

Assisted but Unguided: AI Tool Integration, Academic Performance, And Institutional Policy Gaps Among Filipino College Students

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ABSTRACT: This research investigated how Artificial Intelligence (AI) tools can affect the performance of college students in one of the state universities in Pangasinan, Philippines. The research design was a convergent parallel mixed-method survey design, in which 300 first- year to fourth-year college students were surveyed in five focus group discussions of five academic colleges to produce both quantitative and qualitative data. A survey instrument developed by the researcher was used to collect quantitative data and semi-structured focus group discussions (FGDs) were used to collect qualitative data. Findings indicated that 91.3 percent of respondents adopted ChatGPT as the major tool of AI. The results also indicated the statistically significant difference in the increase of the General Weighted Average (GWA) of students before ($M = 83.72$) and after ($M = 87.03$) regular use of AI tools ($p = .001$). Generally, students were positive ($M = 4.10$) that AI tools had positive effects on their academic performance, especially in comprehension of lesson material, quality of writing and research effectiveness.

Nevertheless, qualitative results raised an issue related to over-reliance, academic integrity, and the lack of a formal institutional policy of AI. The article concludes that although it is evident that AI tools can enhance academic performance outcomes, their uncontrolled application has serious pedagogical consequences. The research proposes the creation of AI literacy curriculum, institutional policies about AI usage, and faculty training programs according to the existing and future educational technology standards.

Keywords: *Artificial intelligence in education, academic performance, college students, AI tools, ChatGPT, mixed-method research, Philippines, AI literacy.*

INTRODUCTION

The blistering development of the Artificial Intelligence (AI) into almost all spheres of the nowadays life has changed the environment of higher education dramatically. Intelligent tutoring systems and automated essay graders, as well as more advanced large language models (LLMs) like ChatGPT, Google Gemini, and Microsoft Copilot, have spread faster than ever before, disrupting knowledge production in educational institutions (Holmes et al., 2019; Zawacki-Richter et al., 2019). This is changing in a Philippine institution of higher education that continues to struggle with the post-pandemic shift of emergency remote instruction towards a more normalized, yet digitally enhanced, academic setting (Casingal and Ancho, 2021).

The new generative AI systems have divided educational stakeholders around the world, with ChatGPT, created by OpenAI and which passed the 100 million user mark in just two months of its release in 2022, being seen as an example of this technology (Rudolph et al., 2023). The supporters believe that AI makes knowledge more democratic, promotes differentiated learning, and improves academic performance (Popenici & Kerr, 2017; Chen et al., 2020). Those who oppose it, however, warn against excessive reliance, loss of the skills to think critically, and the desensitization of academic dishonesty (Baidoo-Anu & Ansah, 2023; Cotton et al., 2023). The Filipino college students are in the middle of these opposing views, and they are one of the most digitally active young people in the Southeast of Asia; hence their claim to be the subject of empirical research is quite strong.

Research studies on teacher professional development and educational innovation in the Philippine higher education framework have gradually acknowledged that technology has a role to play in transforming the nature of instruction and student learning. According to Casingal and Ancho (2021), Filipino teachers, especially those in the public school, have tried to overcome major challenges in technology adoption and resource limitation, which should be highlighted as the reasoning supporting the need to implement technology integration in a deliberate and evidence-based manner. Equally, Casingal and Ancho (2022) used a convergent parallel mixed-method design to investigate financial literacy in the context of teachers in the public school setting, which is an example of establishing a methodological precedent that the current study modifies to investigate the usage of AI with the demographic of college students. More recently, Casingal and Quimson (2023) supported the usefulness of mixed-method designs in the complexity of teaching and learning phenomena among Filipino participants by showing that a combination of quantitative and qualitative data provides more complex and practical information compared to mono-method designs.

Although there has been an increasing global discussion on AI in education, there is a dearth of empirical research in the Philippine state universities, and especially in provincial universities such as Pangasinan. The literature that exists is mostly related to urban institutions of higher learning or it makes use of Western-based literature which may not necessarily consider the unique socioeconomic, technological and pedagogical context of Filipino students in universities elsewhere. This is a meaningful gap as regional state universities in the Philippines enroll students who are high proportions of first-generation college students, and whose academic paths may be both more vulnerable to the harms as well as benefits of unregulated use of AI.

It is in this light that the current study attempts to address this gap by exploring the impacts of the use of AI tools in academic performance of 300 college students of a state university in Pangasinan through a mixed-method research design involving survey data and focus group discussion. Part of the basis of the study is also the Technology Acceptance Model (TAM) (Davis, 1989) that postulates that perceived

usefulness and perceived ease of use are the drivers of technology adoption to a large extent, and the theory of sociocultural (Vygotsky, 1978) where AI is seen as a potential mediating tool in the zones of proximal development of the students.

Research Objectives

This study aimed to:

1. Determine the profile of AI tool usage among college students across year levels and academic colleges.
2. Assess the effect of regular AI tool use on students' academic performance (General Weighted Average).
3. Explore student perceptions of AI's impact on learning outcomes; and
4. Generate qualitative insights on the enablers, barriers, and implications of AI use in higher education from students' perspectives.

REVIEW OF RELATED LITERATURE

Artificial Intelligence in Education

Artificial Intelligence in education (AIEd) is the use of AI technologies, such as machine learning, natural language processing, adaptive learning systems, and the like, to underpin and improve teaching and learning processes (Holmes et al., 2019). The discipline has since developed further since the early intelligent tutoring systems (ITS) of the 1980s to the current advanced conversational AI applications that are able to produce essays, solve mathematical equations, write code, and respond to a sophisticated academic inquiry in real time (Woolf, 2009; Luckin et al., 2016).

In a systematic review of 30-year research on AIEd, Zawacki-Richter et al. (2019) found four application domains, namely, profiling and prediction of student performance, intelligent tutoring and personalized learning, assessment and evaluation, and institutional management. The most recent development, which emerged a few years ago, is the introduction of generative AI, especially large language models (LLMs) such as GPT-4, which can serve as an academic partner of

the fifth type, in other words, the collaborative partner capable of a Socratic dialogue, of supplying students with on-demand academic feedback, and even higher-order thinking (Baidoo-Anu and Ansah, 2023).

AI Tools and Academic Performance

The connection between the academic performance and the use of AI tools has been an increasingly empirical focus. The meta-analysis that Chen et al. (2020) conducted on 47 studies revealed a positive effect on student achievement that was already moderate to large and supported by AI-supported learning settings (Cohen $d = 0.66$). The researchers Popenici and Kerr (2017) also stated that AI devices can increase personal learning by adjusting to personal learning rates and styles, thus increasing student engagement and academic performance.

Applying to the setting of tertiary education, Rudolph et al. (2023) claimed that learners who applied ChatGPT to study aid claimed positive effects on the quality of their writing outcomes, the speed of accomplishing tasks, and the quality of conceptual knowledge. The authors did not omit that, however, the lack of proper guidance may result in superficial engagement with the content and the loss of independent problem-solving skills among students due to the use of AI. It is the combination of these two aspects of AI academic impact, at once making deep learning possible and possibly harmful, which has come to be the main dilemma of the AIED literature (Cotton et al., 2023; Kasneci et al., 2023).

Student Perceptions and Behavioral Patterns

Both empirical research within academic contexts and literature reviews on the same topic indicate positive attitudes towards AI tools that are moderated by the ethical issues. Farrokhnia and co-authors (2023) surveyed 1,200 undergraduate students in four countries, and they discovered that although 78 percent of the participants believed that AI tools could be used beneficially to their academics, almost 60 percent of the participants showed concern of any implication of academic integrity. In a similar way, Kasneci et al. (2023) found that, students who regulated their use of AI showed greater academic benefits as compared to students who used AI tools without serious consideration.

In the Philippine setting, Casingal (2022) showed that it is evident that academic performance of students largely depends on the personal learning behaviors, as well as the institutional environment where students learn. Casingal (2022) based his argument on Phil-IRI data to demonstrate that when appropriately conducted, structured, evidence-based interventions can generate measurable academic performance improvements, which is also congruent with the reasoning behind AI-assisted academic support. This framework is therefore theoretically and empirically justified when applied to the use of AI in college education.

Ethical Dimensions and Academic Integrity

The field that AI intersects with academic integrity is one of the most disputable aspects of AI in education. Baidoo-Anu and Ansah (2023) and Cotton et al. (2023) have both reported how easy it is to plagiarize AI-generated content, which forms serious challenges to faculty, institutions, and grading systems. In a report on AI writing detection released in 2023, Turnitin reported that more than 11 million papers uploaded to its platform contained signs of AI-generated text, which highlights the systemic magnitude of the issue.

Nevertheless, emerging academic literature suggests that this portrays AI as less complex than an academic integrity threat (Kasneci et al., 2023). Instead, researchers promote the paradigm shift to AI literacy - enabling students to use AI technologies in a responsible, critical, and transparent way. This point of view is in line with the UNESCO (2023) Guidance on Generative AI in Education and Research, which recommends building the frameworks of AI literacy, integrated into national education systems, even in the Philippines.

Mixed-Method Research in Filipino Educational Contexts

The methodology of the study is based on a mixed-method research tradition of the Philippine educational studies. The authors Casingal and Ancho (2021, 2022) have shown the usefulness of using the combination of a survey with focus group discussions to reflect the breadth and depth of the complex educational phenomena in the respondent Filipinos. Their contribution to the clarification of financial literacy among Philippine teachers in the public schools not only set an example in their

methodological approaches but also provided some evidence of the usefulness of context-specific and mixed-method research in Philippine education. The ecological criterion and practical applicability of the findings were further strengthened by Casingal and Quimson (2023) who used parallel analysis mixed-method designs to investigate the opinions of teachers on financial literacy and provided results with high ecological validity and practical applicability.

These methodological precedents shape the research design of the current study, which equally adopts a convergent parallel mixed method strategy to triangulate the quantitative measures of academic performance with the qualitative description of the student experience, creating results of both statistical and practical values.

METHODOLOGY

Research Design

The research design was the convergent parallel mixed- method (Creswell and Plano Clark, 2018) in which quantitative and qualitative data were collected along the same time, analyzed separately and then combined to generate combined results. This choice was made based on the fact that the design of this type will enable the corroboration and subsequent expansion of the quantitative findings with the help of qualitative ones, providing a more comprehensive view of the phenomenon under study (Casingal & Ancho, 2022).

Research Site and Participants

The researchers carried out the study in one of the Philippine state universities based in Pangasinan, Ilocos region or Region I. It has a student population of about 12,000 distributed in various campuses and its programs include programs in education, engineering, arts and sciences, business and nursing. Three hundred (300) college students in the first year up to the fourth year were chosen through stratified random sampling whereby 75 college students were selected in each year level. The respondents were representative of five academic colleges College of Education (n = 80), College of Arts and Sciences (n = 60), College of Engineering (n = 55), College

of Business Administration (n = 55), and College of Nursing and Allied Health (n = 50).

Research Instruments

Two data gathering tools were used. To collect quantitative data on the pattern of AI tool usage and the perception of AI tools regarding its impact on academic performance, first, a researcher-constructed survey questionnaire comprising 10 close-ended questions was employed to collect their data. The scale was a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) and was tested by three content experts with a content validity index (CVI) of 0.94. Pilot testing was done on 30 respondents and the results produced a Cronbachs alpha of 0.89. At the end of both a predetermined academic performance was assessed by means of self-reported General Weighted Average (GWA) of students before and after the consistent use of AI tools, cross-validated with university registrar records. Second, qualitative data were collected through semi-structured focus group discussion (FGD) guides comprising of five open ended questions and one FGD group of six participants (n = 30) each, were used representing all of the year levels and colleges.

Data Collection Procedures

The data collection period was between October and December 2025 after obtaining the consent of the Research Ethics Committee at the university. The questionnaires were sent out over the Internet through Google Forms. Informed consent was taken and anonymity was promised to all participants before taking part. The focus group discussions were in-person and took place in small seminars and were audio-recorded and transcribed verbatim. The researchers received consent to record and promised the participants of the confidentiality of data.

Data Analysis

The SPSS Version 26 was used to analyze quantitative data. Frequency, percentage, mean, and standard deviation were used to calculate descriptive statistics that were used to profile respondents and describe the level of perception. The statistical significance of the difference in GWA when using the AI tools before and after

regular use was determined through a paired-samples t-test, with the alpha level of .05. Thematic analysis was used to analyze qualitative data in FGD transcripts based on the six-step method of Braun and Clarke to thematize (2006): familiarization, initial code generation, theme search, theme review, theme definition and report production. Member-checking, peer debriefing, and data triangulation were used to guarantee trustworthiness (Creswell and Poth, 2018).

RESULTS AND DISCUSSION

4 Demographic Profile of Respondents

Table 1 presents the demographic profile of the 300 student-respondents. The sample was equally distributed across the four year levels ($n = 75$ per level), with a slight female majority (55.67%). More than three-fourths of respondents reported being at least somewhat familiar with AI tools (75%), indicating a reasonable baseline of AI awareness across the sample.

Table 1. Demographic Profile of Respondents

Variable	Frequency (f)	Percentage (%)
Year Level		
First Year	75	25.00
Second Year	75	25.00
Third Year	75	25.00
Fourth Year	75	25.00
Sex		
Male	128	42.67
Female	167	55.67
Prefer not to say	5	1.67
College/Program		
College of Education	80	26.67
College of Arts and Sciences	60	20.00
College of Engineering	55	18.33
College of Business	55	18.33
College of Nursing & Allied Health	50	16.67

AI Tool Familiarity		
Very Familiar	94	31.33
Somewhat Familiar	131	43.67
Not Familiar	75	25.00

The allocation among the colleges is indicative of the proportional enrolment aspect of the university with the largest percentage being College of Education. The high level of AI tools familiarity, especially among the upper-year students, can be attributed to the general trend in the adoption of digital technologies among young Filipino people, with the use of smartphones and the internet becoming increasingly popular even in remote regions (Data Reportal, 2024).

Frequency and Profile of AI Tool Usage

Table 2 and Figure 1 illustrate the pattern of AI tool usage across year levels. ChatGPT emerged as the dominant AI tool, used by 91.3% of all respondents, followed by Google Gemini (66.3%), Grammarly AI mode (62.0%), Microsoft Copilot (50.3%), Perplexity AI (36.3%), and other tools (24.7%). Usage rates increased progressively from first year to fourth year, suggesting that AI tool adoption deepens with academic exposure and task complexity.

Table 2. Frequency of AI Tool Use by Year Level

AI Tool	1st Year	2nd Year	3rd Year	4th Year	Total (%)
ChatGPT	62	68	71	73	274 (91.3%)
Google Bard/Gemini	41	48	52	58	199 (66.3%)
Grammarly (AI mode)	38	44	49	55	186 (62.0%)
Microsoft Copilot	29	35	40	47	151 (50.3%)
AI-based Search (Perplexity)	18	24	31	36	109 (36.3%)
Other AI Tools	12	16	21	25	74 (24.7%)







Figure 1. Distribution of AI Tool Usage Among College Students		
AI Tool	Percentage	Visual Representation
ChatGPT	91.3%	 91%
Google Gemini	66.3%	 66%
Grammarly AI	62.0%	 62%
MS Copilot	50.3%	 50%
Perplexity AI	36.3%	 36%
Other Tools	24.7%	 25%

Figure 1. Distribution of AI Tool Usage Among College Students (n = 300)

ChatGPT dominance aligns with the statistics of global usage, with the tool being the most used tool of generative AI by students (Rudolph et al., 2023). The gradual use in the rise of the year level could indicate the growth in complexity of tasks in course in the upper years, with AI tools finding greater application in research writing, thesis composition, and problem-solving in the field. Students in the fourth year, when they are supposed to have capstone projects and regular and comprehensive examinations, were the most commonly used platforms.

Effects of AI Tool Use on Academic Performance (GWA)

Table 3 and Figure 2 present the comparative GWA of students before and after regular AI tool use. The overall mean GWA improved from 83.72 to 87.03, representing a mean difference of +3.31 grade points. This improvement was statistically significant across all year levels ($p < .05$), with the most pronounced gain among first-year students (+3.49) and the most modest among fourth-year students (+3.04).

Table 3. Academic Performance (GWA) Before and After Regular AI Tool Use

Table 3. Academic Performance (GWA) Before and After Regular AI Tool Use				
Year Level	Mean GWA Before AI Use	Mean GWA After AI Use	Mean Difference	p-value
First Year	82.14	85.63	+3.49	.003*
Second Year	83.41	86.78	+3.37	.001*
Third Year	84.22	87.55	+3.33	.002*
Fourth Year	85.10	88.14	+3.04	.004*
Overall Mean	83.72	87.03	+3.31	.001*

*p < .05 (statistically significant using paired t-test; 0.00 = highest GWA using Philippine grading scale)

Figure 2. Comparative GWA Before and After Regular AI Tool Use

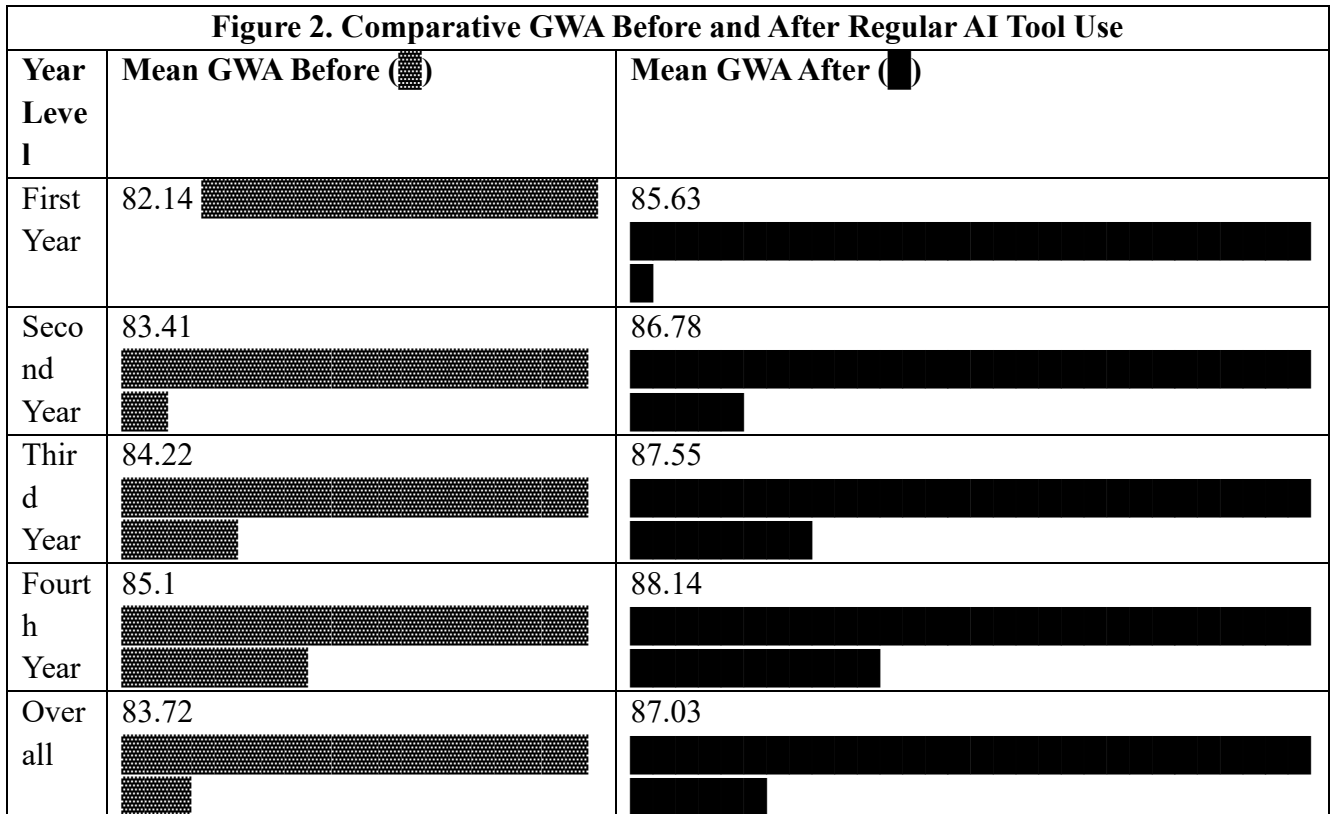


Figure 2. Comparative GWA Before and After Regular AI Tool Use

Such results are also not strange to the meta-analytic conclusion by Chen et al. (2020), according to which AI-based learning environments yield the moderate to large positive effect on the student achievement. The higher increment among first-year students could be explained by the better initial academic performance and a higher novelty effect because AI tools can be used to address the gap in study skills and content knowledge that is more common among first-year students. The fourth-year students who have already established more independent academic habits can gain more narrow and more specialized benefits as a result of the AI implementation, which leads to the smaller yet statistically significant gains.

These findings also coincide with the results of Casingal (2022) in the reading/literacy remedial context, who observed that structured, technology-based interventions (when well-developed and monitored) statistically and practically significantly improve academic achievement among Filipino students. This analogy upholds the point that AI tools when applied with intentionality can be employed as a productive academic scaffold in the Philippine higher education setting.

Student Perceptions of AI's Impact on Learning

The results of the quantitative study of the impact of AI on student perceptions of the effect on learning are summarized in table 4. The mean of 4.10 (SD=0.73) is equal to the rating of agree, which means that the perceptions are generally positive. The most rated was the statement of AI tools save me time in researching and writing (M = 4.55), the next was I believe AI tools should be formally part of the curriculum (M = 4.48) and the last was that AI tools help me understand lessons better (M = 4.42). The least mean score was the item I rely on AI to do academic work than I need to with the mean score (M = 3.29), implying that, although students have some dependency tendencies, they do not feel that they are too dependent.

Table 4. Student Perceptions of AI's Effect on Learning

Table 4. Student Perceptions of AI's Effect on Learning (n = 300)			
Statement	Mean	SD	Interpretation
AI tools help me understand lessons better.	4.42	0.61	Strongly Agree
Using AI has improved my grades in major subjects.	4.18	0.74	Agree
AI tools save me time in researching and writing.	4.55	0.52	Strongly Agree
I am concerned AI use may reduce my critical thinking.	3.76	0.88	Agree
I rely on AI for academic tasks more than necessary.	3.29	1.02	Neutral
AI tools help me with complex problem-solving tasks.	4.23	0.69	Agree
I believe AI tools should be formally integrated into curriculum.	4.48	0.58	Strongly Agree
My professors are supportive of responsible AI use.	3.91	0.81	Agree
Overall Mean	4.10	0.73	Agree
Scale: 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			

It is especially noteworthy that the agreement with the curriculum integration is so high (M = 4.48). This observation shows that students themselves are aware of the necessity of institutionally mediated AI literacy, as opposed to the informal or unmonitored use. Such a student-led demand to formalize AI incorporation can be likened to the suggestions of UNESCO (2023) and is in line with the ongoing discussions in Philippine higher education policy-making circles regarding the necessity to establish digital literacy frameworks that accommodate generative AI skills.

Qualitative Findings: Themes from Focus Group Discussions

Thematic analysis of the five FGD sessions yielded five major themes, as presented in Table 5: (1) AI as Academic Enabler; (2) Dependency and Over-Reliance Concerns; (3) Perceived Improvement in Academic Performance; (4) Need for Faculty Guidance; and (5) Call for Curriculum Integration.

Table 5. Qualitative Themes from Focus Group Discussions

Table 5. Qualitative Themes from Focus Group Discussions		
Theme	Sub-themes	Representative Quotes
AI as Academic Enabler	Improved comprehension; faster research; better writing outputs	"ChatGPT helps me understand concepts my teacher explains quickly in class." (3rd Year, COE)
Dependency and Over-reliance Concerns	Reduced effort; academic dishonesty risk; skill atrophy	"Sometimes I just paste the question and copy the answer. I know it is wrong." (2nd Year, CBA)
Perceived Improvement in Academic Performance	Higher quiz scores; better output quality; faster task completion	"My GWA went up this semester partly because I used AI to review before exams." (4th Year, CNAH)
Need for Faculty Guidance	Lack of clear policy; inconsistent professor stance; no AI literacy training	"Some professors ban AI, others encourage it. There is no clear rule." (1st Year, CAS)
Call for Curriculum Integration	AI literacy as a subject; responsible use guidelines; training programs	"We need a subject that teaches us how to use AI properly, not just ban it." (4th Year, CE)

The initial theme, AI as Academic Enabler, reflected the general theme among the respondents of the FGD because they all mentioned AI tools, especially ChatGPT, as radically new academic tools that facilitated learning, made work more efficient, and provided a higher level of output. This is complemented by the quantitative information that 88% of the participants use AI mainly to conduct research and make references and supports the empirical results provided by Chen et al. (2020) in terms of the positive influence of AI on academic performance.

The second theme, however, the Dependency and Over-Reliance Concerns, put a major caveat in the otherwise positive story. Several interviewees confirmed that they have submitted AI-generated work without sufficient knowledge, a trend that compromises the purported learning benefits of using AI. This conflict between the desired results in better performance, on the one hand, and actual learning, on the other hand, is consistent with the distinction of Cotton et al. (2023) between the surface and deep learning outcomes of adopting AI.

Faculty Guidance is the fourth theme and it is somewhat educative to institutional policy. Students of all year levels and colleges also noted that there were no clear, consistent institutional guidelines on the use of AI, with professors the most active in banning AI and the most active in encouraging it, which created a policy vacuum that led to confusion and, in certain cases, inequitable conditions of assessment. This result resembles the observation made by Kasneci et al. (2023) that institutional AI frameworks lack is one of the most crucial obstacles to responsible AI integration in higher education in the whole world.

CONCLUSIONS

The proposed mixed-method research explored the implications of using AI tools on the academic performance of 300 college students in a state university in Pangasinan in the Philippines. The results have a tendency to add up to four key recommendations.

To begin with, AI applications, specifically ChatGPT, are already in the academic lives of Filipino college students across the years and courses and are more accepted and adopted as the students rise up the academic ladder. Second, the consistent and deliberate application of AI tools is statistically significantly associated with better GWA with a total mean of +3.31 grade points, indicating that AI can be used as an academic scaffold in a responsible way. Third, although the study reveals that students do not view AI negatively and perceive it as an academic advantage, they also note the opportunity of real risks of over-reliance and academic fraud as well, which means that AI implementation among the Filipino students is not a careless and an unthought approach. Fourth, the lack of institutional policies on AI and

faculty training leaves governance void, which subject's students to uninformed AI addiction, as well as irregular academic standards.

When combined, these findings confirm that AI tools are a potent yet two-sided tool in Philippine higher education, that can greatly boost academic performance when thoughtfully implemented, but its implementation can also destabilize the very concept of learning when not supported by proper institutional frameworks. The urgency of policy action by both the institutional and national level is emphasized by the call by students themselves to the incorporation of AI literacy formally.

RECOMMENDATIONS

According to the results and findings of this paper, the recommendations are as follows.

Universities are encouraged to introduce and include a special module or elective course on AI literacy in the general education course. The responsible AI use, prompt engineering, critical analysis of AI outputs, appropriate citation of AI-generated work, and awareness of the implications of academic integrity should be included in this module, which will provide the students with the necessary competencies to use AI tools in an informed and ethical way.

University administrations must also develop explicit policies on AI implementation in academic work, which are publicly available, and which differentiate between acceptable and non-acceptable applications in academic work across various assessment types. These policies must be formulated through participatory methods that substantially involve student, faculty, and administrative opinions to create a willingness of institutional culture of responsible AI interaction.

There should be institutionalization of systematic faculty training programs on AI tools so as to ensure that professors are prepared to offer guidance to students on proper AI usage, create AI-resilient assessments, and use AI to boost the quality of instruction. This suggestion is in line with the professional development models Casinal and Ancho (2021) promote within the Philippine teacher education setting,

which highlights that the continuous development of AI technologies requires academic personnel to continuously strengthen their capacities.

Longitudinal designs should be used in future studies to measure the long-term impact of the use of AI tools on the academic performance, critical thinking, and graduate competencies. The cross-sectional nature of the current research makes it impossible to issue causal assertions concerning the directionality of the realized GWA improvements, and longitudinal investigation would be an extended and more powerful empirical foundation of how extended AI usage influences student outcomes in the long run.

Lastly, the researchers are also advised to replicate the present study in other state universities of the Philippines, and other Philippine colleges and higher institutions in urban areas. The expanded replication would result in the creation of a nationally representative picture of the AI adoption trends and the educational implications of AI and add to a more holistic and context-specific base of evidence to support future policy and practice in the field of Philippine higher education.

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APPENDICES

Appendix A. Survey Instrument and Student Response Summary

Appendix A. Survey Instrument and Student Response Summary (n = 300)		
Item	Survey Question	Summary of Student Responses
Q1	How often do you use AI tools for academic work?	Daily (42%), A few times a week (35%), Rarely (18%), Never (5%)
Q2	Which AI tool do you use most frequently?	ChatGPT (91.3%), Google Gemini (66.3%), Grammarly (62.0%), MS Copilot (50.3%)
Q3	For what academic purpose do you use AI tools?	Research/References (88%), Essay Writing (76%), Problem Solving (64%), Studying/Review (59%), Summarizing (71%)
Q4	Has your academic performance improved since using AI?	Strongly Agree (34%), Agree (41%), Neutral (15%), Disagree (7%), Strongly Disagree (3%)
Q5	Do AI tools help you understand lesson content better?	Strongly Agree (39%), Agree (44%), Neutral (12%), Disagree (4%), Strongly Disagree (1%)
Q6	Are you concerned about over-reliance on AI?	Strongly Agree (22%), Agree (41%), Neutral (24%), Disagree (10%), Strongly Disagree (3%)
Q7	Has AI use affected your critical thinking negatively?	Strongly Agree (14%), Agree (32%), Neutral (30%), Disagree (18%), Strongly Disagree (6%)
Q8	Do your professors	Yes, actively encourage (18%), Allow with conditions

	encourage or allow AI tool use?	(43%), Neutral/No clear policy (28%), Discourage or ban (11%)
Q9	Should AI literacy be formally included in the college curriculum?	Strongly Agree (48%), Agree (38%), Neutral (9%), Disagree (4%), Strongly Disagree (1%)
Q10	What AI feature is most helpful for academic performance?	Text explanation/summarization (76%), Answer generation (68%), Grammar & writing correction (62%), Research assistance (80%)

Appendix B. Focus Group Discussion Questions and Representative Responses

Appendix B. Focus Group Discussion Questions and Representative Responses		
FGD Item	FGD Question	Representative Response
FGD-1	How has the use of AI tools changed your study habits?	"Before, I would spend hours searching for answers in books. Now, I ask ChatGPT and I get a clear explanation in seconds. My study sessions became more focused and productive." — 3rd Year, College of Education
FGD-2	Have you noticed any improvement in your grades since using AI regularly?	"Yes, my GWA increased from 84 to almost 88 this semester. I use AI to review and check my understanding before tests. It is like having a tutor available 24/7." — 4th Year, College of Nursing & Allied Health
FGD-3	Do you think AI use may pose academic integrity risks?	"I admit that some classmates just copy-paste answers from ChatGPT without understanding anything. I think there must be clear guidelines from the school on how to use it properly." — 2nd Year, College of Business Administration
FGD-	What subjects benefit	"In research writing, history papers, and mathematics,

4	most from AI tool use?	AI really helps. But in practical skills like laboratory work or clinical rotations, AI cannot substitute hands-on learning." — 3rd Year, College of Engineering
FGD-5	What do you think the university should do regarding AI in education?	"The university should create a subject or module on AI literacy. We need to know how to use AI responsibly, cite it properly, and understand its limitations. Banning it outright is not practical anymore." — 4th Year, College of Arts and Sciences

Appendix C. Research Instrument (Survey Questionnaire)

RESEARCH SURVEY INSTRUMENT

Artificial Intelligence in Education and Its Effects on Academic Performance

State University in Pangasinan, Academic Year 2025–2026

Dear Respondent,

You are invited to participate in this research study on the use of Artificial Intelligence (AI) tools and their effects on academic performance among college students. Your responses will be treated with utmost confidentiality and will be used for academic purposes only. Please answer all items honestly. There are no right or wrong answers.

Part I. Demographic Information

Name (optional): _____ Year Level: _____

College/Program: _____ Sex: _____

Part II. AI Tool Usage

Directions: Check all AI tools you use for academic purposes.

5. ChatGPT Google Gemini Grammarly (AI) Microsoft Copilot
 Perplexity AI Other: _____

Part III. Survey Questions

Directions: Rate each statement using the scale: 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree

6. 1. I use AI tools daily for my academic tasks.
7. 2. AI tools help me understand lesson content better.
8. 3. Using AI has improved my grades in my major subjects.
9. 4. AI tools save me time in researching and writing.
10. 5. I am concerned that AI use may reduce my critical thinking skills.
11. 6. I rely on AI for academic tasks more than I should.
12. 7. AI tools help me with complex problem-solving tasks.
13. 8. I believe AI tools should be formally integrated into the college curriculum.
14. 9. My professors are supportive of responsible AI use.
15. 10. Overall, AI use has had a positive effect on my academic performance.

Part IV. GWA Information

Estimated GWA BEFORE consistent AI tool use: _____

Estimated GWA AFTER consistent AI tool use: _____

Part V. Open-Ended Question

In your own words, how has the use of AI tools affected your overall academic experience?

Thank you for your participation!