing the need for structured guidelines and equitable access to AI resources in educational settings.

Students identified issues with AI-generated content, particularly inaccuracies and difficulties in handling complex topics. A third-year student mentioned that AI sometimes provides outdated or incorrect information, necessitating fact-checking. Similarly, a fourth-year student noted that AI responses tend to be too generic when dealing with highly technical subjects. These concerns align with findings from previous research, which indicate that AI-generated texts often lack deep contextual

understanding and may contain misinformation (Labajová, 2023). Furthermore, the challenge of AI limiting students' ability to generate original ideas, as pointed out by a first-year student, supports arguments that AI tools, while useful, may reduce critical thinking and creativity if overused (Yalazi-Dawani, 2023).

Table 6: Challenges and Limitations in Utilization of AI Writing Tools Encountered by Respondents

Theme	Code	Sample Quote
Technical Challenges	Inaccuracy of AI-generated content	*"Minsan mali o outdated ang binibigay na impormasyon ng AI, kaya kailangan ko pang mag-fact-check."* (Student, Third Year) [Sometimes, AI provides incorrect or outdated information, so I still need to fact-check.]
	Limited understanding of complex topics	*"Hindi ganun ka-helpful ang AI kapag sobrang komplikado ng topic, kasi parang generic lang ang sagot niya."* (Student, Fourth Year) [AI is not very helpful when the topic is too complex because its answers seem too generic.]
	Difficulty in generating original ideas	*"Kapag masyado akong umasa sa AI, parang hindi na ako nakakapag-isip ng sariling ideas."* (Student, First Year) [When I rely too much on AI, I feel like I'm not generating my own ideas anymore.]
Ethical Concerns	Over-reliance on AI for academic writing	*"Napansin kong parang nagiging tamad na akong mag-isip minsan kasi inaasa ko na lang sa AI yung sagot."* (Student, Second Year) [I noticed that sometimes I become lazy to think because I rely too much on AI for answers.]
	Risk of academic dishonesty	*"Dapat may malinaw na rules kung paano gamitin ang AI sa pagsusulat para hindi ito mauwi sa cheating."* (Student, First Year) [There should be clear rules on how to use AI in writing so that it doesn't lead to cheating.]
Access and Usability Issues	Limited access to AI tools	*"May mga kaklase akong hindi maka-access sa AI tools kasi walang laptop o mahinang internet."* (Student, Third Year) [Some of my classmates can't access AI tools because they don't have a laptop or have weak internet.]
	Difficulty in navigating AI tool features	*"Hindi lahat ng AI tools madaling gamitin. Minsan ang daming options, hindi ko alam kung ano pipiliin."* (Student, Fourth Year) [Not all AI tools are easy to use. Sometimes, there are too many options, and I don't know which one to choose.]
Institutional Policies	Restrictions on AI usage in coursework	*"May mga professors na hindi pinapayagan ang AI kahit ginagamit ko lang sana for brainstorming."* (Student, Second Year) [Some professors don't allow AI even if I only use it for brainstorming.]
	Lack of clear AI usage guidelines	*"Wala pang official na guidelines sa school kung paano dapat gamitin ang AI sa assignments at research."* (Student, First Year) [There are no official school guidelines yet on how AI should be used in assignments and research.]
	Inconsistency in AI policies among professors	*"May ibang teachers na okay lang gumamit ng AI, pero may iba na strict at hindi talaga pumapayag."* (Student, Third Year) [Some teachers allow the use of AI, but others are strict and don't allow it at all.]

A significant concern raised by students is the risk of over-reliance on AI, leading to decreased effort in independent writing. A second-year student expressed that AI use sometimes fosters laziness, a finding echoed in studies showing that excessive dependence on AI can negatively impact student motivation and cognitive engagement (Sorian et al., 2024). Additionally, the potential for academic dishonesty was highlighted by a first-year student who called for clearer institutional rules on AI usage. Previous studies have emphasized the importance of academic integrity policies to prevent AI misuse, such as

unauthorized content generation and plagiarism (Giray et al., 2024).

Students also reported disparities in access to AI tools due to financial and technological constraints. A third-year student mentioned that some classmates struggle with AI access due to the lack of devices or unreliable internet connections, a common issue in the Philippines, where digital inequality remains a pressing concern (Jones & Bridges, 2016). Additionally, a fourth-year student pointed out difficulties in navigating AI tool features, reflecting the need for digital literacy programs to help students maximize AI capabilities (Masatoshi, 2023).

The inconsistent implementation of AI policies across courses and professors emerged as a major concern. A second-year student noted that some professors prohibit AI use entirely, even for brainstorming purposes, while a third-year student pointed out inconsistencies in AI regulations among faculty members. These observations support findings from previous studies indicating that many universities lack unified policies on AI integration, leading to confusion among students (Chan, 2023). A first-year student also highlighted the absence of clear AI usage guidelines in their school, reinforcing the need for well-defined institutional policies that specify appropriate AI applications in academic work (Perez, 2024).

The challenges and limitations identified in this study underscore the need for a balanced approach to AI integration in education. While AI writing tools offer potential benefits, their use should be guided by clear institutional policies, digital literacy initiatives, and ethical considerations to ensure responsible usage. Addressing these challenges requires collaboration between educators, administrators, and policymakers to establish standardized AI guidelines and improve access to digital resources for all students.

7. Integration of Quantitative and Qualitative Findings

The integration of the quantitative and qualitative findings provides a more comprehensive understanding of students' perspectives on the utilization of AI writing tools. By triangulating data from both research methods, deeper insights emerge regarding the perceived benefits, challenges, and ethical concerns surrounding AI in academic writing.

The quantitative results revealed that a significant number of students perceive AI writing tools as beneficial in improving writing efficiency and organization. This aligns with qualitative findings where respondents explicitly stated that AI helps streamline their writing process, particularly in brainstorming and structuring ideas. These findings support existing literature that highlights AI's role in enhancing students' productivity by reducing cognitive load in writing tasks (Liu et al., 2024).

However, despite the advantages, the quantitative data also indicated concerns regarding AI's accuracy and reliability. The qualitative findings reinforced this issue, with students reporting the need to fact-check AI-generated content due to occasional inaccuracies and overly generic responses. This corroborates previous studies that caution against uncritical reliance on AI tools due to their limitations in handling complex topics (Labajová, 2023).

While the quantitative results showed a generally positive perception of AI in writing, the qualitative responses provided nuanced perspectives regarding ethical concerns. Specifically, students expressed fears of becoming overly dependent on AI, a theme that was not strongly evident in the quantitative data. This divergence suggests that while students recognize AI's benefits at a functional level, they also reflect on its long-term impact on their independent writing skills. The study by Soriano et al. (2024) similarly found that students struggle with balancing AI assistance and personal effort in academic tasks.

Another key difference emerged in access to AI tools. The quantitative findings indicated moderate to high usage rates, but qualitative responses revealed disparities in access due to financial constraints and digital literacy levels. Some students noted difficulties in navigating AI features, particularly those unfamiliar with advanced technology. This highlights the need for AI literacy programs to ensure equitable access and skill development, as recommended by Sparks et al. (2024).

The integrated findings underscore the necessity of clear institutional guidelines on AI usage. Quantitative data showed mixed opinions on AI policies, while qualitative responses pointed to inconsistencies among professors regarding AI acceptance in coursework. The lack of uniform policies creates confusion among students, reinforcing the call for standardized AI guidelines in academic institutions (Ramos et al., 2024; Cadiz et al., 2024).

Furthermore, the study highlights the need for ethical AI usage training. While students acknowledge AI's potential, concerns about plagiarism and academic dishonesty persist. Educational institutions must implement structured programs that emphasize responsible AI utilization, ensuring that students develop critical thinking and integrity in their writing practices (Aproda et al., 2024).

V. CONCLUSIONS AND RECOMMENDATIONS

The research points out that students tend to view AI writing tools as helpful, especially in making writing

more efficient, in organizing ideas, and in increasing productivity. The tools assist students in handling academic workload, especially when dealing with tight deadlines. AI is also a helpful study aid by providing ideas and outlining content, enabling students to polish their writing. But problems like inconsistency in AI content, inability to address complicated matters, and fear of originality and independent thought mean that caution is required in the use of AI. There are also ethical issues to worry about, specifically the danger of over-dependence on AI and academic dishonesty, pointing towards responsible and enlightened application of such technologies. In addition, institutional AI usage policies are still incoherent, with some professors banning AI outright while others permit it under certain circumstances. Moreover, unequal access to AI tools based on financial and technological limitations also accentuates the digital divide among students.

To overcome these issues, educational institutions need to create clear and uniform guidelines for AI usage, ensuring faculty members and courses have consistent policies. AI literacy courses must be incorporated into the curriculum to enable students to critically analyze AI-generated material, apply AI ethically, and uphold academic integrity. Training for faculty members on AI-supported learning must also be provided to teach students how to effectively and responsibly utilize these tools. In addition, institutions must promote a balanced strategy for integrating AI, with students nurturing their writing and critical thinking skills while using AI as an assistance tool and not an alternative to independent work. Schools and universities must also offer access to AI tools or digital literacy programs to ensure that all students, irrespective of financial status, can utilize such technological advancements. Lastly, more studies should be undertaken to investigate the long-term implications of AI-powered writing on the learning achievements and academic growth of students. Through these steps, schools can provide a learning environment where AI technologies support learning without undermining academic standards and ethical values.

CONFLICT OF INTEREST

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REFERENCES

[1] Abbas, M. (2024). Is it harmful or helpful? Examining the causes and consequences of generative AI usage among university students. *International Journal of Educational Technology in Higher Education*.

[2] Abdaljaleel, M., Barakat, M., Alsanafi, M., Salim, N. A., Abazid, H., Malaeb, D., ... & Sallam, M. (2024). A multinational study on the factors influencing university students' attitudes and usage of ChatGPT. *Scientific Reports, 14*(1), 1983.

[3] Aiken, L. R. (1985). Three coefficients for analyzing the reliability and validity of ratings. *Educational and Psychological Measurement, 45*(1), 131-142. https://doi.org/10.1177/0013164485451012

[4] Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211.

[5] Aproda, R. W., Prado, M. C., Maria, A. D. S., & Victoriano, N. S. (2024). The Impact of ChatGPT on Academic Integrity and Undergraduate Students' Learning.

[6] Atlas, S. (2023). *ChatGPT for higher education and professional development: A guide to conversational AI*.

[7] Bacallo, D. L. D., Bie, P. E. G., De Vera, A. R., Dizon, R. C., Marcaida, J. L. M., Pineda, A. J. M., ... & Vicente, A. P. (2024). DIGITAL LEARNING REVOLUTION: IDENTIFYING THE INFLUENCE OF DEPENDENCY ON ARTIFICIAL INTELLIGENCE TOOLS TOWARDS THE KNOWLEDGE ACQUISITION OF STUDENTS. *Ignatian International Journal for Multidisciplinary Research, 2*(8), 1338-1362.

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

[9] Braun, V., & Clarke, V. (2021). *Thematic analysis: A practical guide*. SAGE.

[10] Cadiz, M. C. D., Manuel, L. A. F., Reyes, M. M., Natividad, L. R., & Ibarra, F. P. (2024). Technology integration in Philippine higher education: A content-based bibliometric analysis. *Jurnal Ilmiah Ilmu Terapan Universitas Jambi, 8*(1), 35-47.

[11] Celis, C. E. G., Santiago, A. B. B., Dino, M. J., & Magat, M. S. (2023). Academic Integrity in the Digital Age of Artificial Intelligence: A Narrative Literature Review. Available at SSRN 4641787.

[12] Chan, C. K. Y. (2023). A comprehensive AI policy education framework for university teaching and learning. *International Journal of Educational Technology in Higher Education, 20*(1), 38.

[13] Chan, C. K. Y., & Hu, W. (2023). Students' voices on generative AI: Perceptions, benefits, and challenges in higher

education. *International Journal of Educational Technology in Higher Education, 20*(1), 1-22. https://doi.org/10.1186/s41239-023-00411-8

[14] Chounta, I. A., Bardone, E., Raudsep, A., & Pedaste, M. (2022). Exploring teachers' perceptions of artificial intelligence as a tool to support their practice in Estonian K-12 education. *International Journal of Artificial Intelligence in Education, 32*(3), 725-755.

[15] Cortez, P. M., Ong, A. K. S., Diaz, J. F. T., German, J. D., & Jagdeep, S. J. S. S. (2024). Analyzing Preceding factors affecting behavioral intention on communicational artificial intelligence as an educational tool. *Heliyon, 10*(3).

[16] Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE.

[17] Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE.

[18] Cuyugan, C. (2024). The Effect of Artificial Intelligence Tools Usage to the Perceived Learning of 2nd Year Communication Students at Far Eastern University-Manila, Academic Year 2023-2024. *International Journal of Curriculum and Instruction*. Retrieved from https://ijci.net/index.php/IJCI/article/view/1498

[19] Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 319-340.

[20] Egunjobi, J. P. (2023). Artificial intelligence and academic writing: A global exploration of students' perceptions and attitudes. *Journal of Educational Technology Systems, 52*(1), 45-67.

[21] Enciso, R. E. Assessing MAEd Science Students' Views on AI Adoption in Academic Research Writing: Implications for Academic Integrity Policy.

[22] Eslit, E. R. (2023). Voyaging Beyond Chalkboards: Unleashing Tomorrow's Minds through AI-Driven Frontiers in Literature and Language Education.

[23] Estrellado, C. J., & Miranda, J. C. (2023). Artificial intelligence in the Philippine educational context: Circumspection and future inquiries. *International Journal of Scientific and Research Publications, 13*(5).

[24] Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). SAGE Publications.

[25] Giray, L., De Silos, P. Y., Adornado, A., Buelo, R. J. V., Galas, E., Reyes-Chua, E., ... & Ulanday, M. L. (2024). Use and impact of artificial intelligence in Philippine higher education: Reflections from instructors and administrators. *Internet Reference Services Quarterly, 28*(3), 315-338.

[26] Gustilo, L., Ong, E., & Lapinid, M. R. (2024). Algorithmically-driven writing and academic integrity: exploring educators' practices, perceptions, and policies in AI era. *International Journal for Educational Integrity, 20*(1), 3.

[27] Holden, O. L., Norris, M. E., & Kuhlmeier, V. A. (2021, July). Academic integrity in online assessment: A research review. In *Frontiers in Education* (Vol. 6, p. 639814). Frontiers Media SA.

[28] Hua, J. (2023). Beyond exams: Investigating AI tool impact on student attitudes, ethical awareness, and academic dishonesty in online college assessments. *International Journal of Educational Management and Development Studies, 4*(4), 160-185.

[29] Javier, D. R. C., & Moorhouse, B. L. (2023). Developing secondary school English language learners' productive and critical use of ChatGPT. *TESOL Journal, 15*(2), e755.

[30] Jones, M., & Bridges, R. (2016). Equity, access, and the digital divide in learning technologies: Historical antecedents, current issues, and future trends. In *The Wiley handbook of learning technology* (pp. 327-347).

[31] Junio, D. A., & Bandala, A. A. (2023, November). Utilization of Artificial Intelligence in Academic Writing Class: L2 Learners Perspective. In *2023 IEEE 15th International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment, and Management (HNICEM)* (pp. 1-6). IEEE.

[32] Khalifa, M., & Albadawy, M. (2024). Using artificial intelligence in academic writing and research: An essential productivity tool. *Computer Methods and Programs in Biomedicine Update*, 100145.

[33] Klitgård, I. (2025). Navigating the Crossroads of Generative AI and Academic English Writing - A Student Perspective in a Time of Transition. *LOM - Tidsskrift for Læring og Medier, 31*.

[34] Krullaars, M., van der Velde, M., & van der Aalst, W. (2023). The effects of over-reliance on AI dialogue systems on students' learning motivation and performance. *Smart Learning Environments*, 10(1), 1-14. https://doi.org/10.1186/s40561-023-00116-7

[35] Labajová, L. (2023). The state of AI: Exploring the perceptions, credibility, and trustworthiness of the users towards AI-Generated Content.

[36] Liu, M., Zhang, L. J., & Biebricher, C. (2024). Investigating students' cognitive processes in generative AI-assisted digital multimodal composing and traditional writing. *Computers & Education, 211*, 104977.

[37] Luckin, R., & Holmes, W. (2016). *Intelligence unleashed: An argument for AI in education*.

[38] Mahmudi, A. A., Fionasari, R., Mardikawati, B., & Judijanto, L. (2023). Integration of artificial intelligence technology in distance learning in higher education. *Journal of Social Science Utilizing Technology, 1*(4), 190-201.

[39] Malik, A. R., Pratiwi, Y., Andajani, K., Numertayasa, I. W., Suharti, S., & Darwis, A. (2023). Exploring artificial intelligence in academic essay: higher education student's perspective. *International Journal of Educational Research Open, 5*, 100296.

[40] Malon, J. C., Virtudazo, J. A., Vallente, W., Ayop, L., & Malon, M. F. O. (2024). *International Journal of Educational Methodology*.

[41] Mapúa University. (n.d.). Mapúa University leads the way in AI-integrated education in the Philippines. *Mapúa University News*.

[42] Masatoshi, H. (2023). Educational reform for middle-income trap under digitalization: Culprits, challenges, and strategies in the Philippines. *SocioEconomic Challenges, 7*(3), 200-218.

[43] Maurat, J. I. C., Isip, E. V., & Lumabas, A. G. R. (2024, October). A Comparative Study of Gender Differences in the Utilization and Effectiveness of AI-Assisted Learning Tools in Programming Among University Students. In *Proceedings of the 2024 International Conference on Artificial Intelligence and Teacher Education* (pp. 30-34).

[44] Mendoza, J. D., Santos, M. A., & Reyes, P. L. (2023). The effect of artificial intelligence tools usage on the perceived learning of communication students. *International Journal of Computing Innovations, 5*(2), 123-130.

[45] Moran, A., & Wilkinson, B. (2025, March 2). Students' use of AI spells death knell for critical thinking. *The Guardian*. Retrived from: https://www.theguardian.com/technology/2025/mar/02/students-use-of-ai-spells-death-knell-for-critical-thinking

[46] Moustakas, C. (1994). *Phenomenological research methods*. SAGE.

[47] Nazari, N., Shabbir, M. S., & Setiawan, R. (2021). Application of Artificial Intelligence powered digital writing assistantin higher education: randomized controlled trial. *Heliyon, 7*(5).

[48] Obenza, B. N., Salvahan, A., Rios, A. N., Solo, A., Alburo, R. A., & Gabila, R. J. (2024). University students' perception and use of ChatGPT: Generative artificial intelligence (AI) in higher education. *International Journal of Human Computing Studies, 5*(12), 5-18.

[49] Öztunç, I. (2023). The Impact of AI Writing Tools on Students' Writing Skills in English Writing Classrooms: Students' and Teachers' Perception.

[50] Pan, Z., Xie, Z., Liu, T., & Xia, T. (2024). Exploring the key factors influencing college students' willingness to use AI coding assistant tools: An expanded technology acceptance model. *Systems, 12*(5), 176.

[51] Pedro, F., Subosa, M., Rivas, A., & Valverde, P. (2019). *Artificial intelligence in education: Challenges and opportunities for sustainable development*.

[52] Perez, R. C. L. (2024). AI in higher education: faculty perspective towards artificial intelligence through UTAUT approach. *Ho Chi Minh City Open University Journal of Science-Social Sciences, 14*(4), 32-50.

[53] Ravšelj, D., Keržič, D., Tomaževič, N., Umek, L., & Brezovar, N. (2025). Higher education students' perceptions of ChatGPT: A global study of early reactions. *PLOS ONE*.

[54] Resnik, D. B. (2020). *The ethics of research with human subjects: Protecting people, advancing science, promoting trust*. Springer.

[55] Santiago Jr, C. S., Embang, S. I., Conlu, M. T. N., Acanto, R. B., Lausa, S. M., Ambojia, K. W. P., ... & Romasanta, J. K. N. (2023). Utilization of writing assistance tools in research in selected higher learning institutions in the Philippines: A text mining analysis. *International Journal of Learning, Teaching and Educational Research, 22*(11), 259-284.

[56] Soriano, S., Martinez Jr, R. A., Pabalan III, J. L., Dulay, M. J. B., Fangon, M. R., Rosales, R. S. T., ... & Mathur, A. (2024). Effectiveness Meta AI in Enhancing Academic Writing Proficiency: The Case of Filipino ESL Learners. *Library of Progress-Library Science, Information Technology & Computer, 44*(3).

[57] Sparks, J. R., Katz, I. R., & Beile, P. M. (2016). Assessing digital information literacy in higher education: A review of existing frameworks and assessments with recommendations for next-generation assessment. *ETS Research Report Series, 2016*(2), 1-33.

[58] Stone, A. (2023). Student perceptions of academic integrity: A qualitative study of understanding, consequences, and impact. *Journal of Academic Ethics, 21*(3), 357-375.

[59] Taber, K. S. (2018). The use of Cronbach's Alpha when developing and reporting research instruments in science education. *Research in Science Education, 48*(6), 1273-1296. https://doi.org/10.1007/s11165-016-9602-2

[60] Umali, J. N. D. (2024). Artificial intelligence technology management of teachers, learners motivation and challenges encountered. *Educational Research (IJMCER), 6*(3), 821-880.

[61] University of Illinois Chicago. (2024). Report on student attitudes towards AI in academia. Retrieved from https://learning.uic.edu/news-stories/report-on-student-attitudes-towards-ai-in-academia/

[62] World Bank. (2023). Ratio of female to male tertiary school enrollment for the Philippines. Retrieved from https://fred.stlouisfed.org/series/SEENRTERTFMZSPHL?utm

[63] Yalazi-Dawani, S. (2023). Integrating Artificial Intelligence into Creativity Education: Developing a Creative Problem-Solving Course for Higher Education. State University of New York.

[64] Yan, L., Sha, L., Zhao, L., Li, Y., Martinez-Maldonado, R., Chen, G., ... & Gašević, D. (2024). Practical and ethicalchallenges of large language models in education: A systematic scoping review. *British Journal of Educational Technology, 55*(1), 90-112.

[65] Younus Jasim, M., Hakim Musa, Z., Abood Asim, Z., & Rawdhan Salman, A. (2024). Developing EFL Writing with AI: Balancing Benefits and Challenges. *Technology Assisted Language Education, 2*(2), 80-93.

[66] Zhai, C., Wibowo, S., & Li, L. D. (2024). The effects of over-reliance on AI dialogue systems on students' cognitive abilities: a systematic review. *Smart Learning Environments, 11*(1), 28.