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AI-Assisted Learning Practices and Their Relationship With Students' Academic Performance at Melchor B. Burlaos Memorial High School

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Abstract

This study examined AI-assisted learning practices and their relationship with perceived academic performance among students at Melchor B. Burlaos Memorial High School in Milagros, Masbate. Using a quantitative descriptive-correlational design, the researcher surveyed 60 students selected through stratified random sampling, with 10 respondents from each grade level, Grades 7 to 12. A structured questionnaire measured four dimensions of AI-assisted learning practices, four dimensions of perceived academic performance, and support for responsible AI use. Weighted means summarized the responses. Students reported using AI most frequently for completing academic tasks (M = 3.35) and least frequently for preparing for assessments (M = 2.62). Among perceived academic performance dimensions, completion and quality of academic tasks received the highest mean (M = 3.48). Respondents highly recommended responsible AI measures (M = 3.75), prioritizing acknowledgment of AI-assisted content. Although Pearson correlation was specified in the research design, the previously calculated coefficient was excluded because it used four pairs of category means rather than 60 paired respondent-level scores. Therefore, the direction, strength, and statistical significance of the relationship could not be established. Findings suggest that AI primarily supports students' academic tasks, while schools should strengthen information verification, independent reasoning, and academic integrity. Interpretation is limited by self-reported measures, the single-school sample, unavailable paired scores, and overlapping age categories that could not be verified. The study supports Sustainable Development Goal 4 by informing school guidance on responsible, equitable, and learning-centered AI use. Teachers may integrate guided practice questions and require students to explain answers without AI assistance.

Keywords: Integrity, AI-Assisted Learning, AI Literacy, Perceived Academic Performance, Responsible AI Use, Secondary Students

1. Introduction

AI applications generate outputs such as content, recommendations, or decisions from inputs (Organisation for Economic Co-operation and Development, 2024). In education, they can provide instructional assistance and feedback (U.S. Department of Education, Office of Educational Technology, 2023). Miao and Holmes (2023) emphasized a human-centered approach that protects learner agency, privacy, and inclusion. Chiu et al. (2023) identified opportunities and implementation challenges across learning, teaching, assessment, and administration. Lo (2023) highlighted concerns about accuracy and academic integrity, while Barrot (2023) examined the potential and limitations of ChatGPT for second-language writing. Academic performance generally refers to educational outcomes reflected in grades, assessments, or achievement tests (Wang et al., 2022). This study

focused on students' perceived academic performance in understanding lessons, applying learned concepts, solving problems and thinking critically, and completing academic tasks to the required standard. Applying concepts involves using prior knowledge in unfamiliar situations (Mayer, 2021), while task performance includes efficient completion of academic responsibilities (van Zyl et al., 2024). The study examined how students' perceptions in these areas related to their reported use of AI for lesson comprehension, task completion, learning skills, and assessment preparation.

Hwang et al. (2020) and Zhang and Aslan (2021) emphasized instructional purpose, learning context, and human involvement. Su and Yang (2023) linked the level of AI assistance to intended learning outcomes, while Mayer (2021) explained how learners process and integrate information. Baidoo-Anu and Owusu Ansah (2023) discussed interactive assistance and formative assessment, and Carpenter et al. (2022) highlighted spacing and retrieval practice. Crompton and Burke (2023) documented educational AI applications, while de Bruin et al. (2020) examined the relationship between cognitive load and self-regulation. Farrokhnia et al. (2024) identified opportunities for personalized assistance alongside concerns about response quality, bias, and contextual understanding. Long and Magerko (2020), Ng et al. (2021), and Vuorikari et al. (2022) emphasized competencies for evaluating and using digital tools responsibly. Tlili et al. (2023) highlighted inconsistencies in generated responses, while Wisniewski et al. (2020) found that the educational value of feedback depends on the information it provides. Cotton et al. (2024) and Lim et al. (2023) addressed academic integrity and ownership. The European Commission (2022) and Chan (2023) emphasized institutional guidance, while UNICEF (2021) and the Australian Government Department of Education (2023) addressed safeguards relevant to learners' rights, safety, inclusion, and development. Evidence on learning outcomes varies by educational level and instructional conditions. Yilmaz and Karaoglan Yilmaz (2023) reported gains in computational thinking, programming self-efficacy, and motivation among undergraduates receiving structured AI support. Sun and Zhou (2024) found a positive overall effect on academic achievement across generative AI interventions involving college students. In high school mathematics, Bastani et al. (2025) found that unrestricted AI assistance improved practice performance but was followed by poorer performance on an unaided assessment. A tutoring interface with safeguards substantially reduced that adverse effect. These findings make independent performance an important consideration when interpreting the value of AI-assisted schoolwork.

The study took place in Barangay Bara, Milagros East District. The Philippine Statistics Authority (n.d.-b) reported a provincial population of 910,813 in 2024. Act No. 2934 (1920) reestablished Masbate as a province independent of Sorsogon. The Philippine Statistics Authority (n.d.-a) recorded 57,362 municipal residents in 2024. Act No. 993 (1903) incorporated the former municipality of Malbug into Milagros. According to the Philippine Statistics Authority (n.d.-a), rural Barangay Bara had 1,802 residents. Executive Order No. 662 (1953) confirmed that Bara remained within Milagros. The Senate of the Philippines Legislative Reference Bureau (n.d.-b) recorded a proposal for a building at Bara Elementary School, and a separate proposal concerned a building for Barangay Bara High School (Senate of the Philippines Legislative Reference Bureau, n.d.-a). Community support, including a land donation, helped establish and develop the participating secondary school (Melchor B. Burlaos Memorial High School, n.d.). The Organisation for Economic Co-operation and Development (OECD, 2023) reported that Filipino students performed below the OECD average in mathematics, reading, and science in PISA 2022. Rodrigo and Talandron-Felipe (2024) identified limited AI knowledge and use among interviewed public-school teachers, along with software, hardware, and connectivity constraints. Garcia et al. (2025) reported favorable perceptions of ChatGPT as a supplementary tool among junior high school students and science teachers in Mandaluyong City. In Philippine higher education, Cacho (2024) emphasized ethical and fair use, while Espartinez (2025) documented concerns about dependence and reduced intellectual effort alongside the convenience of ChatGPT. Estrellado and Miranda (2023) and Co (2025) discussed educational opportunities alongside constraints in infrastructure, expertise, and institutional readiness. The University of the Philippines (2023) and the University of the Philippines Open University (2024) emphasized learning goals, educational standards, and integrity. Candilas (2025) and Piedad et al. (2025) considered writing support, creativity, intellectual property, and accountability. Maboloc (2024) and Far Eastern University (2024a) emphasized critical inquiry and evaluation, while Sumintac (2024) and Silliman University (2024) linked appropriate AI use to instructional goals, transparency, and training. The Department of Education (2020) addressed assessment and grading during the pandemic, and the MATATAG policy set directions for implementing the revised curriculum (Department of Education, 2024). The Second Congressional Commission on Education (2024) documented broader educational challenges, and its subsequent report emphasized persistent learning gaps (Second Congressional Commission on Education, 2025). Far Eastern University (2024b) and the Philippine Association of Colleges and Universities (2024) addressed acceptable assistance and student responsibilities. Vergara (2024) emphasized AI-related curricular knowledge, and the National Privacy Commission (2024) clarified data protection obligations for AI systems that process personal information. The Department of Education (2025) established a Center for Artificial Intelligence Research, while Funa and Gabay (2025) emphasized ethical use, AI literacy, inclusion, and implementation conditions. International secondary studies illustrate how AI use varies with the task and the support available. Bulduk (2023) and Zeng and Mahmud (2023) identified information seeking and idea generation alongside concerns about assessment, reliability, and academic honesty. Sirirojjananan (2023) reported

favorable perceptions of language-learning support, while Johansson and Thuresson (2024) found mixed responses and a need for clear instructions. Chawalit (2025) identified support for early STEM design activities alongside difficulty applying feedback, while Tomaschitz (2025) found complementary strengths in AI-assisted and conventional programming resources. Ng (2024) examined AI literacy development, and Septiani Aulia (2025) identified differences in mathematical communication during AI-assisted learning. Konradt (2025) examined structured reflection and gradually reduced assistance, while Bech and Hansen (2025) documented concerns about dependence, ownership, and reduced reflection. Philippine secondary studies likewise reported varied outcomes. Casio et al. (2024) found subject-specific associations, and Dela Cruz et al. (2025) emphasized AI's supplementary role and the importance of student effort. Jaurigue (2025) found no significant overall difference in statistical thinking among instructional groups, whereas Dimaunahan et al. (2025) reported lower mathematics anxiety and improved algebra performance following AI-supported activities. Maghamil and Sieras (2024) reported improved assessed writing quality, while Esmas et al. (2024) identified limitations in generated language and references. Ordonez et al. (2024) and Abellera et al. (2025) reported associations involving students' perceptions, critical thinking, self-efficacy, or academic confidence. Saya-ang and Adriano (2025) and Santos et al. (2024) identified support for academic work alongside concerns about verification, originality, dependence, and integrity.

The study draws on Cognitive Load Theory (Sweller, 1988), the social cognitive model of Self-Regulated Learning (Zimmerman, 1989), and Social Cognitive Theory (Bandura, 1986). Sweller (1988) explains how instructional design can manage the mental demands of processing unfamiliar information. Zimmerman (1989) emphasizes learners' active use of strategies, monitoring, and feedback. de Bruin et al. (2020) connect this monitoring to the regulation of mental effort. Bandura (1986) explains the interaction among personal factors, behavior, and the learning environment, while Schunk and DiBenedetto (2020) link self-efficacy to choices, effort, and persistence. The Input–Process–Output model links students' demographic profiles, reported AI-assisted practices, and perceived academic performance to the questionnaire and analysis. Its intended output is a set of proposed measures for responsible AI-assisted learning. A feedback loop allows those measures to inform future assessment and refinement of school guidance.

The literature points to common priorities for implementation. Hwang et al. (2020), Zhang and Aslan (2021), Su and Yang (2023), and Mayer (2021) connect assistance to instructional goals and learning processes. Baidoo-Anu and Owusu Ansah (2023) discuss interactive assistance, while Carpenter et al. (2022) highlight opportunities for effective learning through practice. Crompton and Burke (2023) and de Bruin et al. (2020) connect AI applications with questions about effort and self-regulation. Farrokhnia et al. (2024), Long and Magerko (2020), Ng et al. (2021), and Vuorikari et al. (2022) emphasize critical evaluation and responsible use. Tlili et al. (2023) and Wisniewski et al. (2020) highlight checking information and using feedback effectively. Cotton et al. (2024), Lim et al. (2023), the European Commission (2022), and Chan (2023) address integrity and institutional responsibilities, while UNICEF (2021) and the Australian Government Department of Education (2023) extend these concerns to learner protection. Prior secondary studies cover different outcomes and settings. Bulduk (2023), Zeng and Mahmud (2023), Sirirojjananan (2023), and Johansson and Thuresson (2024) describe students' purposes and experiences. Chawalit (2025), Tomaschitz (2025), Ng (2024), Septiani Aulia (2025), Konradt (2025), and Bech and Hansen (2025) show the range of subject-specific activities, learner capabilities, and instructional supports examined. Philippine studies by Casio et al. (2024), Dela Cruz et al. (2025), Jaurigue (2025), Dimaunahan et al. (2025), Maghamil and Sieras (2024), Esmas et al. (2024), Ordonez et al. (2024), Abellera et al. (2025), Saya-ang and Adriano (2025), and Santos et al. (2024) likewise span distinct subjects, outcomes, and institutional settings. The focus of several studies on specific tools, subjects, or private institutions leaves limited evidence directly applicable to the participating public secondary school in Masbate. The present study addresses that gap by examining the association between four AI-assisted learning practices and four dimensions of perceived academic performance among 60 students in Grades 7 to 12. It also describes respondents by age, sex, and grade level and uses their responses to identify priorities for school guidance. The study's correlational design frames the relationship as an association between self-reported measures.

The study aligns with SDG 4 – Quality Education by examining how secondary students use AI to understand lessons, practice skills, and prepare for assessments. Its focus on information verification, independent reasoning, and appropriate assistance provides a basis for school guidance that keeps AI use aligned with learning goals and responsive to students' needs.

Responsible AI use in Philippine education depends on resources and institutional readiness, as discussed by Estrellado and Miranda (2023) and Co (2025). The University of the Philippines (2023) and the University of the Philippines Open University (2024) emphasize learners' needs and academic standards. Candilas (2025) and Piedad et al. (2025) address creativity, ownership, and accountability, while Maboloc (2024) and Far Eastern University (2024a) emphasize critical engagement. Sumintac (2024) and Silliman University (2024) connect AI use with learning objectives, transparency, and training. The Department of Education (2020, 2024) situates these educational decisions within assessment and curriculum guidance, while the Second Congressional Commission

on Education (2024, 2025) identifies broader learning challenges. Far Eastern University (2024b) and the Philippine Association of Colleges and Universities (2024) clarify acceptable assistance and student responsibilities. Vergara (2024) and the National Privacy Commission (2024) emphasize AI literacy and personal information protection, while the Department of Education (2025) and Funa and Gabay (2025) highlight institutional support, inclusion, and ethical implementation. In this context, the study can inform school practices that preserve independent learning, teach responsible digital use, and give students and teachers clear expectations for AI-assisted work.

2. Material and methods

2.1 Research Design

The study employed a quantitative descriptive-correlational design. The descriptive component summarized respondents' demographic characteristics, AI-assisted learning practices, perceived academic performance, and support for suggested measures. The correlational component examined the association between AI-assisted learning practices and perceived academic performance without manipulating either variable. The study measured academic performance through students' self-reports.

2.2 Locale of the Study

The study was conducted at Melchor B. Burlaos Memorial High School in Barangay Bara, Milagros East District, Municipality of Milagros, Province of Masbate.

2.3 Respondents of the Study

The respondents were 60 students from Grades 7 to 12, with 10 students representing each grade level. Their demographic profile was described in terms of age, sex, and grade level.

2.4 Sample and Sampling Procedure

The study used stratified random sampling with equal allocation. The researcher divided the student population into six strata by grade level using the official enrollment lists and randomly selected 10 students from each stratum. Every student within a stratum had an equal chance of selection.

2.5 Research Instrument

The researcher used a structured questionnaire with four parts. The first recorded age, sex, and grade level. The second used 12 indicators, three per dimension, to assess how often students used AI to understand lessons, complete academic tasks, develop learning skills, and prepare for assessments. The third used 12 indicators, three per dimension, to assess students' perceived performance in knowledge and understanding of lessons, application of learned concepts, problem-solving and critical thinking, and completion and quality of academic tasks. Both parts used a four-point frequency scale. The fourth part used a four-point recommendation scale to gauge students' support for eight measures. These covered responsible and ethical AI use, verification of AI-generated information, acceptable-use guidelines, acknowledgment of AI assistance, protection of personal information, balanced use of learning resources, critical evaluation, and independent learning.

2.6 Data Gathering Procedure

The researcher revised the proposal and questionnaire based on feedback from the pre-oral defense panel and submitted the revised proposal to the research adviser. After securing a research permit and written approval from the appropriate Schools Division authorities and the school head, the researcher coordinated the survey schedule with the school head and class advisers. Before administering the questionnaire, the researcher explained the study's purpose and response instructions. Students answered independently and received clarification as needed. The researcher retrieved the completed questionnaires, checked them for completeness, coded and tabulated the responses, and paired each respondent's composite scores for the two study variables. The results informed the conclusions and recommendations. The researcher then incorporated feedback from the adviser and final oral defense panel and submitted the revised manuscript for final review and approval at Osmeña Colleges.

2.7 Data Analysis Techniques

Frequencies and percentages summarized respondents' age, sex, and grade level. Weighted means summarized AI-assisted learning practices, perceived academic performance, and support for the suggested measures. The measures were ranked by weighted mean to identify priorities. The methodology specified Cronbach's alpha to assess the internal consistency of the questionnaire scales before final administration, with demographic items excluded. The methodology specified Pearson's product–moment correlation to estimate the strength and direction of the association using the 60 paired respondent-level composite scores after checking the test assumptions. The significance level was set at 0.05, with rejection of the null hypothesis when the p-value was below 0.05. The manuscript's conclusion states that the reported correlation still requires recomputation using the individual scores.

2.8 Ethical Considerations

Participation was voluntary. For respondents younger than 18, the researcher obtained parental or guardian consent and student assent. Respondents aged 18 and older provided informed consent. The researcher kept respondents' identities and questionnaire responses confidential.

3. Results and Discussion

3.1 Respondent Profile

3.1.1 Age

The preliminary age distribution contained overlapping categories, particularly for respondents aged 15 years. Because the original individual age records were unavailable for verification, the age-group frequencies could not be reliably corrected. Consequently, the age distribution was excluded from further demographic interpretation. The study retained the total sample of 60 respondents while acknowledging the limitation in age classification. The age distribution provides context for interpreting AI use across different stages of development. UNICEF (2021) emphasized children's development, privacy, safety, and inclusion in educational AI, while the Australian Government Department of Education (2023) highlighted responsible and ethical AI use in schools.

3.1.2 Sex

Of the 60 respondents, 37 (61.67%) were female and 23 (38.33%) were male. Both sexes were represented in the sample, with greater representation among female students. UNICEF (2021) emphasized fairness and inclusion in AI systems affecting children, while Funa and Gabay (2025) identified accessibility and inclusion as important considerations in implementing AI in education.

3.1.3 Grade Level

Grades 7 through 12 were equally represented, with 10 respondents (16.67%) from each grade level. Equal representation captured responses from students across six stages of secondary education. Septiani Aulia (2025) examined Grade 7 students' use of AI in mathematics, while Maghamil and Sieras (2024) investigated AI-assisted writing among Grade 12 students, illustrating the relevance of examining AI use across grade levels and subjects.

3.2 AI-Assisted Learning Practices

3.2.1 Understanding of Lessons

Students sometimes used AI to understand lessons, with a grand mean of 3.04. Finding examples ranked highest (3.15), followed by obtaining explanations of difficult lessons (3.10) and simplifying complex concepts (2.88). The pattern suggests that students used AI as a supplementary source of examples and explanations. Sirirojjananan (2023) found that high school students perceived ChatGPT as useful for quick answers and English-learning support, while Su and Yang (2023) emphasized aligning AI assistance with learning outcomes. The ratings reflect how often students sought help with comprehension.

3.2.2 Completion of Academic Tasks

AI use for completing academic tasks had the highest grand mean among the four learning practices (3.35), rated "Always." Students rated guidance on difficult tasks highest (3.50), followed by reviewing and revising generated content (3.33) and organizing ideas for assignments and projects (3.21). Students most often sought AI assistance when they faced difficult tasks and also reported reviewing generated content before using it. Zeng and Mahmud (2023) found that upper secondary students used ChatGPT for inspiration and idea generation. Esmas et al. (2024) identified useful writing support alongside problems with generated language and nonexistent links, underscoring the value of checking and revising AI output.

3.2.3 Development of Learning Skills

AI use for developing learning skills had a grand mean of 3.13, rated "Sometimes." Using AI while continuing to think and work independently ranked highest (3.55), followed by checking the accuracy and relevance of generated information (3.08) and using AI to develop critical-thinking and problem-solving skills (2.77). Students reported working independently more frequently than using AI specifically to practice higher-order thinking. Long and Magerko (2020) identified critical evaluation as an AI literacy competency. Saya-ang and Adriano (2025) also found differences in fact-checking, originality, and dependence among senior high school students engaged in AI-assisted research writing. These findings support activities that require students to verify and evaluate AI responses.

3.2.4 Preparation for Assessments

AI use for assessment preparation had a grand mean of 2.62, rated "Sometimes." Using AI feedback to identify and correct mistakes ranked highest (2.83), followed by reviewing lessons before quizzes and examinations (2.82). Using AI-generated practice questions and exercises ranked lowest (2.22). Students used AI more frequently to review lessons and correct errors than to practice answering questions independently. Baidoo-Anu and Owusu Ansah (2023) discussed the potential of generative AI for interactive assistance and formative assessment.

Carpenter et al. (2022) explained the learning value of retrieval practice and spaced study, which provides a basis for using practice questions as supplementary review materials.

3.3 Students' Perceived Academic Performance

3.3.1 Knowledge and Understanding of Lessons

Knowledge and understanding of lessons had a grand mean of 3.24, rated "Sometimes." Identifying important concepts and connecting new lessons with prior knowledge shared the highest rating (3.30 each). Explaining lessons in students' own words received the lowest rating (3.12). Students reported recognizing and connecting concepts more consistently than explaining them independently. Mayer's (2021) explanation of meaningful learning emphasizes processing information and connecting it with prior knowledge. The University of the Philippines (2023) similarly emphasized learners' needs and goals when making educational decisions about AI. These perspectives support giving students opportunities to explain concepts in their own words.

3.3.2 Application of Learned Concepts

Application of learned concepts had a grand mean of 3.21, rated "Sometimes." Relating lessons to practical situations ranked highest (3.38), followed by applying classroom concepts in exercises (3.17) and using prior learning in unfamiliar tasks (3.08). The lower rating for unfamiliar tasks suggests that transferring knowledge to new situations was more challenging for students. Chawalit (2025) reported that secondary students experienced difficulty interpreting AI responses and applying feedback during a STEM activity. Ng et al. (2021) included understanding, use, evaluation, and ethical considerations in AI literacy. These perspectives support guiding students to judge whether information fits a problem and apply it through their own reasoning.

3.3.3 Problem-Solving and Critical-Thinking Skills

Problem-solving and critical-thinking skills had a grand mean of 3.30, rated "Always." Identifying possible solutions ranked highest (3.32), followed by explaining reasons or evidence for answers (3.30) and analyzing information before reaching a conclusion (3.28). The closely grouped ratings reflect students' perceptions of their reasoning practices. Farrokhnia et al. (2024) identified opportunities for personalized AI assistance alongside limitations in response quality, bias, and contextual understanding. Ordonez et al. (2024) reported positive associations between favorable perceptions of AI language models and questionnaire measures of critical thinking and self-efficacy. The present findings are based on self-reported practices.

3.3.4 Completion and Quality of Academic Tasks

Completion and quality of academic tasks had a grand mean of 3.48, rated "Always." Reviewing work for accuracy, completeness, and organization ranked highest (3.72), followed by using teacher feedback (3.45) and submitting tasks on time (3.27). Students reported reviewing and improving their work more consistently than meeting deadlines. Wisniewski et al. (2020) found that the effects of educational feedback depend on the information communicated. Maghamil and Sieras (2024) reported higher assessed writing quality after AI-assisted activities. In the present study, the ratings describe students' perceptions of their task completion and work quality.

3.4 Relationship Between AI-Assisted Learning Practices and Perceived Academic Performance

The relationship between AI-assisted learning practices and perceived academic performance could not be statistically established because the original respondent-level paired scores were unavailable for verification and reanalysis. The previously reported Pearson correlation was excluded because it was calculated using four pairs of category means rather than the 60 individual paired observations required for respondent-level analysis. Consequently, no valid correlation coefficient or statistical significance result can be reported. Previous studies by Casio et al. (2024), Abellera et al. (2025), and Jaurigue (2025) provide relevant context regarding AI-assisted learning and student outcomes. However, the strength, direction, and statistical significance of the relationship in the present study remain undetermined.

3.5 Proposed Measures for Responsible AI Use

Students rated all eight proposed measures "Highly Recommended," with a grand mean of 3.75. Proper acknowledgment of AI-assisted content ranked first (4.00). Verifying generated information and using AI to strengthen understanding and problem-solving tied for second (3.83 each), followed by balancing AI with other learning resources (3.80), providing orientation on responsible use (3.75), protecting personal information (3.72), and establishing acceptable-use guidelines (3.60). Activities requiring students to evaluate and verify AI responses received the lowest rating (3.47). The ratings show strong support for guidance on academic honesty, verification, and independent learning. Cotton et al. (2024) emphasized academic integrity and clear expectations for acceptable AI assistance. The National Privacy Commission (2024) clarified data protection obligations for AI systems that process personal information. Funa and Gabay (2025) emphasized ethical use, AI literacy, training, accessibility, privacy, and alignment with educational goals.

4. Conclusion & Recommendations

Among the 60 students in Grades 7 to 12 at Melchor B. Burlaos Memorial High School, AI was used most consistently to complete academic tasks and less consistently to understand lessons, develop learning skills, or prepare for assessments. Students rated themselves more highly on reviewing their work and identifying possible solutions than on explaining lessons in their own words or applying knowledge to unfamiliar tasks. Taken together, these patterns show where students seek AI assistance and where they report needing more practice in independent learning. Students strongly supported measures for responsible AI use, giving the highest priority to acknowledging AI-assisted work. The findings provide a basis for school guidance on academic honesty, verification of AI-generated information, and independent reasoning. No conclusion about the direction, strength, or significance of the association between AI-assisted learning practices and perceived academic performance can be drawn until the 60 paired respondent-level scores are analyzed.

The school head and teachers should provide age-appropriate AI literacy orientation across Grades 7 to 12 and establish clear rules for acceptable assistance in assignments, projects, and assessments. Guidance should prioritize proper acknowledgment of AI-assisted work, checking generated information against credible sources, protecting personal information, and balancing AI use with textbooks, classroom instruction, and independent study. To strengthen assessment preparation, teachers can use teacher-checked practice questions, ask students to answer independently before consulting AI, and have them explain how they corrected their mistakes. Classroom tasks should also require students to explain concepts in their own words, apply learning to unfamiliar situations, and justify answers with evidence. Intermediate deadlines and feedback-based revision can support timely completion and improve the quality of academic work. Teachers should monitor student outputs and periodically review the guidance to determine how well it addresses learners' needs.

The study involved 60 students from one high school, which limits the applicability of the findings to other settings. Questionnaire responses measured self-reported AI use and perceived academic performance. The study included no verified grades, achievement tests, or independently scored tasks. The descriptive-correlational design limits causal inference. The earlier correlation calculation was based on four pairs of category means, not the 60 paired respondent-level scores, so the association remains untested. Reanalysis requires the original 60 paired composite scores. The overlapping age categories must also be corrected using the original age records before the demographic distribution is finalized. Future studies could recruit students from more schools and supplement self-reports with verified grades or independently scored performance tasks.

5. Compliance with ethical standards

Before collecting data, the researcher secured a research permit and written approval from the appropriate Schools Division authorities and the school head of Melchor B. Burlaos Memorial High School. The request for approval described the study's purpose, participants, data collection procedures, and confidentiality measures. Before administering the questionnaire, the researcher explained the purpose of the study, provided instructions for answering, and informed students that participation was voluntary. For students under 18, the researcher obtained consent from a parent or guardian and assent from the students themselves. Students aged 18 or older provided informed consent. Respondents completed the questionnaire independently and were given sufficient time to answer. The researcher clarified instructions when needed without influencing their responses and kept students' identities and answers confidential.

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