

Influence of AI Tools on the Information Literacy Skills of Grade 10 Students within Pantay Integrated High School in Social Studies Subject

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THE PROBLEM AND ITS BACKGROUND

INTRODUCTION

The rapid advancements in Artificial Intelligence (AI) have reshaped the way individuals engage with information, particularly in the educational context worldwide. AI technologies, which have evolved significantly in recent years (Moon et al., 2024) are transforming how students acquire, process, and evaluate information. Today's generation of learners is increasingly interacting with AI tools, often without realizing their impact on learning outcomes. This global trend calls for a reevaluation of educational strategies to align with the digital competencies and critical thinking skills required in the modern world. As AI becomes deeply integrated into classrooms worldwide, it is vital to understand its influence on students' ability to seek, assess, and utilize information, particularly in subjects like Social Studies, which demand analytical and evaluative skills.

This research investigates the influence of AI tools on the information literacy skills of Grade 10 students, with a focus on Social Studies. The study centers on Pantay Integrated High School in Tanauan City, Batangas, Philippines, chosen for its unique characteristics. This school offers Social Studies as a core subject and incorporates a curriculum that addresses contemporary issues, making it an ideal context for exploring the impact of AI on information literacy. Furthermore, the students' access to various AI tools provides a relevant setting to analyze how these technologies support or challenge their ability to evaluate, retrieve, and synthesize information.

AI has shown immense potential to enhance educational efficiency, such as automating repetitive tasks and providing personalized learning experiences (Wen, 2024). These benefits improve how students interact with academic content. However, concerns persist regarding over-reliance on AI tools, (Hua, 2023) which could diminish students' ability to critically assess the credibility of sources and foster ethical awareness (Murray, 2023).

The importance of AI in improving students' information literacy is evident in its ability to assist in key areas such as information retrieval, evaluation, and synthesis. Studies indicate that AI-powered tools enhance students' ability to critically assess sources and engage with diverse perspectives (D'Angelo et al., 2022). For example, AI can provide personalized learning experiences, facilitating targeted instruction based on individual progress and preferences (Bennani et al., 2021). In Social Studies, these capabilities enable students to gain deeper insights into complex topics and analyze issues effectively. However, (Ng, 2023) questions remain regarding how these tools shape students' cognitive and ethical engagement with information (Sebetci, 2019).

Existing literature highlights the benefits of AI (Murray, 2023) in education but underscores the need for ethical frameworks to ensure responsible use, particularly in environments where academic integrity is at stake. (Ng et al., 2021) Research also emphasizes integrating curricula that address cognitive skills required for evaluating and synthesizing information in the AI era (Voulgari et al., 2021).

By focusing on Grade 10 students at Pantay Integrated High School, this study aims to contribute valuable insights into how AI tools enhance or challenge information literacy skills within the Social Studies curriculum. This research fills a gap in understanding the intersection of AI, information literacy, and subject-specific learning, providing recommendations for educators and policymakers on how to effectively integrate AI into the curriculum while fostering critical thinking and ethical awareness. In sum, this study seeks to shed light on the ways AI influences students' ability to seek, evaluate, and synthesize information, offering a nuanced perspective on its role in contemporary education.

Pantay Integrated High School was chosen for this study due to its relevance in the local context, the diversity of its student population, and its potential access to technological resources. The school has shown an interest in integrating modern educational tools, making it an ideal setting to explore how AI tools influence students' information literacy skills, particularly in social studies. With a commitment to innovative teaching practices and a strong curriculum focus on critical thinking, Pantay Integrated High School provides a unique opportunity to investigate the impact of AI on information literacy, offering insights that could benefit both the school and the broader educational community.

This study aims to explore how AI tools influence the information literacy skills of Grade 10 students at Pantay Integrated High School, specifically in the context of social studies. In an era where digital tools and artificial intelligence are rapidly transforming educational landscapes, students must not only acquire knowledge but also develop the critical ability to evaluate and use information effectively. Information literacy is crucial for navigating today's vast and often overwhelming information environment, and understanding the role of AI tools in this process is essential. By investigating how these technologies affect students' skills in sourcing, analyzing, and synthesizing information, this study will provide valuable insights into the potential benefits and challenges of integrating AI in secondary education. The findings will not only contribute to enhancing teaching strategies in social studies but also inform educators, policymakers, and technology developers about best practices for fostering essential literacy skills in an increasingly digital world.

THEORETICAL FRAMEWORK

This study investigates the influence of artificial intelligence (AI) on the information literacy skills of Grade 10 students in social studies at Pantay Integrated High School. The theoretical framework is grounded in several key concepts that collectively illuminate the interplay between AI and information literacy (Alshahrani, Wang et al., 2021).

At its core the **Information Literacy Theory** emphasizes the skills required to identify, locate, evaluate, and effectively use information. These competencies are crucial for students in Social Studies, where they must critically assess diverse sources, gather historical data, and construct evidence-based arguments. Models like the Big6 by Eisenberg and Berkowitz and the Information Literacy Competency Standards established by the American Library Association (ALA) provide structured frameworks to guide students in developing these skills. By focusing on these models, the theory ensures that students are equipped to navigate the vast and complex information landscape effectively.

AI directly relates to Information Literacy Theory by enhancing the processes involved in managing information. AI tools such as search engines, chatbots, and citation managers facilitate the identification and retrieval of information while automating routine tasks like organizing data and verifying sources. For example, AI can assist students in evaluating the credibility of historical documents or organizing complex datasets, streamlining their research and analysis. This alignment between AI capabilities and the core tenets of Information Literacy Theory illustrates how technology supports students in mastering essential academic skills.

Socio-Constructivist Learning Theory

The **Socio-Constructivist Learning Theory**, proposed by Vygotsky, emphasizes that learning is mediated through tools and social interactions. This theory highlights that students gain knowledge through active engagement, collaboration, and contextual learning. In Social Studies, this includes analyzing historical events,

discussing multiple perspectives, and synthesizing ideas with peers and educators. AI-powered platforms such as digital assistants, collaborative learning tools, and discussion forums embody this mediation, making the learning process more interactive and accessible.

AI supports the principles of this theory by fostering environments where students can actively engage with learning resources and each other. For instance, AI systems offer real-time feedback, enabling students to refine their arguments and analyses in collaborative settings. Additionally, these tools facilitate group projects by providing shared access to resources, simulations, and discussion boards. This alignment demonstrates how AI enhances the socio-constructivist approach by enabling meaningful interactions and promoting deeper engagement with Social Studies content.

Technological Pedagogical Content Knowledge (TPACK) Framework

The **TPACK Framework** underscores the integration of technology into education, asserting that effective learning occurs when technological tools align with pedagogical strategies and relevant content. In Social Studies, this means using technology to enhance understanding of historical, cultural, and socio-political contexts while supporting critical thinking and analysis. AI tools, such as simulation platforms, content summarization systems, and adaptive learning programs, exemplify this integration.

AI fits into the TPACK framework by enhancing the delivery of Social Studies content through tailored and innovative approaches. For instance, AI-powered simulations can recreate historical events, allowing students to explore different scenarios and outcomes. Furthermore, adaptive learning systems provide personalized content based on student progress, ensuring that each learner receives targeted instruction. This synergy between technology, pedagogy, and content exemplifies how AI can meaningfully enhance educational practices.

Cognitive Load Theory

The **Cognitive Load Theory**, developed by Sweller, focuses on the mental effort required to process information. It posits that reducing unnecessary cognitive burdens allows students to concentrate on understanding and analyzing essential content. In Social Studies, where students often encounter large volumes of complex information, managing cognitive load is critical.

AI relates to this theory by streamlining information processing and reducing extraneous cognitive effort. For example, AI tools can filter irrelevant data, organize complex datasets, and summarize lengthy texts, enabling students to focus on evaluating credible sources and comprehending key content. By reducing cognitive overload, AI tools promote deeper learning and critical thinking, both of which are essential in the context of Social Studies education.

Self-Regulated Learning Theory

The **Self-Regulated Learning Theory**, proposed by Zimmerman, examines how students take control of their own learning processes through planning, monitoring, and evaluation. This theory highlights the importance of autonomy and self-awareness in achieving academic success. AI tools, such as learning analytics platforms and personalized feedback systems, empower students to regulate their learning by providing actionable insights and guidance.

AI supports self-regulated learning by enabling students to track their progress, set learning goals, and adjust their strategies accordingly. For instance, AI-powered dashboards provide real-time analytics on performance, helping students identify areas for improvement. In Social Studies, this might involve refining research techniques, reevaluating sources, or revising arguments based on feedback. This alignment demonstrates how AI fosters self-regulation and enhances students' ability to manage their learning effectively.

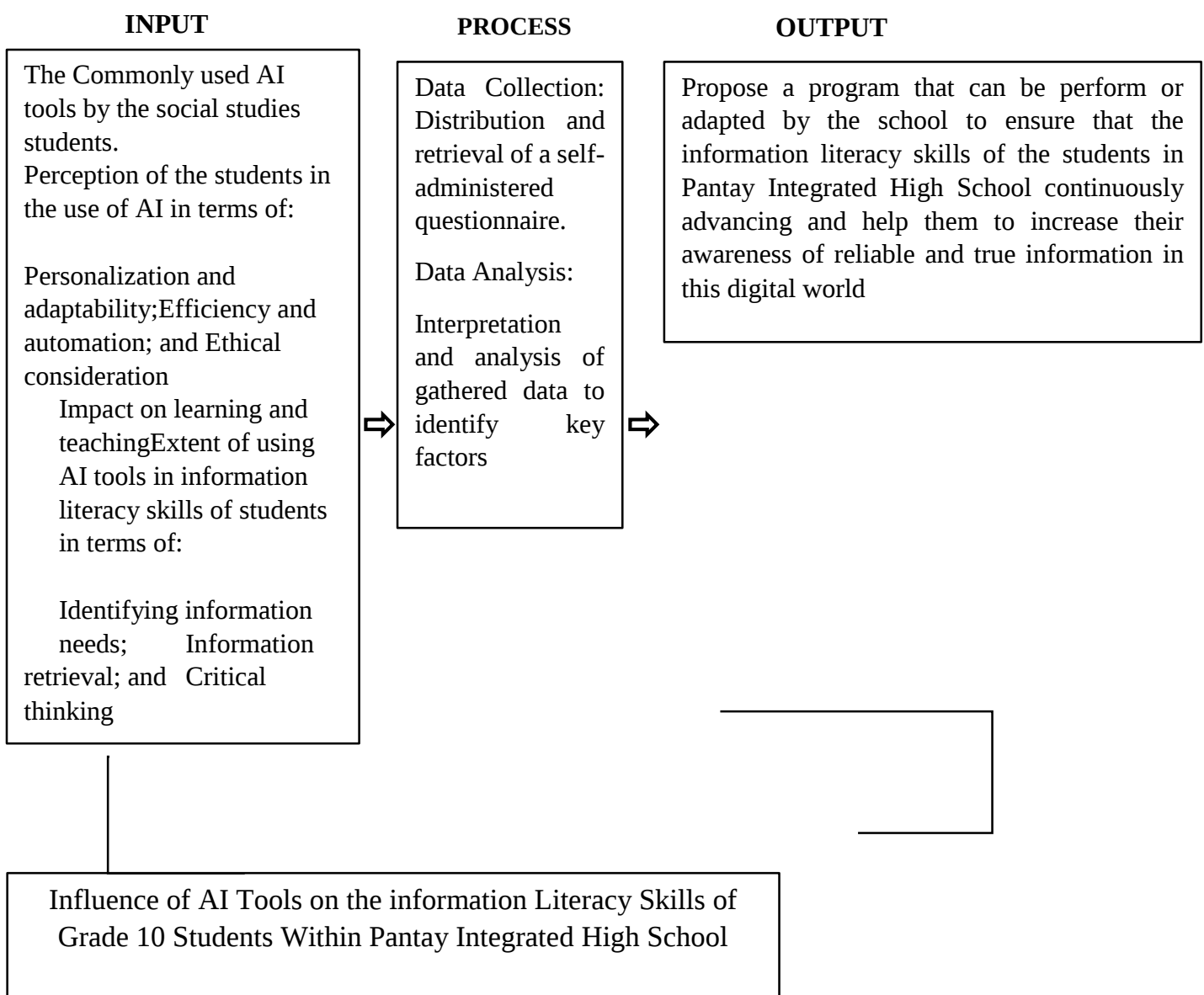
JISC Digital Literacy Framework

The **JISC Digital Literacy Framework** connects the use of AI tools with the broader concept of digital literacy, which encompasses the ability to evaluate, create, and communicate digital content. In Social Studies, digital literacy is crucial for critically engaging with online resources, multimedia, and collaborative platforms. AI tools, such as content generators and plagiarism checkers, enhance digital literacy by supporting students in their evaluation and creation of content.

However, this framework also highlights the potential risks of over-reliance on AI, which may weaken students' independent critical thinking skills. While AI streamlines processes like information retrieval and content generation, students must also develop their evaluative capabilities to avoid blindly accepting AI-generated outputs. By balancing the benefits and risks, the JISC Digital Literacy Framework underscores the importance of using AI tools as a complement to, rather than a replacement for, critical thinking.

By integrating these theoretical perspectives, this study offers a comprehensive understanding of AI's influence on the development of information literacy skills in students. The findings highlight the potential of AI to enhance learning outcomes while emphasizing the need to cultivate critical thinking and evaluative skills to ensure balanced and effective use of AI tools.

Figure 1: PARADIGM OF THE STUDY



Research Paradigm

The first box contains the Input, which examines the research questions focused on the influence of artificial intelligence (AI) tools on the information literacy skills of grade 10 students in social studies. It includes identifying the commonly used AI tools, how students describe these tools in terms of personalization, efficiency, ethical considerations, and their impact on learning. Additionally, it explores how AI tools influence students' information literacy skills regarding identifying information needs, information retrieval, and critical thinking. The input also investigates whether there is a significant correlation between the utilization of AI tools and students' information literacy skills, along with recommendations for enhancing these skills based on the findings.

The middle box, representing the process, includes the processes involved in the research. This encompasses the distribution and retrieval of a self-administered questionnaire designed to collect data from students. Following data collection, the interpretation and analysis of the gathered data take place, aimed at identifying key factors that influence the information literacy skills of students.

The last box, which is the output presents the recommended action to be performed based on the findings of the study, indicating the significant or non-significant relationships between the use of AI tools and the students' information literacy skills. This recommendation are also based on the provided conclusions drawn from the analysis on how to effectively use AI tools to enhance students' information literacy skills in social studies.

Statement Of The Problem

The key objective of this research is to examine the impact of artificial intelligence on the information literacy skills of Grade 10 students of Pantay Integrated High School in the Social Studies subject. This study aims to address the following research questions:

1. What are the commonly used AI tools by the Social Studies students?
2. How do Social Studies students describe AI tools that they used in terms of:
 - 2.1 Personalization and Adaptability;
 - 2.2 Efficiency and Automation;
 - 2.3 Ethical Considerations; and
 - 2.4 Impact on Learning and Teaching?
3. What are the extent of using AI tools in information literacy of students in terms of;
 - 3.1 Identifying Information Needs;
 - 3.2 Information Retrieval; and
 - 3.3 Critical Evaluation?
4. Is there a significant correlation between the utilization of AI tools by Social Studies students and their information literacy skills in the subject?
5. Based on the findings of the study, what programs can be done to assure the enhancement information literacy skills of the students?

Research Hypothesis

There is a significant positive relationship between AI tool usage and the specific information literacy skills (such as identifying information needs, retrieving information, and critical thinking) among Grade 10 students in the social studies subject at Pantay Integrated High School.

Significance Of The Study

In order to understand the impact of artificial intelligence (AI) tools on the information literacy skills of Grade 10 students at Pantay Integrated High School in the context of social studies, it is essential to explore the factors that influence this relationship. The findings of this study benefits not only to individual stakeholders but also to various groups:

Teachers: The research provide educators with valuable insights into how AI tools can be effectively integrated into the curriculum to enhance students' information literacy skills. By understanding the relationship between AI usage and information literacy, teachers can develop targeted instructional strategies that improve students' ability to identify, evaluate, and utilize information effectively.

Students: This study aims to empower Grade 10 students by equipping them with the skills necessary to navigate the complexities of digital world. By highlighting the importance of information literacy and the role of AI tools, students can become more independent learners who are better prepared for challenges and future career demands.

School Administrators: The insights gained from this study can guide school administrators in making informed decisions regarding the adoption and integration of AI tools in the educational framework. By understanding how these tools influence information literacy, administrators can implement policies and initiatives that support effective teaching practices and enhance learning outcomes.

Parents: Raising awareness about the impact of AI on information literacy can enable parents to better support their children's education. By understanding how AI tools contribute to information literacy, parents can encourage their children to engage with these responsibly and foster a culture of inquiry and critical thinking at home.

Educational Technologists: The collaboration with educational technologists can enhance the effectiveness of AI tools in the classroom. Insights from this study informs the design and implementation of educational technologies that cater to the specific needs of students, promoting engagement and facilitating learning.

Future Researchers: This study lay the groundwork for future research on AI and information literacy, expanding the knowledge in this field. By identifying gaps and opportunities for further exploration, it encourages subsequent studies to investigate related themes and enhance the understanding of AI's role in education.

Scope And Delimitation

This study focuses on the influence of artificial intelligence (AI) tools on the information literacy skills of Grade 10 students at Pantay Integrated High School, specifically within the context of the social studies subject. The research examines various identified factors that affect students' ability to identify, evaluate, and effectively use information, as perceived by the students themselves. The investigation conducted during the academic year 2023-2024, ensuring that the data collected reflects the current educational and technological landscape impacting students' learning experiences.

Definition Of Terminologies

The following terms are defined operationally for a better understanding of the study.

Artificial Intelligence/AI Tools: Software platforms that utilize AI technologies to assist users in performing tasks such as data retrieval, analysis, and information organization, thereby enhancing users' ability to process and evaluate information.

Critical Thinking: Analyzing information objectively and evaluate its relevance, credibility, and significance, which is essential for interpreting sources in social studies.

Ethical Considerations: The moral implications of using AI tools in education, including issues related to data privacy, accuracy of information, and the potential for bias in AI algorithms.

Grade 10 Students: Learners who are typically 15 to 16 years old and are enrolled in the 10th grade at Pantay Integrated Highschool, participating in the social studies curriculum.

Information Evaluation: The process of assessing the quality and relevance of information sources, ensuring that the information used in academic work is credible, accurate, and appropriate for the subject matter.

Information Retrieval: The process of obtaining information systematically from a large repository, including digital databases and online resources.

Information Literacy: A set of skills that enables individuals to identify, locate, evaluate, and effectively use information in various formats, particularly within the context of academic subjects such as social studies.

Personalization: The customization of AI tools to meet individual students' learning needs, allowing for tailored educational experiences that enhance information literacy.

Social Studies: An academic subject that integrates various disciplines, including history, geography, economics, and civics, to develop students' understanding of human society and social relationships.

User Engagement: The extent to which students interact with AI tools, characterized by their frequency of use, depth of involvement, and the extent to which they incorporate these tools into their learning processes.

REVIEW OF RELATED LITERATURE AND STUDIES

This chapter provides an overview of previous research on knowledge sharing and networks. It introduces the framework of the study that comprises the main focus of the research described in this thesis.

Foreign Literature

Based on "Conceptualizing AI literacy: An exploratory review" of Burgsteiner, Kandlhofer, & Steinbauer (2016), learners should learn about the underlying AI concepts for their future careers and understand the ethical concerns in order to use AI responsibly since in this current era, it is undeniably that AI has become widespread across various sectors, including business, science, art, and education, aimed at enhancing user experiences and boosting efficiency. The primary reason for that is it can be found in numerous aspects of daily life, such as smart home devices, smartphones, and digital assistants like Google and Siri.

In "Responsible AI: requirements and challenges". It mentioned that while most people recognize the presence of AI services and devices, few are familiar with the underlying concepts and technologies or the potential ethical concerns associated with AI. (Ghallab, 2019).

In the book "Where are the educators?" that published on 2019, the definition of AI has expanded to include its ability to perform cognitive tasks, especially in learning and problem-solving, through innovative technologies like machine learning, natural language processing, and neural networks (Zawacki-Richter, Marín, Bond, & Gouverneur, 2019).

Xu (2020) emphasized in his “Artificial intelligence: A powerful paradigm for scientific research” the significance of AI education for teachers, suggesting that “educators who are proficient in using AI could surpass those who are not, as AI can enhance their capabilities and facilitate their transformation, significantly boosting management efficiency and decision-making quality”.

As per Responsible Artificial Intelligence by Virginia Dignum (2019), teaching both the public and computer scientists about AI ethics is crucial for enhancing their social responsibility and promoting social inclusion and diversity, ultimately enabling AI to be used for the benefit of society.

Observing the impact of artificial intelligence on both instructors and students in the classroom will be intriguing. As teachers face an increasing workload, the demand for AI systems to assist them is rising. These systems can analyze course materials and syllabus to help educators develop personalized content. Additionally, they can be utilized to create and grade exams (Hwang et al., 2020; Upala & Wong, 2019).

AI in history from Shahkarami (2023) highlights the effectiveness of using a Surrogate Reservoir Model (SRM) for assisted history matching in reservoir simulations. By leveraging Artificial Intelligence and Data Mining (AI&DM) technologies, the SRM serves as an intelligent, efficient prototype of a full-field reservoir simulation model. The SRM operates in fractions of a second, significantly reducing the time required for history matching compared to traditional methods. Moreover, it accurately reproduces the numerical results of the full-field reservoir simulation model, ensuring reliable outputs. Applied to a synthetic reservoir model with 24 production wells and 30 years of production data, the SRM effectively handled the history matching process by tuning static data, such as permeability. The combination of speed and accuracy demonstrates the SRM's capability as a fast and effective tool for history matching, potentially revolutionizing workflows in reservoir management.

Local Literature

As higher education evolves to accommodate more adaptable and flexible career paths, personalized learning becomes increasingly vital in reflecting the diverse needs and expectations of students (Gunnio, 2022; Hardy, 2023; Parikh, 2023). This shift towards individualized learning aligns with the growing demand for education that mirrors the personalized experiences offered by modern Artificial Intelligence (AI) technologies such as ChatGPT (Fütterer et al., 2023), there is a unique opportunity to reshape higher education by offering more adaptable, interactive, and student-centered learning experiences (Naik, 2023; Tulsiani, 2024; Estrellado & Millar, 2023).

The high preference rates across various functionalities indicate the growing reliance of Filipino students on AI tools to assist them in different aspects of academic writing. (Fabro, 2024) By leveraging these tools, students can improve the quality, accuracy, and efficiency of their writing, ultimately enhancing their academic performance and learning outcomes.

The big data age surely needs ethic-fit-context to bound what and how we delimit AI. This was evident on the UNESCO (2019) about encouraging education to have concerted policy over ethical issues. There are established ethical guidelines for the use of artificial intelligence (AI) in schools.

AI is recognized by Filipino educators and administrators as a significant tool that enhances teaching practices, streamlines administrative tasks, and boosts research productivity (Giray, L. et al. 2024)

The 2023 AI Index Report indicates that incidents of “ethical misuse of AI has increased 26 times since 2012.” some experts are worried that people will misuse these systems to spread disinformation.

Foreign Studies

Scholars assert that adaptive personalized adaptive learning (PAL) offers advantages over less adaptable methods, with AI-driven PAL enabling a more advanced and responsive learning experience compared to systems based on simple if-then rules. (Bulger, 2016, p. 29; Wilson & Scott, 2017)

It has become widespread across various sectors, including business, science, art, and education, aimed at enhancing user experiences and boosting efficiency. It can be found in numerous aspects of daily life, such as smart home devices, smartphones, and digital assistants like Google and Siri. While most people recognize the presence of AI services and devices, few are familiar with the underlying concepts and technologies or the potential ethical concerns associated with AI (Burgsteiner, Kandlhofer, & Steinbauer, 2016; Ghallab, 2019).

A review of AI's different applications highlights several ways it will influence education. Drawing from the findings of the analyzed articles, this section closely examines AI's impact on administration, teaching, and self-directed learning (Bakhromovich, 2020; Chassignol et al., 2018).

Incorporating chatbots and virtual assistants into educational environments can revolutionize support services, enhance accessibility, and create more efficient learning spaces. This technology also plays a crucial role in helping students identify their information needs, making it easier for them to find relevant resources (Chen et al., 2023; Essel et al., 2022).

Studies indicate that chatbots, often referred to as intelligent tutors or teaching assistants, greatly enhance the student experience and increase the likelihood of academic success. At Deakin University, for instance, IBM Watson-powered chatbots are utilized to support this educational framework. This highlights the connection between chatbot technology and improved information retrieval, facilitating better access to learning resources. Deakin University (Deakin University, 2015)

AI in Education from Chen (2023), Artificial Intelligence has significantly transformed education by enhancing administrative efficiency improving teaching quality, and personalizing learning experiences. AI adoption in education has evolved from basic computer technologies to sophisticated systems, such as web-based platforms, intelligent systems, and humanoid robots. These technologies now assist instructors in performing various administrative tasks, such as reviewing and grading assignments more effectively and efficiently, freeing up time for educators to focus on higher-order teaching activities.

AI's ability to leverage machine learning and adaptability has led to the customization and personalization of curricula and content based on individual student needs, fostering greater engagement and retention. These tailored learning experiences not only enhance the learner's journey but also improve overall education quality. (Lin, 2024) As a result, AI-driven tools and platforms have proven to be instrumental in transforming traditional education into a more dynamic, efficient, and student-centered process, contributing to significant advancements in learning outcomes and teaching methodologies.

Local Studies

AI offers numerous advantages in education, particularly in terms of personalization and efficiency. AI-driven platforms can customize learning materials based on individual student needs, which enhances engagement and supports differentiated instruction. AI can help bridge gaps in education and support diverse learning environments (Soliman, 2024). Moreover, AI can contribute to developing digital literacy skills among students, preparing them for a technology-driven future.

AI can help automate administrative tasks, such as student enrollment, grading, and recordkeeping, freeing up faculty and staff to focus on more critical aspects of education. (Atoum, et al. 2017; Wang, T., & Cheng, E. C. K., 2022).

In examining the use of AI in Philippine higher education, educators and administrators recognize AI as a transformative tool capable of enhancing teaching, streamlining administrative tasks, and boosting research productivity. This acknowledgment includes the facilitation of learning through specific AI applications, although there are concerns regarding issues like cheating and data fabrication, which could detract from critical thinking and creativity. (Santiago, C., & Ulanday, Ma. L. 2024). The need for regulatory policies and ethical guidelines is emphasized to govern AI usage effectively within educational institutions.

(Calimlim, 2024) Studies show that students exposed to AI-assisted learning environments exhibit improved academic performance, particularly among groups that traditionally underperform

Recent studies indicate positive perceptions among students about AI's role in personalized learning and adaptive feedback, with significant improvements in academic performance observed. (Prestoza, 2024)

The Synergetic Impact of AI, IoT, and 5G on Information Literacy and Education concludes that the AI has significant potential to transform education by enhancing teaching and learning processes, fostering innovation, and supporting the development of next-generation educational ecosystems. This synergy improves information literacy by equipping learners with the skills to access, evaluate, and utilize information effectively. (Muraszkiewicz. 2019) However, the study emphasizes that the transformation of education in the digital age requires the active involvement of not just educators and technologists but also students and citizens.

Synthesis

The research on the Influence of AI Tools on the Information Literacy Skills of Grade 10 Students within Pantay Integrated High School aligns with a significant body of literature discussing the integration of artificial intelligence (AI) in education. Burgsteiner, Kandlhofer, and Steinbauer emphasize the growing relevance of AI tools in enhancing education, particularly in terms of personalization, efficiency, and the development of essential digital and information literacy skills. AI tools are transforming educational environments by automating administrative tasks, personalizing learning experiences, and improving student engagement. This transformation is critical as AI, particularly AI-driven platforms, can tailor learning content to individual student needs, fostering a more adaptive and responsive learning experience. In the context of Pantay Integrated High School, it is essential to assess how these AI tools impact the development of **information literacy**—a skill that is indispensable in navigating and evaluating the vast amounts of information students encounter daily.

Furthermore, scholars like Ghallab highlight the necessity of integrating AI literacy into educational curricula to prepare students for future careers. This aligns with the need for students at Pantay Integrated High School to understand AI's underlying concepts and ethical implications, which are crucial for responsible use. The ethical concerns surrounding AI, such as its potential misuse for disinformation, underscore the importance of not only using AI tools for enhancing learning but also fostering a deeper understanding of the social responsibility that comes with them.

Additionally, Zawacki-Richter, Marín, Bond, and Gouverneur recognize AI's integration in education as a tool to improve administrative efficiency, enhance teaching quality, and support adaptive learning, which may reflect positively on the development of information literacy. AI-driven chatbots and virtual assistants, for instance, are already being leveraged to help students identify their information needs and enhance their ability to retrieve relevant academic resources. This mirrors the objectives at Pantay Integrated High School, where AI tools could support students in developing the critical skills needed to effectively evaluate and apply information in academic contexts.

However, it is also crucial to consider the challenges noted in the literature, particularly the need for ethical guidelines and policies to regulate AI's use in educational settings, as pointed out by Dignum. There are concerns regarding the potential for AI to inadvertently promote academic dishonesty or hinder critical thinking, especially if students rely too heavily on AI tools for completing tasks such as writing and research. Therefore, any AI implementation at Pantay Integrated High School must be accompanied by a strong emphasis on ethical use, ensuring that students not only benefit from AI tools but also learn how to use them responsibly to enhance their information literacy and academic integrity.

In conclusion, the research at Pantay Integrated High School aligns with broader trends and findings in the literature regarding the transformative role of AI in education. It emphasizes the importance of AI literacy and the ethical considerations that come with it, while also exploring the potential of AI tools to enhance students' information literacy skills. Through a well-rounded approach that includes both the practical and ethical

dimensions of AI, students at Pantay Integrated High School can be better equipped to navigate the complexities of the digital age and utilize AI to improve their academic performance and critical thinking abilities.

Research Methodology And Procedures

This chapter outlines the methodology and procedures followed in the study, providing a detailed account of the research method, subjects, research locale, instrument validation, reliability of the questionnaire, data collection procedure, scoring system, and the statistical treatment of the data. These procedures were designed to ensure the validity, reliability, and consistency of the findings.

Research Design

This study employed a quantitative research design with a descriptive-correlational approach to examine the relationship between the use of artificial intelligence (AI) tools and the information literacy skills of Grade 10 students in Social Studies. The descriptive aspect aimed to assess and describe the current level of students' information literacy, focusing on their ability to identify, locate, evaluate, and effectively use information. The correlational aspect explored the degree to which AI tool usage influenced these skills, highlighting connections between technology adoption and academic performance (Zoe Fisher, 2017). This design was particularly suitable for providing measurable insights into how AI impacts students' learning, offering a systematic method to evaluate trends and relationships.

By integrating descriptive and correlational methods, the study provided a comprehensive understanding of AI's role in enhancing key academic skills, such as critical thinking, information retrieval, and ethical decision-making. The approach allowed for objective data collection and statistical analysis to identify patterns and associations between variables. This methodological framework was instrumental in evaluating not only the benefits of AI integration in education but also potential challenges, such as over-reliance on technology, thereby offering practical recommendations for educators and policymakers to optimize the use of AI tools in fostering information literacy.

Respondent Of the Study

The study involved 166 Grade 10 students from Pantay Integrated High School, who were selected through simple random sampling. This method was chosen to ensure that every student had an equal chance of being included in the sample, providing a representative group of the school's Grade 10 student population.

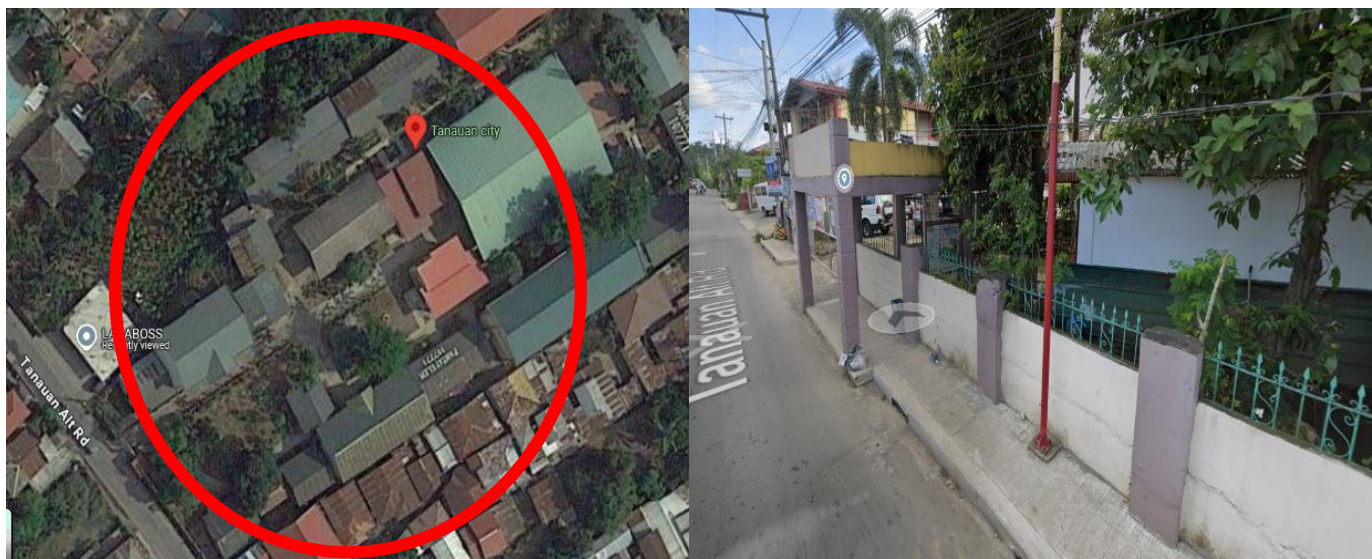
Table 1: The Distribution of Respondents from Grade 10 Students of Pantay Ingtergrated Highschool

Pantay Integrated HighSchool Grade 10	Total Students	Total Number of Respondents
Section A	42	29
Section B	42	30
Section C	41	29
Section D	41	29
TOTAL	166	117

Locale Of the Study

The research was conducted at Pantay Integrated High School, a public secondary school located in Pantay, Batangas. This school was chosen because it offers Social Studies as a core subject for Grade 10 students, making it an ideal setting for investigating the impact of AI tools on information literacy in the context of this subject. The students' access to technology and the curriculum's inclusion of information literacy skills in Social Studies made this locale particularly relevant for the study.

Figure 2: Map



Legend: School used in study

Figure 2: Map of Pantay Matanda, Tanauan City, Batangas

Research Instrument

The primary instrument for data collection in this study was a researcher-constructed questionnaire, purposefully designed to evaluate Grade 10 students' information literacy skills and their usage of AI tools within the context of Social Studies. The development process involved a comprehensive review of relevant literature to identify key constructs and best practices in assessing information literacy and technology integration. Additionally, consultations with subject matter experts in education ensured the questionnaire's validity and alignment with the study's objectives.

The questionnaire included items that assessed critical components of information literacy, such as students' ability to locate credible sources, evaluate information accuracy, and effectively use gathered data for academic purposes. Furthermore, it explored students' perceptions of how AI tools influenced these skills, focusing on aspects such as efficiency, adaptability, and ethical considerations. The instrument was designed to be clear and straightforward to ensure accurate and reliable responses, providing valuable insights into the interplay between AI tools and information literacy development.

Validity Of The Questionnaire

The prepared questionnaire was given to the adviser and three experts in order to determine the validity status of the instrument. The experts reviewed the questionnaire to ensure that the items accurately measured the constructs of interest, such as information literacy and the use of AI tools. The questionnaire underwent several revisions based on their feedback until a final version was locked in. Once validated, the researchers prepared copies of the finalized questionnaire to distribute to the chosen respondents for the study.

Reliability Of the Questionnaire

To ensure the reliability of the questionnaire, the researchers distributed it to Grade 10 pupils at Pantay Integrated High School, who were not included in the main study sample. Their responses were subjected to statistical treatment to assess the consistency and reliability of the instrument. Through extensive testing and analysis, the reliability of the questionnaire was confirmed, providing confidence in its ability to consistently measure the targeted constructs related to information literacy and the use of AI tools.

Table 2: Level of Internal Consistency of the Survey Questionnaire

Subscales	No. of Items	Cronbach's Alpha	Internal Consistency
Extent of AI Tool			
Personalization and Adaptability	9	.837	Good
Efficiency and Automation	11	.904	Excellent
Ethical Considerations	6	.629	Acceptable
Impact on Learning and Teaching	9	.908	Excellent
Influence of AI Tools			
Identifying Information Needs	5	.794	Acceptable
Information Retrieval	9	.914	Excellent
Critical Evaluation	8	.834	Good

Data Gathering Procedure

This study will adhere to a systematic data gathering procedure to ensure the accuracy and reliability of the collected information. Initially, the researchers will request formal permission from the principal of Pantay Integrated High School, outlining the study's objectives and the importance of participation. The researchers distribute the questionnaires to the selected Grade 10 students, ensuring that all respondents understand the purpose of the study and their role in it.

The distribution process is conducted at a convenient time for the students to minimize disruption to their academic activities. During this period, the researchers are available to answer any questions or provide clarification on the questionnaire items. After the respondents have completed the questionnaires, the researchers collected the completed forms for analysis.

The data collected from these questionnaires are systematically analyzed to identify key factors influencing information literacy and the use of AI tools in Social Studies. This thorough process ensures that the gathered data is both comprehensive and relevant to the study's aims, enabling the researchers to draw meaningful conclusions and recommendations.

Statistical Treatment Of Data

For meaningful interpretation of data, the following statistical treatment will be applied: The following are the statistical treatments to be used in the study.

- 1. Mean.** This will be applied to determine the responses of the students.
- 2. Standard Deviation.** This will be used to calculate the dispersion of all respondent replies in the indicators given in the variables from the mean.
- 3. Percentage.** It will be utilized to describe the respondents' age distribution and sex.
- 4. Pearson's Correlation Coefficient.** It will be used to know the strength and direction of the relationship between the two variables.

Presentation, Analysis and Interpretation Of Data

This chapter presents the data obtained through the survey conducted, the analysis of the data using the appropriate statistical treatment, and the interpretation of the results obtained.

Commonly used AI tools by the Social Studies students.

Table 3: Commonly used Generative AI/Chatbot of Grade 10 Students in Pantay Integrated High School

Generative AI/Chatbot	Frequency	Percentage
ChatGPT	89	76%
Siri	19	16%
Alexa	7	6%
Microsoft Copilot	6	5%
Google Assistant/Gemini	45	38%
Others	8	7%

Based on the table, the majority of the students are using ChatGPT with the total of 76%, followed by Google Assistant/Gemini with the total of 38%, in third commonly Chatbot used is Siri with 16%, Alexa placed fourth for having 6%, and lastly, Microsoft Copilot with 5%. While 7% of the students are using different Chatbot that is not indicated on the questionnaires.

The reason why does the ChatGPT is more common is ChatGPT was launched to the public in November 2022 and gained rapid traction, amassing over 1 million users within the first five days and reaching 100 million monthly active users just two months after its release (Ilias, 2024). This breakneck speed established it as the fastest-growing consumer application in history.

Users who seek creative writing assistance or diverse AI interactions will likely gravitate towards ChatGPT due to its impressive range of functionalities.

Table 4: Commonly used Writing Assistant of Grade 10 Students in Pantay Integrated High School

Writing Assistant	Frequency	Percentage
Grammarly	54	46.15%
Quillbot	75	64.10%
Ginger	3	2.56%
Others	7	5.98%

As illustrated in the table, the majority of the students are using Quillbot with the total of 64.10%, followed by Grammarly with total of 46.15%, and lastly Ginger with 2.56%. While 5.98% of the students are using different Writing Assistant that is not indicated on the questionnaires.

The reason why Quillbot has more users because it provides flexible pricing options. The premium plans are competitively priced, offering additional features at a reasonable cost. This can be particularly appealing to students and those on a budget (Fahad Hamid, 2024).

Table 5: Commonly Used Citation Generator of Grade 10 Students in Pantay Integrated High School

Citation Generator	Frequency	Percentage
EndNote	31	26.50%
Liner	31	26.50%
Others	12	10.26%
Zotero	9	7.69%

As shown in the table, the majority of the students are using EndNote and Liner with the same total of 26.50%, followed by Zotero with total of 7.69%, while 10.26% of the students are using different Citation Generator that is not indicated on the questionnaires.

The reason why Liner is more common, Liner simplifies organizing information. Users easily highlight important content, similar to a digital highlighter, which facilitates quick information retrieval (Theta Labs, 2024). The perception of an accessible and modern design significantly influences preferences and can sway researchers toward tools that prioritize ease of use.

Perception of Social Studies Students on the AI Tools that they used in terms of;

Personalization and Adaptability.

Table 6 displays the results of grade 10 students at Pantay Integrated High School regarding the level of personalization and adaptability they experience when using AI tools.

This part aims to explore students' perceptions of AI tools they use, specifically focusing on how these tools are perceived in terms of personalization and adaptability. Personalization refers to how well AI tools cater to individual learning needs, while adaptability refers to their ability to adjust to the evolving requirements of students.

Table 6: Personalization and Adaptability of AI

Personalization and Adaptability	Mean	SD	Interpretation
As a student that using AI, I can say that ...			
1. AI tools provide personalized recommendations based on my specific learning needs.	3.09	0.63	Agree
2. AI tools allow me to customize the type of content I receive for my research projects.	3.14	0.56	Agree
3. I can modify the settings of AI tools to suit my individual learning goals.	2.95	0.61	Agree
4. I can focus on areas where I need more support or improvement with the help of AI	3.01	0.78	Agree
5. AI tools usually provide the information from my trusted source	3.02	0.75	Agree
6. AI tools adapt to my learning style and preferences when I use them for social studies	2.99	0.68	Agree
7. AI tools can adjust their content based on my performance and progress in social studies.	2.97	0.68	Agree
8. AI tools can identify my future needs based on my previous inquiries	2.81	0.95	Agree

9. AI tools refine the suggestions they make overtime based on my interaction history	2.81	0.76	Agree
10. AI tools change the content delivery method based on my preferred pace and learning style	2.83	0.71	Agree
Composite Mean	2.96	0.71	Agree

Legend: 1.0-1.75-(Strongly Disagree/Poor Level); 1.76-2.50-(Disagree/Low Level); 2.51-3.25-(Agree/High Level);3.26-4.00- (Strongly Agree/Very High Level)

From the table, it is evident that a majority of students express agreement with the notion that AI tools enable them to customize the content they receive for their research projects, with a weighted mean of 3.14, further highlighting the tools' adaptability. For instance, AI algorithms can analyze browsing histories, past research inquiries, and specified project goals to match users with relevant articles, datasets, and even visual materials, creating a customized research experience (Chris Baldwin, 2023).

The overall composite mean of 2.96 reveals that, on the whole, students generally perceive AI tools as providing a considerable degree of personalization and adaptability. This suggests that, while students find these tools beneficial, there are certain aspects particularly in predicting future needs and refining content over time that could be further developed to optimize their learning experience.

Efficiency and Automation

Table 7 presents the responses of grade 10 students at Pantay Integrated High School regarding the Efficiency and Automation provided by AI tools in their learning. This part examines students' perceptions of AI tools, specifically focusing on two key aspects: Efficiency and Automation. Efficiency relates to AI's potential to simplify tasks, save time, and boost productivity. Automation refers to AI's capability to handle repetitive tasks, such as grading, content delivery, and providing feedback.

Table 7: Efficiency and Automation;

Efficiency and Automation	Mean	SD	Interpretation
<i>In my experience with AI, I can prove that ...</i>			
1. AI tools help me complete my assignments.	3.21	0.75	Agree
2. I can quickly find information using AI tools.	3.16	0.73	Agree
3. I am productive when using AI tools for my social studies projects.	3.00	0.77	Agree
4. AI tools help me manage my time better when researching for assignments.	3.09	0,74	Agree
5. I can easily organize the results of my inquiries to the subject using AI tools.	2.92	0.80	Agree
6. The efficiency of AI tools broadens my prior knowledge in the social studies subject	3.06	0.76	Agree
7. The automation features of AI tools save me time in my research process	3.29	0.64	Agree
8. AI tools enable me to automate repetitive tasks during my studies.	3.08	0.67	Agree
9. AI tools allow me to complete projects faster than I would without them.	3.14	0.68	Agree
10. AI tools automatically suggest relevant resources based on my project or research topic.	3.09	0.71	Agree
11. AI tools can perform routine checks or assessments of my work, such as grammar or citation errors, without needing manual intervention.	3.07	0.65	Agree
Composite Mean	3.10	0.72	Agree

Legend: 1.0-1.75-(Strongly Disagree/Poor Level); 1.76-2.50-(Disagree/Low Level); 2.51-3.25-(Agree/High Level);3.26-4.00- (Strongly Agree/Very High Level)

From the data the table has, the majority of students agree that AI tools significantly improve their productivity and streamline various academic tasks. The highest agreement is observed in the statement about AI tools saving time during the research process, with a weighted mean of 3.29, demonstrating the strong role of Automation in increasing efficiency. AI tools can automate the collection and organization of vast amounts of research data. By employing algorithms to sift through databases and sources, these tools can quickly gather relevant information, such as academic papers and articles, thus eliminating the tedious manual search process. This automation allows users to access a wealth of data in a fraction of the time it would normally take, enabling faster project initiation and progress (Mandala, V., & Surabhi, M. D. 2024).

Overall, the composite mean of 3.10 indicates that the grade 10 students of Pantay Integrated High school find AI tools to be highly effective in enhancing Efficiency and Automation in their academic tasks. While there is strong agreement in most areas, slight room for improvement remains in the organization of inquiry results.

.Ethical Considerations

Table 8 presents the responses of grade 10 students at Pantay Integrated High School regarding their awareness to ethical considerations when using AI tools. This part of the study also explores students' perceptions of the ethical considerations associated with the AI tools they use. Ethical considerations likely involve concerns such as data privacy, bias in AI algorithms, transparency in AI decision-making, and the potential impact of AI on fairness and equality in educational settings. Students may reflect on how AI tools influence their learning experience and whether these tools align with ethical standards in education.

Table 8: Ethical Considerations

Ethical Considerations	Mean	SD	Interpretation
1. I think AI tools can occasionally present perspectives that reflect underlying influences, highlighting the importance of critical evaluation.	3.26	0.60	Agree
2. I verify the sources of information obtained through AI tools to ensure their credibility.	3.16	0.68	Agree
3. I consider the potential impact of AI tools on my learning outcomes.	3.17	0.67	Agree
4. I am cautious about sharing personal data when using AI tools.	3.09	0.74	Agree
5. I think AI tools provide guidelines to ensure that the original owner of content must be given credits	3.08	0.67	Agree
6. I believe that understanding the ethical considerations such as acknowledging the authors is essential when using AI for research	3.16	0.75	Agree
Composite Mean	3.15	0.69	Agree

Legend: 1.0-1.75-(Strongly Disagree/Poor Level); 1.76-2.50-(Disagree/Low Level); 2.51-3.25-(Agree/High Level);3.26-4.00- (Strongly Agree/Very High Level)

Overall, the students agree that ethical issues are an important aspect of using AI. The highest level of agreement is with the statement that AI tools can occasionally present perspectives that reflect underlying influences, highlighting the importance of critical evaluation, with a weighted mean of 3.26 Critical evaluation can include examining the source of the data used to the AI (LG, 2024), considering whether it contains biases, and understanding the context in which the information is presented.

With a composite mean of 3.15, the results suggest that students acknowledge the ethical dimensions of using AI tools and are aware of the need for critical evaluation, source verification, and responsible data handling. While ethical considerations are recognized, there may still be opportunities to reinforce these practices further.

Impact on Learning and Teaching

Table 9 displays the responses of grade 10 students at Pantay Integrated High School regarding the impact of AI tools on their learning and teaching experiences. The perception of students regarding the impact of AI tools on learning and teaching likely focuses on the balance between technology and traditional teaching methods.

Table 9: Impact on Learning and Teaching

Impact on Learning and Teaching	Mean	SD	Interpretation
1. AI tools have positively influenced my understanding of social studies concepts.	3.28	0.67	Agree
2. AI tools enhance my collaboration with peers during group projects.	3.15	0.66	Agree
3. AI tools make learning more interactive and engaging.	2.95	0.72	Agree
4. AI tools can assist teachers in delivering lessons more effectively.	3.09	0.71	Agree
5. I find that AI tools provide additional resources that enhance my learning experience.	3.28	0.69	Agree
6. I feel that my ability to apply knowledge has improved with the help of AI tools.	3.14	0.66	Agree
7. I much prefer to use AI tools rather than watching educational videos.	3.03	0.81	Agree
8. My engagement in learning has increased since I started using AI tools.	3.01	0.78	Agree
9. The use of AI tools in the classroom has made learning more accessible.	3.11	0.72	Agree
Composite Mean	3.11	0.71	Agree

Legend: 1.0-1.75-(Strongly Disagree/Poor Level); 1.76-2.50-(Disagree/Low Level); 2.51-3.25-(Agree/High Level);3.26-4.00- (Strongly Agree/Very High Level)

Overall, students agree that AI tools have a positive effect on their academic performance. The highest levels of agreement (mean of 3.28) are seen in the statements that AI tools are believed to enhance students' understanding of complex concepts, particularly in social studies and provide additional resources that enhance their learning experience. (Malik, 2021) These results suggest that students find AI tools to be valuable in deepening their understanding of subject matter and supplementing their educational resources.

The composite mean of 3.11 indicates that, overall, students view AI tools as positively impacting their learning experience, with room for further enhancement in certain areas like engagement.

Extent of using AI tools in information literacy skills of students in terms of:

Identifying Information Needs;

Table 10 presents the responses of grade 10 students at Pantay Integrated High School regarding their ability to identify information needs for social studies topics with the assistance of AI tools. This part of the study examines the process of identifying information needs by providing quick access to relevant resources, refining search focus, and offering personalized recommendations.

Table 10: Identifying Information Needs

Identifying Information needs	Mean	SD	Interpretation
1. I have a clear understanding of the types of information required for specific social studies topics.	3.33	0.56	Agree
2. I can easily determine the scope of information needed for my projects.	3.32	0.61	Agree
3. AI tools assist me in narrowing down my research questions effectively.	3.23	0.61	Agree
4. I am able to articulate my information needs when using AI tools.	3.24	0.70	Agree

5. AI tools assist me in exploring related topics or subtopics that I may not have initially considered.	3.26	0.61	Agree
Composite Mean	3.28	0.62	Agree

Legend: 1.0-1.75-(Strongly Disagree/Poor Level); 1.76-2.50-(Disagree/Low Level); 2.51-3.25-(Agree/High Level);3.26-4.00- (Strongly Agree/Very High Level)

Overall, the student's express agreement that AI tools significantly support them in determining and refining the information required for their research. The highest level of agreement is observed in the statement about having a clear understanding of the types of information needed for specific social studies topics, with a weighted mean of 3.33. Students reported a clear understanding of the types of information needed for specific social studies topics (Subramonyam, 2023)..

With a composite mean of 3.28, it is evident that students find AI tools highly effective in identifying and refining their information needs, ultimately enhancing their research process in social studies.

Information Retrieval

Table 11 presents the responses of grade 10 students at Pantay Integrated High School regarding their experience with Information Retrieval using AI tools for social studies projects. The research highlights how AI-driven tools improve the precision and relevance of search results by understanding natural language queries, filtering resources by credibility and relevance, and providing personalized suggestions. Additionally, the study looks at how AI tools assist in organizing and contextualizing retrieved information, helping students quickly identify useful materials for their research.

Table 11: Information Retrieval

Information Retrieval	Mean	SD	Interpretation
1. I find it easy to retrieve information using AI tools for my social studies projects.	3.21	0.61	Agree
2. AI tools help me quickly access a variety of sources for my research.	3.18	0.60	Agree
3. I believe that using AI tools improves the accuracy of the information I retrieve.	3.16	0.64	Agree
4. I can efficiently filter and sort through information retrieved by AI tools.	3.22	0.63	Agree
5. AI tools assist me in locating relevant information for my assignments.	3.18	0.61	Agree
6. I often use multiple AI tools to gather information for my research projects.	3.09	0.75	Agree
7. The information retrieval process is faster with AI tools compared to traditional methods.	3.09	0.64	Agree
8. I trust the information retrieved by AI tools for academic purposes.	3.10	0.70	Agree
9. AI tools provide me with relevant citations and references for my research.	3.21	0.69	Agree
Composite Mean	3.16	0.65	Agree

Legend: 1.0-1.75-(Strongly Disagree/Poor Level); 1.76-2.50-(Disagree/Low Level); 2.51-3.25-(Agree/High Level);3.26-4.00- (Strongly Agree/Very High Level)

Overall, students agree that AI tools significantly assist in retrieving relevant information for their research. The highest levels of agreement are seen in the statements that efficient filtering and sorting (3.22) reveals that students feel capable of efficiently filtering and sorting through the information retrieved using AI tools. Recent assessments show that users find it relatively easy to navigate and organize the information provided by AI tools

(Kouzov, 2019). This ability to manage information effectively illustrates a positive impact on productivity and organization during the research process.

. The composite mean of 3.16 suggests that, overall, students find AI tools to be useful and reliable for Information Retrieval, but there are opportunities to further optimize these tools for speed, trust, and versatility.

Critical Evaluation

Table 12 presents the responses of grade 10 students at Pantay Integrated High School regarding their approach to Critical Evaluation of information retrieved using AI tools. This part of the study assesses the credibility, quality, and bias of sources, as well as in detecting misinformation and plagiarism. The research highlights the ability of AI to facilitate source comparison, identify potential biases, and provide real-time fact-checking, all of which contribute to a more critical approach to evaluating information.

Table 12: Critical Evaluation

Critical Evaluation	Mean	SD	Interpretation
1. I evaluate the information I retrieve from AI tools.	3.34	0.66	Agree
2. I am able to differentiate between credible and non-credible sources provided by AI tools.	3.09	0.69	Agree
3. I consider the context and reliability of the information from AI tools before using it.	3.25	0.60	Agree
4. AI tools help me identify potential biases in the information I gather.	3.14	0.61	Agree
5. I cross-reference information retrieved from AI tools with other sources.	3.03	0.63	Agree
6. I learned to assess the quality of information obtained from AI tools.	3.02	0.66	Agree
7. I discuss the reliability of AI-generated information with my classmates or teachers.	3.09	0.78	Agree
8. I am equipped to evaluate the AI tools that specialized in my field	3.09	0.71	Agree
Composite Mean	3.13	0.67	Agree

Legend: 1.0-1.75-(Strongly Disagree/Poor Level); 1.76-2.50-(Disagree/Low Level); 2.51-3.25-(Agree/High Level);3.26-4.00- (Strongly Agree/Very High Level)

The results show that students generally agree that they actively evaluate the information they retrieve. The highest level of agreement is seen in the statement that students evaluate the information they retrieve from AI tools, with a weighted mean of 3.34, this reflects a strong inclination towards actively engaging with the data acquired (Kizhakkethil, 2024).

The composite mean of 3.13 indicates that students generally engage in critical evaluation of AI-generated information, but there are areas where their skills and practices could be further developed, particularly in cross-referencing and assessing quality.

Correlation between Personalization and Adaptability of AI Tools and the Information Literacy Skills of Students.

The analysis detailed in Table 13 investigates the significant relationship between the use of AI tools for personalization and adaptability and students' information literacy skills.

Table 13: Correlation between Personalization and Adaptability of AI Tools and the Information Literacy Skills of Students.

Information Literacy Skills	r-value	p-value	Decision
Identifying Information Need	0.3287	0.0008	Reject Ho. The result is significant at p-value <0.05.
Information Retrieval	0.3398	<0.0001	Reject Ho. The result is significant at p-value <0.05.
Critic Evaluation	0.3744	0.0001	Reject Ho. The result is significant at p-value <0.05.

Legend: ** Correlation is significant at 0.05 level (two-tailed)

The findings indicate a statistically significant connection, as evidenced by all p-values being less than 0.05, which provides strong support to reject the null hypothesis.

A positive correlation is identified between the use of AI tools and the skill of Identifying Information Needs, with an r-value of 0.3287 and a p-value of 0.0008. This implies that greater engagement with AI tools enhances students' capability to effectively determine their information requirements (Taylor, 2024).

Similarly, a noteworthy relationship exists in the domain of Information Retrieval, with an r-value of 0.3398 and a p-value below 0.0001. (Kocaman, 2024) This shows that increased usage of AI tools correlates with improved proficiency in retrieving relevant information.

Moreover, the Critical Evaluation skill demonstrates a strong positive correlation, indicated by an r-value of 0.3744 and a p-value of 0.0001. (Lindauer, 2024). This suggests that AI tools contribute to students' abilities to critically assess the information they gather.

Correlation between Efficiency and Automation of AI Tools and the Information Literacy Skills of Students.

Table 14 outlines the findings from an analysis exploring the significant relationship between the extent of using AI tools specifically regarding their efficiency and automation and students' information literacy skills.

Table 14: Correlation between Efficiency and Automation of AI Tools and the Information Literacy Skills of Students.

Information Literacy Skills	r-value	p-value	Decision
Identifying Information Need	0.4572	0.0023	Reject Ho. The result is significant at p-value <0.05.
Information Retrieval	0.4499	0.0045	Reject Ho. The result is significant at p-value <0.05.
Critic Evaluation	0.4521	<0.001	Reject Ho. The result is significant at p-value <0.05.

Legend: ** Correlation is significant at 0.05 level (two-tailed)

The results indicate a statistically significant positive relationship, highlighting that the use of AI tools focused on efficiency and automation contributes to the enhancement of various information literacy skills. All p-values are below 0.05, providing robust evidence to reject the null hypothesis.

The analysis reveals a substantial positive correlation between AI tool usage and the ability to identify information needs, with an r-value of 0.4572 and a p-value of 0.0023. This suggests that increased utilization of efficient and automated AI tools improves students' skills in determining the information necessary for their projects (Fitria, 2021). Additionally, a similar relationship is observed in the area of Information Retrieval, where an r-value of 0.4499 and a p-value of 0.0045 indicate that AI tools enhancing efficiency aid students in retrieving information more effectively.

Furthermore, the analysis of Critical Evaluation shows a significant positive correlation as well, evidenced by an r-value of 0.4521 and a p-value of less than 0.001. This finding demonstrates that the application of AI tools designed for efficiency and automation substantially assists students in critically assessing the information they obtain (Xiaozhu, et al. 2023). Since all p-values are lower than the significance level of 0.05, these results are deemed statistically significant, confirming that the efficiency and automation capabilities of AI tools positively influence students' information literacy skills

Correlation between Ethical Consideration of AI Tools and the Information Literacy Skills of Students.

Table 15 details the findings from an analysis exploring the significant relationship between the ethical considerations and the information literacy skills of students.

Table 15: Correlation between Ethical Consideration of AI Tools and the Information Literacy Skills of Students.

Information Literacy Skills	r-value	p-value	Decision
Identifying Information Need	0.8711	0.00032	Reject Ho. The result is significant at p-value <0.05.
Information Retrieval	0.8847	0.0021	Reject Ho. The result is significant at p-value <0.05.
Critic Evaluation	0.8331	0.00017	Reject Ho. The result is significant at p-value <0.05.

Legend: ** Correlation is significant at 0.05 level (two-tailed)

The results demonstrate a strong and statistically significant positive relationship, emphasizing that the ethical use of AI tools is associated with enhancements in key information literacy skills. Each p-value is less than 0.05, providing compelling evidence to reject the null hypothesis and indicating a meaningful connection between ethical AI tool usage and students' information literacy.

The analysis reveals particularly strong correlations in all three dimensions of information literacy. The area of Identifying Information Needs shows an exceptional r-value of 0.8711 and a p-value of 0.00032, suggesting that students who take ethical aspects into account when using AI tools are significantly more proficient at identifying their information requirements based on research from Torrey Trust (2024) named “Artificial Intelligence (AI) in Education: AI and Ethics”

A similarly robust positive relationship is identified in Information Retrieval, with an r-value of 0.8847 and a p-value of 0.0021, indicating that students whom ethically using the AI tools closely correlates with the effective retrieval of accurate and reliable information (Najeem Olawale Adelakun, 2024).

Additionally, the Critical Evaluation displays an undeniably strong correlation with an r-value of 0.8331 and a p-value of 0.00017, highlighting that students who are conscious or full aware about the ethical considerations in their use of AI tools are better prepared to critically evaluate the information and data they access (Ben Shaw, 2024). Given that all p-values are below the 0.05 significance level, these findings affirm that ethical considerations in using AI tools are vital in fostering students' information literacy skills across various domains

Correlation between Impact on Learning and Teaching of AI Tools and the Information Literacy Skills of Students.

The analysis presented in Table 16 reveals a significant relationship between the extent of using AI tools and their impact on learning and teaching, particularly concerning students' information literacy skills.

Table 16: Correlation between Impact on Learning and Teaching of AI Tools and the Information Literacy Skills of Students

Information Literacy Skills	r-value	p-value	Decision
Identifying Information Need	0.6271	<0.0001	Reject Ho. The result is significant at p-value <0.05.
Information Retrieval	0.5461	<0.0001	Reject Ho. The result is significant at p-value <0.05.
Critic Evaluation	0.6922	0.0092	Reject Ho. The result is significant at p-value <0.05.

Legend: ** Correlation is significant at 0.05 level (two-tailed)

There is strong statistical evidence indicating a positive relationship between the use of AI tools and the enhancement of various information literacy skills among students (Jey Willmore, 2023). All p-values in this analysis are below the 0.05 threshold, providing solid grounds to reject the null hypothesis, which asserts that there is no effect from AI tools on students' information literacy.

The data shows a significant positive correlation between AI tool usage and the ability to identify information needs, with a Pearson correlation coefficient (r-value) of 0.6271 and a p-value less than 0.0001. (Kacper Rafalski, 2024). This suggests that students who report a greater impact from AI tools on their learning experiences are more adept at pinpointing their information requirements.

A similar positive relationship is evident for information retrieval skills, as indicated by an r-value of 0.5461 and a p-value also less than 0.0001. This finding underscores that AI tools facilitate students in effectively gathering information pertinent to their research demands. Furthermore, the dimension of critical evaluation reveals a strong positive correlation (r-value = 0.6922, p-value = 0.0092), highlighting the enhancement of students' abilities to critically assess and evaluate the information they access when AI tools are incorporated into their learning context (Allison Query, 2024)

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter provides a comprehensive summary of findings, the conclusions drawn from the data, and the corresponding recommendations based on the study's results

SUMMARY OF FINDINGS

This study investigated the influence of artificial intelligence (AI) tools on the information literacy skills of Grade 10 students within Pantay Integrated High School in Social Studies subject. Using a descriptive-correlational research design, the study gathered data from 117 out of 166 students to assess how AI tools enhance their ability to identify information needs, retrieve relevant information, and critically evaluate sources. The findings are summarized as follows:

1. Most of the Grade 10 students answered ChatGPT was the most widely used chatbot, with 59% of users, followed by Google Assistant at 38%. In the category of writing assistants, Quillbot was the preferred tool with 64%, while Grammarly came in second with 46%. For citation generators, EndNote and Liner were the most popular, each with 26.5%.
2. The extent of AI tool usage among students reveals several key insights. Students agreed that AI tools offer personalized recommendations and adjust to their learning needs, with an average rating of 2.96. These tools also enhance efficiency by streamlining academic tasks and saving time, earning a composite mean of 3.10. Ethical considerations were emphasized by students, who highlighted the importance of using AI responsibly and recognized that AI tools promote ethical awareness, with a mean score of 3.15. Furthermore, AI tools positively impacted students' understanding of concepts and their ability to collaborate with peers, reflected in a composite mean of 3.11.

3. Students demonstrated strong information literacy skills across several areas. They effectively identified and refined the information required for their projects, with a composite mean of 3.28. AI tools played a significant role in helping students locate and access relevant information, as reflected by a mean score of 3.16. Additionally, students showed the ability to critically evaluate the credibility and reliability of information sources, with a composite mean of 3.13.
4. The correlations between AI tool usage and information literacy skills reveal varying degrees of relationship. For personalization and adaptability, there were moderate positive correlations ranging from 0.3287 to 0.3744. Efficiency and automation showed moderate to strong correlations, with values between 0.4499 and 0.4572. Ethical considerations exhibited very strong correlations, ranging from 0.8331 to 0.8847. Finally, the impact on learning and teaching displayed strong correlations, ranging from 0.5461 to 0.6922.

CONCLUSION

Based on the findings, the following conclusions were drawn:

1. **Commonly Used AI Tools:** Social Studies students frequently use ChatGPT, Google Assistant, and Quillbot, among other AI tools, to assist in tasks such as information retrieval, writing assistance, and citation management.
2. **Students' Description of AI Tools:**
 - **Personalization and Adaptability:** AI tools provide tailored recommendations and content, enabling students to focus on specific learning needs and refine their research.
 - **Efficiency and Automation:** These tools streamline academic tasks, improve time management, and automate repetitive processes like grammar checks and citation formatting.
 - **Ethical Considerations:** Students recognize the need for responsible use, emphasizing data privacy, source verification, and the acknowledgment of original content creators.
 - **Impact on Learning and Teaching:** AI tools enhance understanding of Social Studies concepts, support collaboration, and foster interactive learning experiences.
3. **Extent of AI Tool Usage in Information Literacy Skills:**
 - **Identifying Information Needs:** Students effectively determine the scope and nature of the information required for their projects with AI assistance.
 - **Information Retrieval:** AI tools facilitate access to diverse and accurate sources, improving the efficiency of information gathering.
 - **Critical Thinking:** Students demonstrate improved abilities to evaluate the credibility, reliability, and biases of the information retrieved using AI tools.
4. **Correlation Between AI Tools and Information Literacy Skills:** A significant positive correlation exists between AI tool usage and the development of information literacy skills. The results confirm that integrating AI tools into educational contexts fosters critical thinking and enhances students' academic performance in Social Studies.
5. Based on the findings of the study, the researchers recommend implementing an Information Literacy Program Goals and Outcomes (2024) to enhance students' ability to identify, locate, evaluate, and use information effectively. This program addresses gaps in information literacy skills by focusing on teaching practical strategies for navigating and critically assessing information sources. Activities within the program include search strategy workshops to train students on effective search techniques using digital tools and databases,

evaluation skills training to help students assess the quality, credibility, and validity of information using frameworks like CRAAP (Currency, Relevance, Authority, Accuracy, Purpose), and lessons on citing and referencing to emphasize the importance of academic integrity through proper citation methods and ethical resource use. Additionally, the program introduces students to AI tools such as ChatGPT, highlighting their role in generating information, understanding their limitations, and the importance of cross-verifying AI-generated content. This comprehensive approach provides students with essential skills to navigate today's information-rich environment confidently. As noted by Hunt and Galveston (2024), effective information literacy involves not only finding information but also evaluating its credibility and validity, ensuring responsible and ethical use of resources. By incorporating these practices, the Information Literacy Program empowers students to become critical thinkers and informed decision-makers, enhancing their academic success and preparing them for the challenges of the digital age.

RECOMMENDATIONS

Based on the findings and conclusions presented, researchers suggested the following recommendations.

1. Social Study Teachers and other educators may integrate AI tools into lesson plans to actively support students in improving their information literacy skills. Special focus should be given to how AI can support critical thinking, information retrieval, and ethical use. Design engaging group activities involving AI tools to encourage collaboration and shared learning. Conduct lessons that emphasize ethical AI practices to instill responsible usage among students.
2. Students may actively engage with AI tools to enhance their academic performance while following ethical practices. Group collaboration is encouraged when using AI tools to foster teamwork and better problem-solving strategies. Develop habits of critical evaluation by assessing the reliability and credibility of AI-generated information.
3. School Administrators are advised to ensure access to AI tools by providing resources and training for both students and teachers. Organize regular workshops focusing on ethical AI use and its academic benefits to promote awareness and understanding. Facilitate partnerships between educators and IT experts to design innovative, technology-integrated learning strategies.
4. Future Researchers, expand the scope of research to include other subject areas and grade levels to further examine the influence of AI tools on a wider range of students. Investigate the long-term effects of AI tools on students' academic performance and critical thinking development. Identify and address potential challenges and barriers to the implementation of AI in learning environments, such as lack of access or technological literacy.

RECOMMENDATION

This research is entitled The Influence of AI Tools on The Information Literacy Skills of Grade 10 Students Within Pantay Integrated High School in Social Studies Subject which was prepared and submitted by the researchers who are Christian Thirdy

Mamangon and Bianca Joy Maya as part of the requirements for the Bachelor of Secondary Education Major in Social Studies, is recommended to be accepted for approval by the board.

NELIA P. MANANGUIT, Ed. D

Dean of Studies

ATTY. ANNA CONSUELO V. COLLANTES

Chief Operating Officer

Critic Evaluator

APPROVAL SHEET

This research paper entitled “**Influence of AI Tools on The Information Literacy Skills of Grade 10 Students Within Pantay Integrated High School in Social Studies Subject**”, prepared and submitted by Christian Thirdy Mamangon and Bianca Joy Maya, in partial fulfillment of the requirements for the degree **Bachelor of Secondary Education** is hereby recommended for approval and acceptance.

Bel Patrice Tisuela

Adviser

Approved in partial fulfillment of the requirements for the degree **Bachelor of Secondary Education** by the Oral Examination Committee with a grade of ____%

PANEL OF EXAMINERS

NELIA MANANGUIT

Chairman

Ms. Madelle Masongsong Mr. Mark Andrew S. Rimas, MBA

Member

Member

Date of Oral Examination: December 17, 2024

Accepted in partial fulfillment of the requirements for the degree **Bachelor of Secondary Education major in Social Studies**.

Nelia Mananguit

Dean, College of Teacher Education

ACKNOWLEDGEMENT

The researchers would like to extend their profound gratitude to the following people for their significant contribution to this study's accomplishments.

We are incredibly grateful to our **All-Powerful God** for providing us with the fortitude and knowledge needed to complete this research successfully. For all the blessings bestowed upon our family and ourselves. All of the achievements are a result of your unwavering love and guidance.

To **Hon. Mayor Nelson “Sonny” P. Collantes** the Chairman Emeritus of Tanauan Institute and **Hon. Congresswomen Ma. Theresa “Maitet” V. Collantes** the 3rd District of Batangas, for given the opportunity to receive a scholarship from the Collantes family.

To the **Dean of Studies Ma'am Nelia Mananguit Ed.D**, who always give support and guide the students. We are so grateful to have a wonderful Head teacher, again we are giving our warmest gratitude on you.

To their thesis adviser, **Ma'am Bel Patrice Tisuela**, we wanted to express our heartfelt gratitude for your tremendous advice, constant support, and commitment during the whole thesis process. Our academic experience has been enhanced by your mentorship, which has also influenced our comprehension and enthusiasm for the subject.

Researchers sincerely appreciate your dedication to our success and the invaluable support and wisdom you have provided. Researchers appreciate you for being such a great mentor and teacher.

To their validators, **Sir Mark Andrew S. Rimas, Ma'am Guia Azur and Ma'am Madelle Masongsong**, for assisting us in validating every aspect of our research, including the problem statement, title, and questionnaires, in order to produce better results.

To their **Librarian**, who has the responsibility of taking care the books in our school that helped us to have some information from the books that we can use in our research paper.

To **Thesis Grammarian**, who have demonstrated a willingness to take the time to correct incorrect use of words, sentences, and punctuation within their studies.

To the **Panelists** for their invaluable time, insightful feedback, and thoughtful contributions throughout the research process. Their expertise and constructive suggestions have significantly enriched the study And lastly, they would like to express our gratitude to our dear parents, **Julie Anne Ortiz, Babylanda B. Maya and Joey N. Maya** for their unwavering support and unceasing encouragement during the course of our research and thesis writing. They were the reason this achievement was possible.

Dedication

The researchers dedicate this hard work to our **Almighty God**, in awe of Your endless blessings, unwavering strength, and guiding light, we humbly offer their gratitude. Your grace has empowered us to achieve milestones beyond our imagination. With hearts full of thankfulness, we dedicate our accomplishments to Your divine guidance.

They would also like to affectionately dedicated this study to their **parents, brothers, sisters, mentors, and acquaintances** for their prayers, support and encouragement.

KJGL

JRST

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Appendices

November 30, 2024

MS. GUIA AZUR, LPT

Teacher, Tanauan Institute Inc.

Dear Madam/Sir:

Greetings of Peace!

We are students in Tanauan Institute taking up Bachelor of Secondary Education Major in Social Studies. We are conducting a study entitled **“The Influence of AI Tools on The Information Literacy Skills of Grade 10**

Students Within Pantay Integrated High School in Social Studies Subject.” as part of our requirements in Research in Social Studies.

As our validator, we would like to ask your approval for the research instrument to be used in in the study. Attached herewith is the copy of the statement of the problem for the said research. Your comments and suggestions will be highly appreciated and will be of great help to this undertaking.

I am hoping for your favorable response and wholehearted consideration on this matter.

Thank you very much and God Bless!

Sincerely yours,

MAYA, BIANCA JOY

MAMANGON, CHRISTIAN THIRDY

Researchers

Noted:

BEL PATRICE T. TISUELA

Research Adviser

Approved:

MS. GUIA AZUR, LPT

Teacher, T.I

November 30, 2024

MS. MADELLE MASONGSONG, LPT

Teacher, Tanauan Institute Inc.

Dear Madam/Sir:

Greetings of Peace!

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MAYA, BIANCA JOY

MAMANGON, CHRISTIAN THIRDY

Researchers

Noted:

BEL PATRICE T. TISUELA

Research Adviser

Approved:

MS. MADELLE MASONGSONG, LPT

Teacher, T.I

November 30, 2024

Mark Andrew C. Rimas, MBA

College Faculty

Tanauan Institute Inc.

Dear Madam/Sir:

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Sincerely yours,

MAYA, BIANCA JOY

MAMANGON, CHRISTIAN THIRDY

Researchers

Noted:

BEL PATRICE T. TISUELA

Research Adviser

Approved:

Mark Andrew C. Rimas, MBA

College Faculty

December 2, 2024

MS. NANCY B. MARALIT

Principal III

Pantay Integrated High School

Pantay Matanda, Tanauan City, Batangas

Dear Ma'am:

Greetings of Peace!

We are students in Tanauan Institute taking up Bachelor of Secondary Education Major in Social Studies conducting a study entitled **“INFLUENCE OF AI TOOLS ON THE INFORMATION LITERACY SKILLS OF GRADE 10 STUDENTS WITHIN PANTAY INTEGRATED HIGH SCHOOL IN SOCIAL STUDIES SUBJECT”** as part of our requirements in Research in Social Studies. In view of this, may we humbly seek your permission to allow me to administer our survey questionnaire among the Grade 10 students. A copy of the questionnaire that each of the respondent will answer is attached for your reference and review. Rest assured that all the information to be gathered will be treated with utmost confidentiality and will be used for academic purposes only.

I fervently look forward for your positive response. Thank you very much and God Bless!

Very respectfully yours,

Christian Thirby Mamangon

Researcher

Bianca Joy B. Maya

Researcher

Noted:

BEL PATRICE T. TISUELA

Researcher Adviser

Approved:

NELIA P. MANANGUIT EdD

Dean of Studies

College Department

Tanauan Institute Inc.

Influence of AI Tools on the Information Literacy Skills of Grade 10 Students Within Pantay Integrated High School in Social Studies Subject

Name (Optional): _____

Date: _____

Part 1: Commonly Used AI Tools

Instructions for Respondents: Choose at least one from the options by putting a check on the box

What AI tools you commonly use?

Generative AI/Chatbots	☐  ChatGPT ☐  Microsoft Copilot ☐  Siri ☐  Google Assistant ☐  alexa ☐ Others (specify)_____
Writing Assistant	☐  Grammarly ☐ Others (specify)_____ ☐  Quillbot ☐  Ginger Software
Citations Generators	☐  Zotero ☐ Others (specify)_____ ☐  EndNote ☐  Liner
Others	_____ _____

Part 2: Extent of use of AI tools

Instructions for Respondents: Read each statement comprehensively and put a checkmark on the box that corresponds to your answer. Use the Likert Scale below in answering the question

4 – Strongly Agree

2 – Disagree

3 – Agree

1 – Strongly Disagree

Section 2.1: Personalization and Adaptability				
Tailoring AI to meet individual preferences, needs, and goals. AI's ability to adjust and change based on user behavior, progress, and context				
As a student that using AI, I can say that ...	4	3	2	1
1. AI tools provide personalized recommendations based on my specific learning needs.				
2. AI tools allow me to customize the type of content I receive for my research projects.				

3. I can modify the settings of AI tools to suit my individual learning goals.				
4. I can focus on areas where I need more support or improvement with the help of AI				
5. AI tools usually provide the information from my trusted source				
6. AI tools adapt to my learning style and preferences when I use them for social studies				
7. AI tools can adjust their content based on my performance and progress in social studies.				
8. AI tools can identify my future needs based on my previous inquiries				
9. AI tools refine the suggestions they make overtime based on my interaction history				
10. AI tools change the content delivery method based on my preferred pace and learning style				

Section 2.2: Efficiency and Automation AI's ability to improve productivity, time management, and overall effectiveness. AI's ability to perform tasks without manual intervention, streamlining processes				
<i>In my experience with AI, I can prove that ...</i>	4	3	2	1
1. AI tools help me complete my assignments.				
2. I can quickly find information using AI tools.				
3. I am productive when using AI tools for my social studies projects.				
4. AI tools help me manage my time better when researching for assignments.				
5. I can easily organize the results of my inquiries to the subject using AI tools.				
6. The efficiency of AI tools broadens my prior knowledge in the social studies subject				
7. The automation features of AI tools save me time in my research process				
8. AI tools enable me to automate repetitive tasks during my studies.				
9. AI tools allow me to complete projects faster than I would without them.				
10. AI tools automatically suggest relevant resources based on my project or research topic.				
11. AI tools can perform routine checks or assessments of my work, such as grammar or citation errors, without needing manual intervention.				

Section 2.3: Ethical Considerations Refers to the responsibility to ensure that AI systems are used in ways that promote fairness, transparency, privacy, and accountability	4	3	2	1
1. I think AI tools can occasionally present perspectives that reflect underlying influences, highlighting the importance of critical evaluation.				

2. I verify the sources of information obtained through AI tools to ensure their credibility.				
3. I consider the potential impact of AI tools on my learning outcomes.				
4. I am cautious about sharing personal data when using AI tools.				
5. I think AI tools provide guidelines to ensure that the original owner of content must be given credits				
6. I believe that understanding the ethical considerations such as acknowledging the authors is essential when using AI for research				

Section 2.4: Impact on Learning and Teaching Refers to the influence that educational tools, methods, technologies, or strategies have on the learning outcomes and teaching practices within an educational setting.	4	3	2	1
1. AI tools have positively influenced my understanding of social studies concepts.				
2. AI tools enhance my collaboration with peers during group projects.				
3. AI tools make learning more interactive and engaging.				
4. AI tools can assist teachers in delivering lessons more effectively.				
5. I find that AI tools provide additional resources that enhance my learning experience.				
6. I feel that my ability to apply knowledge has improved with the help of AI tools.				
7. I much prefer to use AI tools rather than watching educational videos.				
8. My engagement in learning has increased since I started using AI tools.				
9. The use of AI tools in the classroom has made learning more accessible.				

Part 3: Influence of AI tools on the student's Information Literacy Skills

Instructions for Respondents: Read each statement comprehensively and put a checkmark on the box that corresponds to your answer. Use the Likert Scale below in answering the question.

4 – Strongly Agree

2 – Disagree

3 – Agree

1 – Strongly Disagree

Section 3.1: Identifying Information Needs Identifying information needs applies to different situations and is important for making good decisions.	4	3	2	1
1. I have a clear understanding of the types of information required for specific social studies topics.				
2. I can easily determine the scope of information needed for my projects.				
3. AI tools assist me in narrowing down my research questions effectively.				
4. I am able to articulate my information needs when using AI tools.				

5. AI tools assist me in exploring related topics or subtopics that I may not have initially considered.

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Section 3.2: Information Retrieval

The task of identifying and retrieving information system resources that are relevant to an information need, often specified in the form of a query.

4 3 2 1

1. I find it easy to retrieve information using AI tools for my social studies projects.

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2. AI tools help me quickly access a variety of sources for my research.

--	--	--	--

3. I believe that using AI tools improves the accuracy of the information I retrieve.

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4. I can efficiently filter and sort through information retrieved by AI tools.

--	--	--	--

5. AI tools assist me in locating relevant information for my assignments.

--	--	--	--

6. I often use multiple AI tools to gather information for my research projects.

--	--	--	--

7. The information retrieval process is faster with AI tools compared to traditional methods.

--	--	--	--

8. I trust the information retrieved by AI tools for academic purposes.

--	--	--	--

9. AI tools provide me with relevant citations and references for my research.

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Section 3.3: Critical Evaluation

Refers to the systematic process of assessing and analyzing the value, relevance, and credibility of information.

4 3 2 1

1. I evaluate the information I retrieve from AI tools.

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2. I am able to differentiate between credible and non-credible sources provided by AI tools.

--	--	--	--

3. I consider the context and reliability of the information from AI tools before using it.

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4. AI tools help me identify potential biases in the information I gather.

--	--	--	--

5. I cross-reference information retrieved from AI tools with other sources.

--	--	--	--

6. I learned to assess the quality of information obtained from AI tools.

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7. I discuss the reliability of AI-generated information with my classmates or teachers.

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8. I am equipped to evaluate the AI tools that specialized in my field

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