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EXPLORING THE USE OF AI IN TEXT GENERATION AND WRITING ASSISTANCE AMONG JUNIOR HIGH SCHOOL STUDENTS IN THE PHILIPPINES

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Abstract

This study explores the utilization of Artificial Intelligence (AI) for text content generation and writing task assistance among junior high school (JHS) students in a private school in the Philippines. Employing a quantitative survey research design, data were gathered through an online questionnaire and analyzed using means, t-test, and ANOVA. Results revealed that students exhibited low utilization of AI for text content generation (M = 2.42), primarily due to concerns over academic dishonesty, information accuracy, and risk to grades. Conversely, moderate utilization (M = 2.59) was observed in using AI for writing task assistance, such as grammar checking, idea expansion, and feedback—indicating students' preference for AI as a tool to enhance, rather than replace, their own work. A significant gender difference (p = 0.0150) was found in text generation, with males using AI more than females, while no significant difference (p = 0.3593) emerged in writing assistance. Grade-level comparisons showed low utilization across all levels for text generation, but significant differences (p = 0.0011) in writing assistance, with higher grade levels showing more frequent use. Findings highlight the need for clear school-wide AI policies and structured guidance to support students in responsibly integrating AI into academic practices. School administrators should establish clear policies, provide A.I. literacy programs, and ensure equitable access to foster ethical and effective use of A.I. in education. Teachers must model responsible engagement with A.I., integrate discussions of its limitations and biases into lessons, and guide students in using it as a learning aid rather than a shortcut. Students are encouraged to verify information, maintain academic integrity, and treat A.I. as a supplement to their own critical thinking and effort. This study fills gaps in existing literature by providing information and analysis about differences in A.I. use among students of varying grade levels, particularly for English writing tasks.

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INTRODUCTION

Students are increasingly over-dependent on Artificial Intelligence (A.I.), which they often use as a replacement for independent thinking and academic effort. This over-reliance weakens essential skills such as critical thinking, time management, and deep learning. Moreover, students frequently misuse A.I. tools like ChatGPT to complete assignments and achieve high grades without genuine engagement, leading to academic dishonesty and ethical concerns in education (Demirkol & Malkoc, 2023).

It is necessary to investigate whether this heavy reliance on A.I. has a positive or negative effect on students' learning and development. Understanding this impact is vital, as unchecked

A.I. dependence may overshadow traditional learning methods that emphasise creativity, analytical skills, and intellectual resilience. This study aims to determine whether students' frequent use of A.I. truly fosters academic growth or, instead, fosters dependence that hinders their overall development. Many students rely on A.I. to meet the demands of the curriculum, using it extensively for homework and projects. This increased reliance is causing a shift away from traditional methods of problem-solving and independent idea generation.

Previous research has identified the risks associated with overusing A.I., particularly its impact on students' cognitive abilities. According to Zhai, Wibowo, and Li (2024), A.I.-generated responses often contain errors, which can impair critical and analytical thinking. Their systematic review highlights issues such as algorithmic biases, misleading content, and lack of transparency, which can negatively influence students' learning experiences by promoting passive information consumption. These limitations underscore the need for critical engagement when integrating A.I. into education.

Studying AI use among Filipino high-schoolers is urgently important because the country is already moving to institutionalize AI in schooling while students are actively adopting generative tools in learning and writing. The Department of Education recently launched an Education Center for AI Research (E-CAIR) to drive AI innovation for basic education (Department of Education, 2025). Empirical studies from the Philippines document senior-high students' awareness, perceptions, and actual use of generative AI for schoolwork and language learning, and qualitative work captures students' experiences in classroom settings (Cataga et al., 2024) but further studies, particulalry on different levels, are much needed. Examining the Philippine context, with its distinct policy moves, digital-divide challenges, teacher capacity issues, and emerging ethical concerns, is essential to shape equitable policies, teacher training, and curricula so AI improves learning rather than widening gaps. This study also fills gaps in existing literature by providing information and analysis about differences in A.I. use among students of varying grade levels, particularly for English writing tasks.

Thus, this study sought to examine the AI utilization of Junior High School students, particularly in terms of content generation and task assistance in order to offer insights and potential solutions that encourage responsible A.I. use while reinforcing traditional learning values and promoting intellectual independence. It sought to answer two problems, particularly the following:

Problem 1. What is the extent of students' AI Utilization for Text Content Generation and Writing Task Assistance?

Problem 2. What is the extent of students' AI Utilization for Text Content Generation and Writing Task Assistance when grouped according to sex and Grade Level?

RESEARCH METHOD

Research Design

This study employed a qualitative descriptive research design, specifically a survey research approach, to describe and interpret students' utilization of artificial intelligence (AI). This design was appropriate for capturing detailed insights into students' experiences and patterns of AI use, allowing the researcher to gather data from a broad population without manipulating variables.

Participants

The participants of the study were selected from a private sectarian high school located in Cagayan de Oro City, Philippines, with a total student population of 1,892. A total of 659 students comprised the research sample, selected across various grade levels and biological sexes based on their availiability and willingness to participate. Based on biological sex, the sample consisted of 260 male and 399 female students. In terms of grade level, the distribution was as follows: 160 students from Grade 7, 118 from Grade 8, 146 from Grade 9, and 235 from

Grade 10. This diverse sample aimed to provide a representative overview of the student body for the purposes of the study. This sample is deemed appropriate due to their exposure to A.I. and their susceptibility to its use.

Instruments

The instrument is a researcher-made questionnaire with 2 profile questions, biological sex and grade level, as well as 14 questions asking about students' AI utilization in Content Generation and Task Assistance. As it is a researcher-made questionnaire, it has undergone content and face validation from experts and was pilot-tested. Using chronbach's alpha, the survey-questionnaire revealed an α=0.90 reliablity. The following scoring guide was used to describe the means:

Score Range	Descriptor	Description
3.26 – 4.00	High Utilization	Frequently uses AI tools in various academic or personal tasks; demonstrates confidence and familiarity with AI applications.
2.51 – 3.25	Moderate Utilization	Occasionally uses AI tools for specific purposes; shows some understanding but limited integration in daily tasks.
1.76 – 2.50	Low Utilization	Rarely uses AI tools; limited exposure and minimal application in tasks.
1.00 – 1.75	Very Low Utilization	Almost no use of AI tools; lacks awareness, access, or interest in using AI technologies.

Research Procedures

To conduct the study, letters of permission were first requested and approved by school administrators, particularly the school principal. A voluntary response sampling technique was employed. Participants were provided with an assent form and were informed that participation was entirely voluntary, with the freedom to withdraw at any point. Confidentiality and anonymity of responses were ensured. Both the assent form and the research questionnaire were created using Google Forms and distributed directly via the school's Microsoft Teams. The forms remained open for two weeks before being closed. Collected data were then processed and analyzed using JAMOVI.

Data Analysis

To assess the extent of AI utilization among the respondents, the researcher calculated the mean scores for each group, specifically categorizing them by biological sex and grade level. These mean scores offered a general overview of AI usage trends, allowing for comparisons between different groups. This method provided a clear snapshot of how AI tools were being utilized across various demographic and academic categories. To investigate whether there were statistically significant differences in AI utilization between groups, the researcher employed Welch's t-test. This statistical test was chosen because the data did not meet the normality assumptions required for a standard t-test, as assessed by the Shapiro-Wilk Test. Welch's t-test is robust to unequal variances and sample sizes, making it a suitable choice for analyzing the data in this context. By applying this method, the researcher could more accurately determine if AI usage differed significantly between groups, offering deeper insights into how various factors influence AI adoption in educational settings.

RESEARCH FINDINGS AND DISCUSSION

Research Findings and Discussion

The results will be discussed per problem, with each problem having two respective tables for Text Content Generation and Task Assistance. Table 1 presents the extent of students' A.I. utilization for text content generation.

Problem 1. What is the extent of students' AI Utilization for Text Content Generation and Writing Task Assistance?

Table 1
Extent of AI Utilization for Text Content Generation

N= 659		
Question	Mean	Descriptor
1. Generating homework answers	2.58	Moderate Utilization
2. Answering online quizzes	1.76	Low Utilization
3. Summarizing long readings	2.89	Moderate Utilization
4. Generating ideas for school projects	2.69	Moderate Utilization
5. Generating essays	2.06	Low Utilization
6. Generating sources for research activities	2.49	Low Utilization
7. Using A.I. tools instead of traditional search engines	2.43	Low Utilization
Over-all Mean	2.42	Low Utilization

Generating homework answers (Q1) shows a mean of 2.58 which is interpreted as 'Moderate Utilization'. This suggests that respondents moderately use A.I. to generate homework answers, likely when they need additional help. According to the Khup & Bantugan (2025), high school students use A.I. tools for essay generation, problem-solving, and test preparation, particularly when struggling with assignments. This highlights A.I.'s role in supplementing students' learning rather than completely replacing their efforts.

Answering online quizzes (Q2), shows a mean of 1.76 interpreted as 'Low Utilization'. This indicates that respondents generally avoid using A.I. tools for online quizzes. Ganiyu (2025) supports this, stating that students percieve using A.I. to complete assignments or exams as academic dishonesty. This reflects a broader concern about ethics in A.I. usage and the need for guidance on responsible academic practices. For summarizing long readings (Q3) the mean 2.89 interpreted as 'Moderate Utilization' suggests that respondents moderately rely on A.I. to condense long readings into more digestible formats. In a similar vein, Zhao (2025) found that students use A.I. tools for summarization, as these tools provide concise and clear explanations, making complex readings more accessible, suggesting A.I.'s potential to aid comprehension and learning efficiency.

For generating ideas for school projects (Q4), the mean 2.69 interpreted as 'Moderate Utilization' suggests that respondents moderately use A.I. tools to generate project ideas, likely when brainstorming. Nagelhout (2024) mentions Harvard Graduate School of Education report which shows that 53% of students use A.I. to gather information, reinforcing A.I.'s role in expanding students' creative and academic resources. This indicates that while students may use A.I. for inspiration, they still incorporate their own ideas and research. For using A.I. to generate essays (Q5), the mean 2.06 interpreted as 'Low Utilization' suggests that respondents rarely rely on A.I. to fully generate essays, possibly due to concerns about quality and accuracy. Carnegie (2024) notes that A.I. can assist in improving writing skills by generating outlines and enhancing grammar, flow, and structure. This suggests that students may use A.I. more as a writing aid rather than a complete substitute for their own work.

For generating sources for research activities (Q6), the mean 2.43 interpreted as 'Low Utilization' suggests that respondents rarely use A.I. to generate sources—likely due to concerns about credibility. Selwyn (2019) noted that automated citation tools can introduce errors. These insights help explain why many respondents hesitate to rely on A.I. for sourcing academic references. Lastly, when asked if they using A.I. tools instead of traditional search engines (Q7), respondents reported 'Low Utilization' with the mean 2.42. This suggests that while respondents occasionally use A.I. for searching, they still prefer traditional search

engines. Kim et al. (2024) found that students favor traditional search methods due to their perceived reliability, despite the growing impact of A.I.-driven search tools. It highlighted that while A.I. adoption is increasing, many students remain cautious due to concerns about misinformation and bias in A.I.-generated content.

The overall mean 2.42 reveals that students have 'Low Utilization' of AI in terms of Text Content Generation. Students have second thoughts when using A.I. for generating assignments, essays and answers as they see these uses as academic dishonesty. It also possible that they cannot be sure of the accuracy and veracity of the information that they gather from it. Students are also particularly grade-concious, and activities which require text generation take up a large part of their grades, something that they would prefer not to take a risk on. On the other hand, they are more comfortable when A.I. is used to improve understanding of texts or as a springboard to create projetcs. This way, they have more contol over the information they put out to A.I. or accept from A.I., not losing their 'personal touch'. While the school this study was conducted in has an existing A.I. policy in academics, specific guidelines and thresholds were not clearly identified, and the tolerance for A.I. largely depend on teachers and their respective subject areas. This points to the need for clearer regulations for A.I. usage in classrooms, particularly because students are in their formative years. Table 2 presents the extent of students' A.I. utilization for writing task assistance.

Table 2
Mean of AI Utilization for Writing Task Assistance

N= 659		
Question	Mean	Descriptor
8. Editing work after A.I. generates answers	2.77	Moderate Utilization
9. Using A.I. to correct grammar problems	2.77	Moderate Utilization
10. Using A.I. to feedback on answers	2.65	Moderate Utilization
11. Prompting A.I. tools to broaden answers	2.68	Moderate Utilization
12. Verifying answers using A.I. tools	2.58	Moderate Utilization
13. Citing sources using A.I. tools	2.29	Low Utilization
14. Using A.I. tools to generate structured outlines for homework	2.38	Low Utilization
Over-all Mean	2.59	Moderate Utilization

For editing work after A.I. generates answers (Q8), the mean 2.77 which is interpreted as 'Moderate Utilization' shows that respondents frequently polish A.I.-generated content instead of accepting it passively. This observation is supported by recent findings from Kochhar (2023), who noted that professionals in technical writing are increasingly engaged in editing A.I.-generated content to ensure accuracy and coherence. Furthermore, a study by Comscore (2023) highlighted that generative A.I. tools are being embraced by users for their ability to enhance content quality through active editing, reinforcing the notion that these outputs serve as a foundation for further development rather than final products.

For using A.I. to correct grammar problems (Q9) the mean 2.77 which is interpreted as 'Moderate Utilization' shows that many students rely on A.I. for grammar correction, using tools like Grammarly and Microsoft Copilot to correct their writing. According to Park (2019), students specifically use A.I. for grammar checking, highlighting its role in enhancing writing clarity and correctness. Moderate utilization suggests that A.I. has become a crucial tool for students aiming for polished academic work.

For using A.I. for feedback on one's answers (Q10), the mean 2.65 which is interpreted as 'Moderate Utilization' suggests that many students use A.I. to assess their answers' accuracy, ensuring well-structured and precise responses. This aligns with findings by Agunlejika (2025) which reported students use A.I. for fact-checking, summarizing, and improving their work.

In prompting A.I. tools to broaden answers (Q11), the students' responses showed a mean of 2.65 which is interpreted as 'Moderate Utilization' shows that respondents moderately use A.I. to expand their ideas rather than relying on it consistently. This is supported by Zhao (2025), who mentions that A.I. helps students generate new perspectives and refine their writing for better clarity.

For verification of answers through A.I. tools (Q12), the mean 2.58 which is interpreted as 'Moderate Utilization' shows that students rely on A.I. to check their work for correctness. While students are confident in using A.I. to check their answers, there is, however, a caveat on dependence on A.I. to check for correctness and accuracy. Zhai et. al. (2024) mention how A.I. could still be faulty, due to reasons such data and algorithm bias and A.I. 'hallucination', wherein A.I. tends to make up answers and put out false information. For citing sources using A.I. tools (Q13), the mean 2.29 which is interpreted as 'Low Utilization' suggests that respondents are hesitant to use A.I. for citation, likely due to accuracy concerns. Research by Capehart (2024) highlights that while A.I. can assist in identifying plagiarism, it also raises ethical questions about privacy and the potential for generating inaccurate citations, which can mislead students.

For using A.I. tools to generate structured outlines for homework (Q14), the mean 2.38 which is interpreted as 'Low Utilization' suggests that structured outlining with A.I. is underutilized—possibly because students prefer to organize their work manually. Existing research on writing processes indicates that manual outlining often provides greater control over idea organization, which is critical for effective writing (Hayes & Flower, 2016). The overall mean 2.59 reveals that students have 'Moderate Utilization' of AI in terms of Generating Content. Compared to Text Content Generation, students are more confident in utilizing A.I. assist in their writing tasks. Students often polish work coming from A.I., and use A.I. to check their grammar, to expound on and verify their answers, and to receive feedback on their writing.

Problem 2. What is the extent of students' AI Utilization for Text Content Generation and Task Asistance when grouped according to sex and grade level?

Table 3 presents the extent of students' A.I. utilization for text content generation when grouped according to sex.

Table 3
Extent of AI Utilization for Text Content Generation when Grouped According to Sex

	Male N= 260		Female N=399		
Question	Mean	Descriptor	Mean	Descriptor	Welch's t
Generating homework answers	2.68	Moderate Utilization	2.52	Moderate Utilization	-2.68**
Answering online quizzes	1.95	Low Utilization	1.63	Very Low Utilization	-4.73***
Summarizing long readings	2.98	Moderate Utilization	2.83	Moderate Utilization	-191ns
Generating ideas for school projects	2.72	Moderate Utilization	2.67	Moderate Utilization	-0.68ns
Generating essays	2.12	Low Utilization	2.03	Low Utilization	-1.30ns
Generating sources for research activities	2.52	Moderate Utilization	2.46	Low Utilization	-0.73ns
Using A.I. tools instead of traditional search engines	2.48	Low Utilization	2.41	Low Utilization	-0.87ns
Over-all Mean	2.49	Low Utilization	2.36	Low Utilization	-2.44*

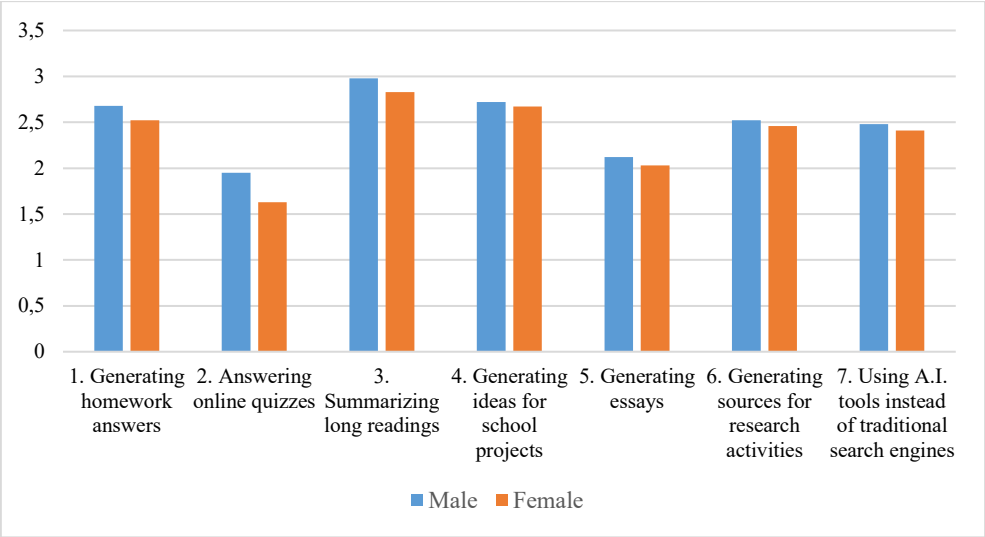

Figure 1. Extent of AI Utilization for Text Content Generation when Grouped According to Sex

For question 1, results show that both male and female respondents have 'Moderate Utilization' of AI in generating homework answers with a mean of 2.68 and 2.52 respectively. While both exhibited the same extent of utilization according to means, Welch's t-test ($t(553) = -2.68$, $p = 0.0076$) reveals that there is a highly significant difference between male and female utilization for generating answers for their homework. This is supported by a study from Bartolomé et al. (2022), which posits that male students may be more inclined to use A.I. as an efficiency tool, while female students, although using A.I. for homework, may do so in a more balanced manner. A.I.-assisted learning tools can enhance comprehension and efficiency, but over-reliance may hinder critical thinking skills.

For question 2, results show that males have a 'Low Utilization' (1.95) while females have 'Very Low Utilization' (1.63) of AI to answer online quizzes. The difference in the extent of utilization is supported by Welch's t-test ($t(480) = -4.73$, $p < .0001$) which reveals that there is a very highly significant difference between male and female utilization of AI to answer online quizzes. This suggests that while both sexes approach quizzes with integrity, females are less likely to use AI for answering quizzes than males. This gender difference is supported by Hadjar (2019) who mentions that males have a more permissive culture in terms of what is viewed as 'cheating'- that it is allowable because their peers also do the same. While there is a significant difference in the results, the means still show that there is a low to very low A.I. utilization in answering online quizzes, which emphasize that students are increasingly aware of the ethical implications of A.I. usage in assessments (Lim and Sorcar, 2023).

For question 3, when asked about summarizing long readings, results show that both male and female respondents have 'Moderate Utilization' of AI for said purpose with a mean of 2.98 and 2.83 respectively. For question 4, results show that both male and female respondents have 'Moderate Utilization' of AI to generate ideas for school projects with a mean of 2.72 and 2.67 respectively. This reiterates Zhao's (2025) assertion that students, both males and females, tend to use A.I. tools for summarization, as these tools provide concise and clear explanations and that students use A.I. to gather information (Nagelhout, 2024).

For question 5, results show that both male and female respondents have 'Low Utilization' of AI to generate essays with a mean of 2.12 and 2.03 respectively. This reflects a cautious approach toward A.I.-generated essays, aligning with concerns about the authenticity of A.I.-assisted writing raised by Nguyen et al. (2024). While A.I. tools can aid in structuring essays, excessive dependence may hinder students' ability to develop writing skills independently.

For question 6 which asks if students use AI to generate sources for research activities, results show that males have a 'Moderate Utilization' (2.52) while females have 'Low Utilization' (2.46) for said purpose. This suggests that students are somewhat skeptical about A.I.-generated sources. This finding echo that of Nyaaba et. al. (2024) who mentions that males view that A.I. provided them confidence and independence in their research writing, however, they also acknowledged the potential inaccuracies in information, leading to skepticism regarding relying entirely on them for support. Selwyn (2019) noted that automated citation tools can introduce errors, underscoring the importance of verifying A.I.-generated references to ensure academic rigor.

For question 7, results show that both male and female respondents have 'Moderate Utilization' of AI tools instead of traditional search engines with a mean of 2.72 and 2.67 respectively. According to Kim et al. (2024), A.I.-driven search engines offer efficiency but may limit exposure to diverse perspectives due to algorithmic biases.

The overall mean of 2.49 for males and 2.36 for females, both indicating 'Low Utilization' shows that both sexes do not use AI as much for text content generation. However, the Welch's t-test reveals a significant difference between males and females ($t(511) = -2.44$, $p = 0.0150$), differences that may stem from male students' reliance on A.I. that come from a preference for immediate solutions in academic work (Delecourt et al., 2024), and female students' effective adoption of AI writing tools, which can enhance their creativity and idea generation capabilities (Iddrisu et al., 2025). This finding is also supported by Ofosu-Ampong (2023) who mentions that male students were more likely to use A.I. based tools for learning and research than female students.

Table 4 presents the extent of students' A.I. utilization for writing task assistance when grouped according to sex.

Table 4
Extent of AI Utilization for Writing Task Assistance when Grouped According to Sex

	Male N= 260		Female N=399		
Question	Mean	Descriptor	Mean	Descriptor	Welch's t
Editing work after A.I. generates answers	2.92	Moderate Utilization	2.67	Moderate Utilization	-2.84**
Using A.I. to correct grammar problems	2.68	Moderate Utilization	2.82	Moderate Utilization	1.57
Using A.I. to feedback on answers	2.71	Moderate Utilization	2.61	Moderate Utilization	-1.21
Prompting A.I. tools to broaden answers	2.65	Moderate Utilization	2.70	Moderate Utilization	0.66
Verifying answers using A.I. tools	2.60	Moderate Utilization	2.57	Moderate Utilization	-0.32
Citing sources using A.I. tools	2.28	Low Utilization	2.29	Low Utilization	0.07
Using A.I. tools to generate structured outlines for homework	2.51	Moderate Utilization	2.30	Low Utilization	-2.74**
Overall Mean	2.62	Moderate Utilization	2.57	Moderate Utilization	-0.92

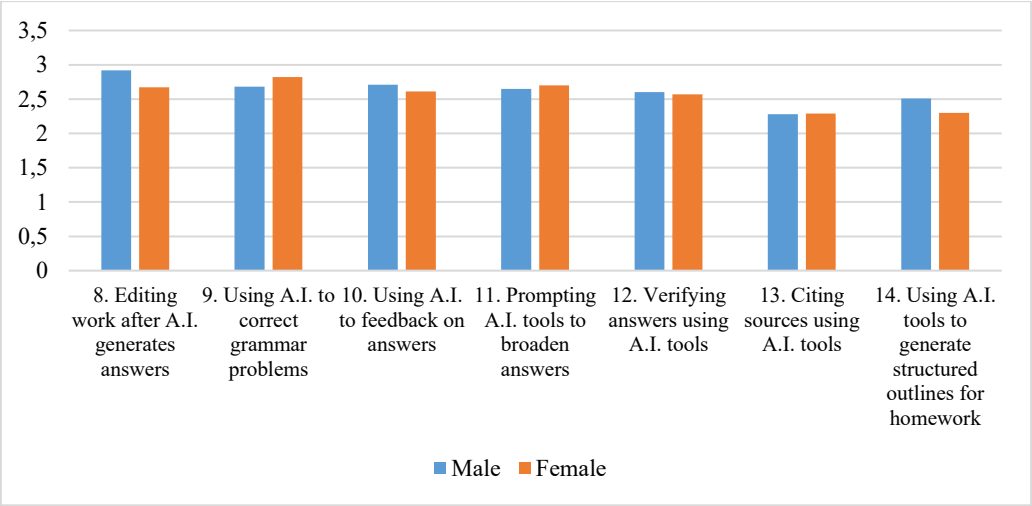

Figure 2 Extent of AI Utilization for Writing Task Assistance When Grouped According to Sex

For question 8, results show that both male and female respondents have 'Moderate Utilization' in terms of editing work after A.I. generates answers, with a mean of 2.92 and 2.52 respectively. This suggests that both sexes recognize the importance of refining A.I.-generated responses rather than relying on them outright. While both exhibited the same extent of utilization according to means, Welch's t-test ($t(557) = -2.84$, $p = 0.0047$**) reveals that there is a highly significant difference between male and female when editing texts after A.I. generates it. According to Park et al. (2023), male students often use A.I. tools for post-processing to ensure clarity, while female students tend to engage in critical evaluation, refining responses to align with personal expression, which, in this case, could contribute to the significant difference. For question 9, results reveal that both male and female respondents have 'Moderate Utilization' in terms of using A.I. to correct grammar problems, with a mean of 2.68 and 2.82 respectively. This indicates that both sexes actively use A.I. for grammar correction, enhancing writing clarity and correctness (Park, 2019).

For question 10 which asks if students use A.I. for feedback on one's answers, both male and female respondents have 'Moderate Utilization' for said purpose, with a mean of 2.71 and 2.61 respectively. This suggests that both sexes recognize A.I. as a valuable tool for evaluating responses. According to Hooda et. al. (2024), a significant majority of students use automated feedback tools to improve the clarity and accuracy of their work by providing timely, targeted insights. These tools help users identify errors and refine their responses, with evidence indicating that while male students may primarily use A.I. feedback to boost efficiency, female students tend to leverage it for qualitative improvements that align with their personal understanding. Question 11 asks the extent of A.I. utilization in terms of broadening answers (Q11), and reults reveal that both male and female respondents have 'Moderate Utilization', with a mean of 2.65 and 2.70 respectively. This suggests both sexes may rely on A.I. more frequently for expanding content. However, caution must be exhibited in the use of A.I. for this purpose as this can curtail students' freedom in conveying their unique thoughts and viewpoints (Krullaars et al., 2023).

In terms of using A.I. tools to verify answers, the findings for question 12 reveal that both male and female respondents have 'Moderate Utilization' of AI tools for verification, with a mean of 2.65 and 2.70 respectively This suggests that both sexes demonstrate an inclination toward using A.I. for verification. Meanwhile, for question 13 which asks if students use A.I. tools for citing sources, both male and female respondents have 'Low Utilization' for said purpose, with a mean of 2.28 and 2.29 respectively. Which suggests that both males and females don't often use A.I. for citing sources.

For using A.I. tools to generate structured outlines for homework (Q14), The overall mean of 2.51 for males, which indicates 'Moderate Utilization' and 2.30 for females, indicating 'Low Utilization' shows that males use A.I. tools to generate structured outlines for homework more often than females. This is supported by Welch's t-test that reveals a significant difference between males and females ($t(514) = -2.74$, $p = 0.0064$), these differences that may stem from the idea that males are often early adopters of new technologies compared to females and are thus more confident in its use (Stöhr et al., 2024).

The overall mean of 2.62 for males and 2.57 for females indicate 'Moderate Utilization' which shows that both sexes moderately use A.I. to assist them in writing tasks, which is supported by Welch's t-test which reveals no significant difference between males and females ($p = 0.3593$) extent of utilization. Iddrisu (2025) also note a declining trend in gender gaps in technology provisioning, particularly the adoption of A.I. writing tools, because as digital literacy continues to advance, both sexes become more familiar and comfortable with using newer technology.

Table 5 presents the extent of students' A.I. utilization for text content generation when grouped according to grade level.

Table 5
Extent of AI Utilization for Text Content Generation When Grouped According to Grade Level

	Grade 7 N= 160		Grade 8 N=118		Grade 9 N=146		Grade 10 N=235		
Question	Mean	Descriptor	Mean	Descriptor	Mean	Descriptor	Mean	Descriptor	Welch's ANOVA
1. Generating homework answers	2.66	Moderate Utilization	2.54	Moderate Utilization	2.47	Low Utilization	2.63	Moderate Utilization	2.20
2. Answering online quizzes	1.75	Low Utilization	1.63	Very Low Utilization	1.66	Very Low Utilization	1.89	Low Utilization	3.70*
3. Summarizing long readings	2.84	Moderate Utilization	2.85	Moderate Utilization	2.82	Moderate Utilization	2.99	Moderate Utilization	1.30
4. Generating ideas for school projects	2.66	Moderate Utilization	2.66	Moderate Utilization	2.64	Moderate Utilization	2.76	Moderate Utilization	0.59
5. Generating essays	2.16	Low Utilization	2.08	Low Utilization	1.88	Low Utilization	2.10	Low Utilization	3.07*
6. Generating sources for research activities	2.69	Moderate Utilization	2.47	Low Utilization	2.53	Moderate Utilization	2.32	Low Utilization	3.67**
7. Using A.I. tools instead of traditional search engines	2.42	Low Utilization	2.44	Low Utilization	2.32	Low Utilization	2.51	Moderate Utilization	1.01
Overall Mean	2.46	Low Utilization	2.38	Low Utilization	2.33	Low Utilization	2.46	Low Utilization	1.48

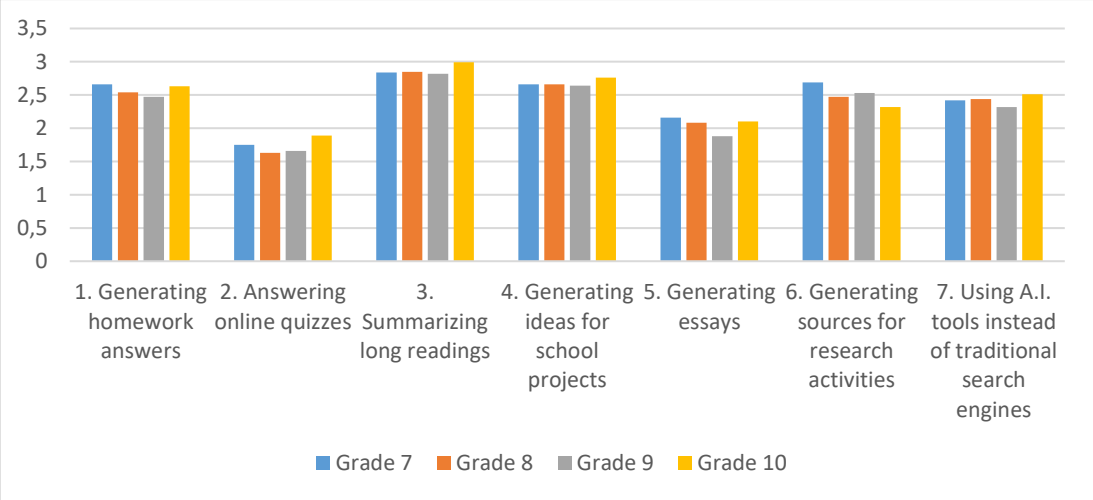

Figure 3. Extent of AI Utilization for Text Content Generation When Grouped According to Grade Level

For generating homework answers (Q1), the means show that Grade 7, 8 and 10 exhibit 'Moderate Utilization' with a mean value of 2.66, 2.54, and 2.63 respectively. Only Grade 9 showed 'Low Utilization' with a mean of 2.47. This suggests that while students across all grade levels use A.I. as a tool rather than a primary source, some grade levels may use even less A.I. for generating homework answers as their curriculum might have different needs and competencies. In the school where the research is conducted, the English 7, 8 and 10 curriculum are mostly composition-heavy, which require writing assignments. Meanwhile the English 9 curricula is more performance-based as it is grounded in theatre.

For answering online quizzes (Q2), the means show that Grade 7 and 10 exhibit 'Low Utilization' with a mean value of 1.75, and 1.89 respectively, while Grade 8 and 9 showed 'Very Low Utilization' with mean values of 1.63 and 1.66. Welch's ANOVA ($F(3,335) = 3.70$, $p = 0.0121$) reveals that there is a significant difference between the various grade levels. This suggests that while some students are less likely to use A.I. for quizzes, others may experiment with it occasionally. Grade 7, the youngest of the group, and Grade 10, the oldest in the group exhibit slightly higher tendencies to utilize A.I. to answer online quizzes, compared to Grade 8 and 9. For Grade 7, it is possible that, because of their age (11-13), they are still curious and are exploring how to navigate assessments through A.I. For Grade 10, because they have stayed in school longer (aged 15-17) and thus has been exposed longer to A.I., they are more confident in using A.I. for assessment purposes. This finding runs contrary to that of Arundel's (2023) which highlights that as students advance to higher grades, they are more inclined to integrate digital tools into their learning processes to verify and supplement traditional assessment methods.

For summarizing long readings (Q3), the means show that Grade 7, 8, 9 and 10 all exhibit 'Moderate Utilization' with a mean value of 2.84, 2.85, 2.82 and 2.99 respectively. This indicates that all groups use A.I. as an occasional aid in summarization but not as a primary tool. This is supported by a research from Zhao et al. (2022) who suggest that older students refine their summarization techniques through A.I. but still rely on their own comprehension skills. For generating ideas for school projects (Q4), the means show that Grade 7, 8, 9 and 10 all exhibit 'Moderate Utilization' with a mean value of 2.66, 2.66, 2.64, and 2.76 respectively. This implies that students in all grade levels view A.I. as a brainstorming tool rather than as a sole source of ideas. A substantial number of students use A.I. to gather information and stimulate creative thinking, suggesting that while A.I. provides valuable input, students still integrate these suggestions with their own ideas and research (Nagelhout, 2024).

For using A.I. to generate essays (Q5), the means show that Grade 7 to 10 exhibit 'Low Utilization' with a mean value of 2.16, 2.08, 1.88 and 2.10 respectively, however, while the

means belong unde ther same descriptor, Welch's ANOVA ($F(3,332) = 3.05$, $p = 0.0279$) reveals that there is a still a statistically significant difference between the various grade levels. The Grade 9 level shows the lowest mean, while the Grade 7 level show the highest mean. As mentioned earlier, because the Grade 9 English curriculum is largely performance-based, there might be less need to use A.I. to generate essays, as compared to the Grade 7 curriculum which is essay-heavy because they need to be trained to write.

For generating sources for research activities (Q6), the means show that Grade 7 and 9 exhibit 'Moderate Utilization, while Grade 8 and 10 showed 'Low Utilization' and it reveals that there is a highly significant difference among the various grade levels. This indicates that while students remain hesitant about A.I.-generated sources, other students use it more selectively. Lastly, students that they were using A.I. tools instead of traditional search engines (Q7). This suggests that as students progress, they may shift toward A.I. tools but still balance them with traditional searches. According to Patel and Wong (2023), older students become more confident in distinguishing reliable A.I.-generated information from biased or inaccurate sources.

The overall means show that students from all grade levels exhibit 'Low Utilization' for using A.I. to generate text content with Grade 7 having a mean of 2.46, Grade 8 with the mean of 2.38, Grade 9 with a mean of 2.33 and Grade 10 having a mean of 2.46. Welch's ANOVA also reveals no significant difference between grade levels ($p = 0.2179$) in terms of extent of utilization for text content generation. While the results show 'Low Utilization' for text content generation, Cho & Ofosu-Anim, (2024) mention that younger students tend to view generative AI tools as essential for academic success. The challenge then for educators is to scaffold students' use of generative AI and to set clear regulatory boundaries in its use.

Table 6 presents the extent of students' A.I. utilization for writing task assistance when grouped according to grade level.

Table 6
Extent of AI Utilization for Writing Task Assistance When Grouped According to Grade Level

	Grade 7 N= 160		Grade 8 N=118		Grade 9 N=146		Grade 10 N=235		
Question	Mean	Descriptor	Mean	Descriptor	Mean	Descriptor	Mean	Descriptor	Welch's ANOVA
Editing work after A.I. generates answers	2.77	Moderate Utilization	2.63	Moderate Utilization	2.63	Moderate Utilization	2.91	Moderate Utilization	2.74*
Using A.I. to correct grammar problems	2.51	Moderate Utilization	2.73	Moderate Utilization	2.96	Moderate Utilization	2.84	Moderate Utilization	4.55**
Using A.I. to feedback on answers	2.48	Low Utilization	2.56	Moderate Utilization	2.82	Moderate Utilization	2.70	Moderate Utilization	3.29*
Prompting A.I. tools to broaden answers	2.50	Moderate Utilization	2.61	Moderate Utilization	2.77	Moderate Utilization	2.78	Moderate Utilization	3.16*
Verifying answers using A.I. tools	2.42	Low Utilization	2.56	Moderate Utilization	2.68	Moderate Utilization	2.64	Moderate Utilization	2.05
Citing sources using A.I. tools	2.10	Low Utilization	2.14	Low Utilization	2.07	Low Utilization	2.63	Moderate Utilization	11.73***
Using A.I. tools to generate structured outlines for homework	2.29	Low Utilization	2.25	Low Utilization	2.22	Low Utilization	2.61	Moderate Utilization	7.14**
Overall Average	2.44	Low Utilization	2.50	Moderate Utilization	2.44	Low Utilization	2.73	Moderate Utilization	5.51**

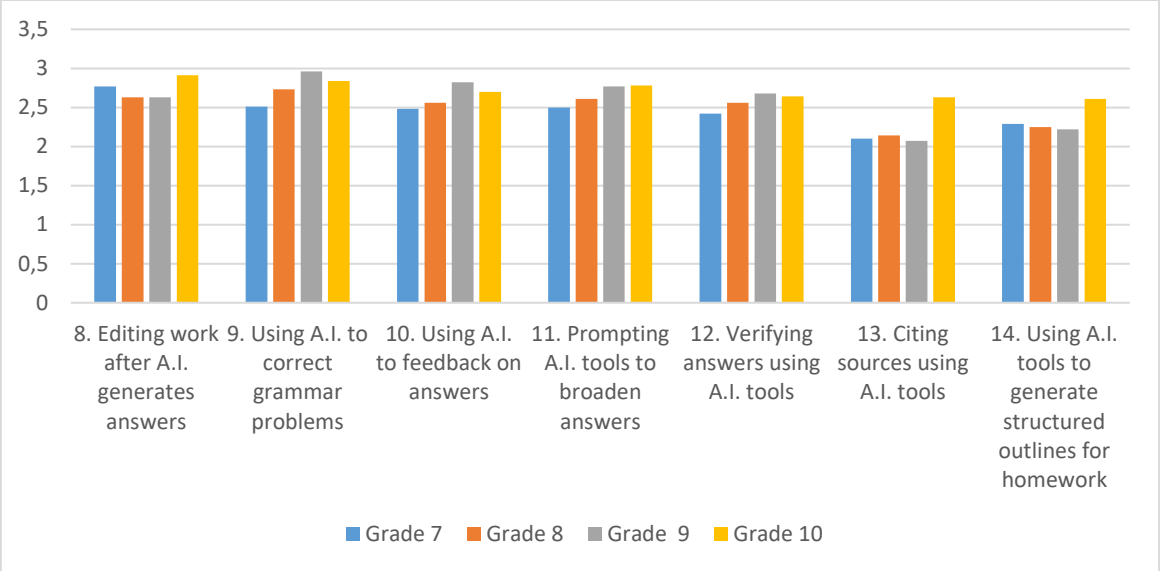

Figure 4. Extent of AI Utilization for Writing Task Assistance When Grouped According to Grade Level

For editing work after A.I. generates answers (Q8), the means show that all grade levels exhibit 'Moderate Utilization' with Grade 7 having a mean of 2.51, Grade 8 with the mean of 2.73, Grade 9 with a mean of 2.96 and Grade 10 having a mean of 2.84. While the means belong under the same descriptor, Welch's ANOVA ($F(3,324) = 2.74$, $p = 0.0434$) reveals that there is a statistically significant difference between the various grade levels. This indicates a strong tendency among students to refine A.I.-generated content, particularly in higher grade levels, aligning with findings that older students engage more critically with A.I. tools to improve content accuracy and coherence (Kim et al., 2020).

For using A.I. to correct grammar problems (Q9), the means show that all grade levels exhibit 'Moderate Utilization' with Grade 7 having a mean of 2.77, Grade 8 with the mean of 2.63, Grade 9 with a mean of 2.63 and Grade 10 having a mean of 2.91. While the means belong under the same descriptor, Welch's t-test ($F(3,323) = 4.55$, $p = 0.0039$) reveals that there is a statistically highly significant difference between the various grade levels. This suggests that as students grow older, they show greater reliance on A.I. for grammar refinement as higher-grade learners are more aware of linguistic accuracy and the benefits of digital writing assistance (Xu, 2024).

For using A.I. for feedback on one's answers (Q10), the means show that Grade 8, 9 and 10 exhibit 'Moderate Utilization' with a mean value of 2.56, 2.82, and 2.70 respectively. Only Grade 7 showed 'Low Utilization' with a mean of 2.48. Welch's ANOVA ($F(3,326) = 3.29$, $p = 0.0210$) also reveals that there is a significant difference between the various grade levels. This reflects a growing awareness of A.I.-driven evaluation, with older students demonstrating selective use, as supported by studies on self-regulated learning in digital environments (Chen et al., 2020). It is also interesting to note that Grade 7, being the youngest level, use A.I. for feedback on their answers less than their older peers. This can be since younger students are yet to recognize the value of A.I. for feedbacking as compared to their older counterparts (Hutt et al., 2024).

In prompting A.I. tools to broaden answers (Q11), the means show that all grade levels exhibit 'Moderate Utilization' with Grade 7 having a mean of 2.50, Grade 8 with the mean of 2.61, Grade 9 with a mean of 2.77 and Grade 10 having a mean of 2.78. While the means belong under the same descriptor, Welch's ANOVA ($F(3,326) = 3.16$, $p = 0.0250$) reveals that there is a statistically significant difference between the various grade levels. This suggests that although students use A.I. to expand their responses, they may lack advanced strategies to

optimize the output effectively. As Zhai et al. (2024) indicate, younger learners in particular require guided instruction to ensure that A.I. tools support rather than replace critical thinking. The older the students get, the more proficient they are in using A.I. to expand their responses.

In verification of answers through A.I. tools (Q12), the means show that Grade 8, 9 and 10 exhibit 'Moderate Utilization' with a mean value of 2.56, 2.68, and 2.64 respectively. Only Grade 7 showed 'Low Utilization' with a mean of 2.10. This suggests uncertainty in verifying information with A.I., particularly among younger students, aligning with research indicating that students often face challenges in evaluating source credibility and engaging in effective fact-checking in digital learning environments (Lloyd, 2010; Wineburg & McGrew, 2017).

For citing sources using A.I. tools (Q13), the means show that Grade 7, 8 and 9 exhibit 'Low Utilization' with a mean value of 2.10, 2.14, and 2.07 respectively. Only Grade 10 showed 'Moderate Utilization' with a mean of 2.63. Welch's ANOVA ($F(3,333) = 11.73$, $p < .0001$) also reveals that there is a very highly significant difference between the various grade levels, particularly for Grade 10. This reflects that, compared to the other grade levels, Grade 10 uses A.I. for citation more. This would make sense as the Grade 10 level has been introduced to citation tools in preparation for the research subject in their English classes. However, it is important to note that citation tools could be useful at all levels.

Lastly, for using A.I. tools to generate structured outlines for homework (Q14), the means show that Grade 7, 8 and 9 exhibit 'Low Utilization' with a mean value of 2.29, 2.25, and 2.22 respectively. Only Grade 10 showed 'Moderate Utilization' with a mean of 2.61. Welch's ANOVA ($F(3,328) = 7.14$, p = 0001) also reveals that there is a highly significant difference between the various grade levels, particularly for Grade 10. It is possible that older students tend to interact more with A.I. tools to generate structured outlines for homework, as they are more concious of their outputs and they believe using the generated structured outlines can improve the clarity, coherence, and organization of their work. (Malik et al., 2023).

The overall means show that students from Grade 7 and 9 exhibit 'Low Utilization' for using A.I. to assist in their writing, with Grade 7 having a mean of 2.44 and Grade 9 with the mean of 2.44. Meanwhile, Grade 8 and 10 exhibit 'Moderate Utilization' for using A.I. to assist in their writing, with Grade 8 having a mean of 2.50 and Grade 10 with the mean of 2.73. Welch's ANOVA also reveals a highly significant difference between grade levels ($F(3.328) = 5.51$, $p = 0.0011$) in terms of extent of utilization for writing task assistance. The Grade 7, being the youngest in the survey, tend to sway more toward the use of A.I. for text content generation than for writing assistance as it is the purpose they are more familiar with, while the Grade 9 English performance-laden curriculum minimizes the use of A.I. for writing assistance. Grade 8 deals with the composition of essays and journalism content, which could point to their moderate utilization, while the Grade 10 level are tasked to create survey research, an area which A.I. could greatly help in terms of their writing process and performance (Kim et al., 2024).

CONCLUSION

The findings of this study demonstrate that while students actively use A.I. in their academic activities, their approach is largely influenced by their academic needs, academic integrity, and personal habits. The growing reliance on A.I. for generating answers and assisting in writing suggests that students recognize its potential to enhance efficiency and improve their academic output. However, the caution exercised by students when using A.I. for assessments underscores ongoing concerns about credibility, academic dishonesty, and over-reliance on automated responses. indicates that students who depend excessively on A.I. for academic work may experience diminished critical thinking skills and struggle with independent problem-solving over time. Beyond individual usage, the study underscores the need for ethical A.I. engagement. Unregulated and excessive A.I. use can contribute to misinformation, reduced information literacy, and challenges in academic integrity. Therefore, fostering responsible A.I.

utilization through education and clear institutional policies throughout various grade levels and subject areas is necessary to maximize its benefits while minimizing its risks.

Given these findings and conclusions, the following recommendations are put forward. First, for school administrators, it is essential to establish clear policies that define ethical and acceptable uses of A.I. in academic settings. These policies should be supported by programs that build A.I. literacy across grade levels and subject areas, ensuring that students and teachers alike understand both the benefits and risks of these tools. Administrators should also invest in professional development opportunities to equip teachers with the skills to effectively integrate A.I. into instruction while maintaining academic integrity. At the same time, schools must work to guarantee equitable access to A.I. resources so that all learners can benefit, regardless of their background.

Teachers, on the other hand, play a central role in modeling responsible A.I. use in their classrooms. They can demonstrate how A.I. tools may assist with brainstorming, research, or practice exercises, while emphasizing that these tools should never replace critical thinking or original work. Teachers should integrate discussions about A.I.'s limitations, potential biases, and ethical considerations into their lessons, thereby fostering awareness and discernment among students. Continuous monitoring and guidance will help ensure that students use A.I. as a learning aid rather than a shortcut.

Students are encouraged to approach A.I. use with a strong sense of responsibility and integrity. They should verify any information generated by A.I. against credible sources, developing their information literacy in the process. A.I. should be treated as a supplement to learning, useful for clarifying concepts, generating ideas, or receiving practice feedback, but never as a replacement for personal effort and insight. Most importantly, students must uphold academic honesty by acknowledging A.I.'s contributions when appropriate and by ensuring that their work reflects their own thinking and analysis. Lastly, future research could explore how A.I. can be integrated across grade levels and subjects while upholding academic integrity and critical thinking. Long-term studies are needed to assess the impact of A.I. literacy programs, and comparative research across different school contexts can clarify issues of equity and access.

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