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Teachers' Utilization of Artificial Intelligence as a Learning Tool and Its Perceived Relationship on Students' Skills and Competencies in Teaching Social Sciences

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Abstract*—The use of artificial intelligence (AI) in the classroom has had an influence on teaching methods, especially in the social sciences. This study measured the extent teachers integrate Artificial Intelligence as a learning tool in teaching Social Sciences. Also, the extent students perceived Artificial Intelligence utilization on their skills and competencies development. Furthermore, to find the significant relationship between teachers' utilization of AI on students' skills and competencies development. This study employed a descriptive-correlational research design to examine the relationship between teachers' utilization of Artificial Intelligence (AI) in teaching Social Sciences and the students' skills and competencies. A sample of one hundred (100) first-year students was selected using the convenience sampling technique, ensuring accessibility and feasibility. Data were collected through an adapted questionnaire, which was validated for reliability and relevance. The responses were analyzed using descriptive statistics (mean and standard deviation) to assess the extent of AI utilization and students' skill levels. Additionally, Pearson's correlation coefficient (Pearson r) was employed to determine the strength and direction of the relationship between the variables. The study found that teachers often use AI-driven platforms at a terms of the perceived influence on students' skills and competencies, the extent was high. Moreover, the results showed a significant positive correlation, indicating a strong relationship between the use of AI by teachers and the study revealed a significant correlation between teachers' AI usage and the development of student skills and competencies. Thus, the null hypotheses are rejected. This implies that AI-driven tools greatly enhance teaching and learning outcomes, supporting their integration into education. It may be recommended that Deans and program chairs continue to support faculty in pursuing graduate studies and AI literacy training to enhance teaching strategies, while professors and instructors integrate AI tools and problem-based learning to improve students' teamwork and problem-solving skills. AI-driven task management and progress-tracking tools can also strengthen work ethics through accountability and personalized feedback, fostering a more engaging learning environment. Additionally, Future researchers may enhance the understanding of AI's long-term effects by expanding studies to include diverse variables and respondents across multiple universities.*

***Keywords*—** *Artificial Intelligence, AI Utilization, Skills, Competencies, Work Ethics, Critical Thinking, Problem Solving.*

I. INTRODUCTION

Rapid technology breakthroughs have significantly influenced the educational scene, with Artificial Intelligence (AI) emerging as an effective tool for teaching and learning. AI-powered educational tools provide fresh strategies to improving instruction, personalizing learning experiences, and equipping students with critical 21st-century skills. In the Social Sciences, where critical thinking, analytical reasoning, and contextual knowledge are crucial, the incorporation of AI brings both possibilities and obstacles. Teachers play a critical role in leveraging AI to enable meaningful learning experiences and increase students' abilities. However, educational researchers are still interested in the extent to which AI is used as a learning aid, as well as its perceived relationship on students' skills and competencies.

The use of AI in education has several applications including intelligent tutoring systems, automated exams, and data-driven instructional support. AI-powered technologies may help create interactive simulations, adaptive learning platforms, and automatic feedback systems to help students understand complicated social science subjects. These technologies provide tailored learning paths, allowing students to study at their own speed and get focused interventions. Despite these benefits, others have expressed concerns about the possible downsides of AI integration, such as teacher reliance on technology, ethical problems, and the need for digital literacy among educators implementation in the classroom. Their amount of knowledge, competency, and desire to use AI tools influences the extent to which these technologies can improve student learning. Educators' perceived benefits and obstacles to AI adoption influence their teaching practices and student engagement. Additionally, institutional support, professional development opportunities, and access to AI resources all have a substantial impact on the efficacy of AI integration in Social Sciences teaching.

The aim of this study is to look at how teachers use AI as a learning tool and analyze its perceived relationship on students' skills and competencies when teaching social sciences. It sought to identify the type of AI tools, the frequency of utilization, training and familiarity, as well as how teachers integrate AI tools to their pedagogical strategies, adaptation and customization in teaching.

As educators integrate AI into their teaching practices, it is crucial to determine how this new platform is relative to students' ability to develop essential competencies and skills

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required in understanding the subject matter. In today's classroom, AI literacy extends beyond conventional learning frameworks, providing students with the skills to effectively navigate and utilize AI in various areas of life and work. This marks a pivotal change in education, where knowledge of AI is becoming as essential as reading, writing, and arithmetic (Zhang et al., 2023).

1.1 Statement of the Problem

Problem/s which were addressed by the research

This study examined the utilization of Artificial Intelligence (AI) as a learning tool by teachers in teaching Social Sciences and its perceived relationship on students' skills and competencies development. Specifically, it sought answers to the following questions:

1. What extent do teachers integrate Artificial Intelligence as
   a learning tool in teaching Social Sciences in terms of:
   1.1. Types of Artificial Intelligence used;
   1.2. Frequency of AI utilization;
   1.3. Training and familiarity with AI tools;
   1.4. Pedagogical strategies employed; and
   1.5. Adaptation and customization of AI tools?
2. What extent do students perceive Artificial Intelligence utilization on their skills development in terms of:
   2.1. Critical thinking;
   2.2. Problem-solving;
   2.3. Communication;
   2.4. Collaboration; and
   2.5. Technological proficiency?
3. What extent do students perceive the relationship of Artificial Intelligence utilization on their competencies development in terms of:
   3.1. Innovation;
   3.2. Digital literacy;
   3.3. Technical aptitude;
   3.4. Adaptability; and
   3.5. Work ethics?
4. Is there a significant relationship between teachers' utilization of AI and students' skills development?
5. Is there a significant relationship between teachers' utilization of AI and students' competencies development?

II. Methodology

This study employed a descriptive-correlational research design to examine the relationship between teachers' utilization of Artificial Intelligence (AI) in teaching Social Sciences and the students' skills and competencies. A sample of one hundred (100) first-year students was selected using the convenience sampling technique, ensuring accessibility and feasibility. Data were collected through an adapted questionnaire, which was validated for reliability and relevance. The responses were analyzed using descriptive statistics (mean and standard deviation) to assess the extent of AI utilization and students' skill levels. Pearson's correlation coefficient (Pearson r) was also used to assess the relationship's strength and direction between the variables.

III. Results and Discussion

This part present, analyzes and interprets the data gathered that showed significant relationship between teachers' utilization of AI on students' skills and competency development.

Extent of Integrating artificial intelligence

Integrating artificial intelligence (AI) is incorporating AI technologies into various systems, activities to enhance efficiency, improve decision-making, and provide intelligent solutions. In this study integrating artificial intelligence includes variables such as types of artificial intelligence, frequency of AI utilization, training and familiarity with AI Tools, pedagogical strategies employed, and adaptation and customization of AI tools and was statistically treated using mean and standard deviation

TABLE 1.

STATEMENT	MEAN	SD	REMARKS
My teacher uses Virtual tutors or assistants (e.g., chatbots, intelligent tutoring systems)	2.98	1.04	Moderately Agree
My teacher uses Automated grading systems	2.90	1.12	Moderately Agree
My teacher uses AI tools for adaptive learning (personalizing learning materials)	2.93	1.03	Moderately Agree
My teacher uses AI-enhanced presentation or content delivery platforms	3.11	0.99	Moderately Agree
My teacher uses AI tools for monitoring and tracking student progress.	2.93	1.08	Moderately Agree
Weighted Mean	2.97		
SD	1.05		
Verbal Interpretation	Moderately High Extent		

Extent of Integrating artificial intelligence of the Teachers as a Learning Tool in Teaching in terms of types of Artificial Intelligence Used intelligence (AI) as a learning tool in teaching, specifically in terms of the types of AI used.

The results indicate a moderately high extent of AI integration, as reflected in the overall weighted mean of 2.97 with a standard deviation of 1.05. Teachers frequently utilize AI-driven platforms to improve instructional delivery and engagement of the students. Other AI applications, such as virtual tutors or assistants, automated grading systems, AI tools for adaptive learning, and AI-driven student progress monitoring, also received moderate agreement from respondents. These findings indicate that while AI is being incorporated into teaching practices, its utilization remains at a moderate level, emphasizing potential areas for further enhancement. Some variability in teachers' adoption of AI tools, possibly due to differences in familiarity, accessibility, or institutional support.

Langove and Khan (2024) reported that automated grading and AI-enhanced content delivery platforms reduce teacher workload and improve student performance, reinforcing the necessity for increased AI integration in Social Sciences instruction. These findings highlight how AI can optimize both teaching efficiency and student learning by providing personalized support and automating routine tasks. As a result, educators can focus more on interactive and higher-order instructional activities, further justifying the need to expand

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AI adoption in education, particularly in the Social Sciences where tailored learning and critical thinking are essential.

TABLE 2. Extent of Integrating artificial intelligence of the Teachers as a Learning Tool in Teaching in terms of Frequency of AI Utilization.

STATEMENT	MEAN	SD	REMARKS
AI tools provide personalized learning materials tailored to my needs.	3.15	0.88	Sometimes
AI systems are used to grade and give feedback on my assignments.	2.89	1.07	Sometimes
AI-based simulations are integrated into classroom discussions or activities.	2.81	1.18	Sometimes
Virtual tutors or AI-driven assistants support my learning process.	3.14	1.10	Sometimes
AI tools are used to monitor and track my academic progress.	2.80	1.20	Sometimes
Weighted Mean	2.96		
SD	1.10		
Verbal Interpretation	Moderately High Extentt		

Table 2 illustrates the extent to which teachers integrate artificial intelligence (AI) as a learning tool in teaching, specifically in terms of frequency of AI utilization.

The results indicate that students perceive the integration of artificial intelligence (AI) tools in their learning experiences to a moderately high extent, as reflected in the overall weighted mean 2.96 with a standard deviation of 1.10. Among the AI applications assessed, personalized learning materials and virtual tutors or AI-driven assistants were the most frequently used, aligning with Zawacki-Richter et al. (2019), who found that AI enhances personalized learning and student engagement. Similarly, Holmes et al. (2022) emphasized the role of AI-driven tutoring systems in improving comprehension and learning retention by providing real-time assistance. However, AI-based simulations and automated grading systems were used to a lesser extent, reflecting findings, its adoption is still in progress due to concerns over accuracy and fairness. Wang & Huang (2025) further noted that AI-based simulations create immersive learning environments that help students visualize complex concepts, yet their adoption varies depending on technological accessibility and teacher readiness. These findings suggest that while AI is making strides in education, its full potential is yet to be realized.

Table 3 illustrates the extent to which teachers integrate artificial intelligence (AI) as a learning tool in teaching, specifically in terms of training and familiarity with AI tools. The findings suggest that teachers have a moderately high level of familiarity as reflected in the overall weighted mean of 3.11 with a standard deviation of 1.12 with AI-powered educational tools, personalized learning systems. This aligns with the study by Zhai et al. (2021), which highlights that while educators recognize the benefits of AI in personalized instruction, their proficiency in fully leveraging these tools remains an area for development.

However, teachers report less familiarity with AI-based assessment and feedback tools, which echoes the findings of Holmes et al. (2022), who suggest that while AI-driven assessment tools can provide efficient grading and feedback, educators may still rely on traditional assessment methods due to concerns about AI's interpretative accuracy.

TABLE 3. Extent of Integrating artificial intelligence of the Teachers as a Learning Tool in Teaching in terms of Training and Familiarity with AI tools.

STATEMENT	MEAN	SD	REMARKS
I understand how AI-powered educational platforms (e.g., adaptive learning apps) function.	3.27	1.08	Somewhat Familiar
I understand how to integrate AI-powered learning platforms into my teaching practices.	3.01	1.15	Somewhat Familiar
I am aware of the features and functionalities of AI-based assessment and feedback tools.	2.91	1.16	Somewhat Familiar
I have sufficient knowledge of AI-driven personalized learning systems for students.	3.27	1.05	Somewhat Familiar
I can confidently use AI-powered data analytics to track and improve student performance.	3.07	1.15	Somewhat Familiar
Weighted Mean	3.11		
SD	1.12		
Verbal Interpretation	Moderately High Extent		

TABLE 4. Extent of Integrating artificial intelligence of the Teachers as a Learning Tool in Teaching in terms of Pedagogical Strategies Employed

STATEMENT	MEAN	SD	REMARKS
AI tools help my teacher create more engaging and interactive lessons.	3.46	0.98	Agree
AI systems assist my teacher in providing immediate feedback to students	3.49	0.92	Agree
My teachers use AI tools to differentiate instruction for students with varying learning needs.	3.38	1.01	Moderately Agree
AI tools help facilitate collaborative learning among students.	3.31	0.97	Moderately Agree
AI enhances my teachers' ability to track and assess our progress over time.	3.08	1.08	Moderately Agree
Weighted Mean	3.34		
SD	1.00		
Verbal Interpretation	Moderately High Extent		

Table 4 illustrates the extent to which teachers integrate artificial intelligence (AI) as a learning tool in teaching, specifically in terms of pedagogical strategies employed.

The findings indicate that students perceive AI as playing a moderately high role as reflected in the overall weighted mean of 3.34 with a standard deviation of 1.00 in enhancing their learning experience, particularly in engaging lesson delivery and providing immediate feedback. This aligns with the study of Wang et al. (2021), which emphasizes that AI-powered tools, such as intelligent tutoring systems, improve student engagement and motivation by offering interactive and adaptive learning experiences.

Table 5 illustrates the extent to which teachers integrate artificial intelligence (AI) as a learning tool in teaching, specifically in terms of adaptation and customization of AI tools.

The results indicate that teachers utilize AI tools to a moderately high extent, as reflected in the overall weighted mean of 2.97 with a standard deviation of 1.05 in customizing them to fit learning objectives and student needs. However, areas such as tailored feedback and curriculum alignment suggest that while AI integration is present, teachers may still

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face challenges in fully optimizing AI for personalized learning.

TABLE 5. Extent of Integrating artificial intelligence of the Teachers as a Learning Tool in Teaching in terms of Adaptation and Customization of AI Tools

STATEMENT	MEAN	SD	REMARKS
My teachers customize AI tools to align with the specific learning objectives of our class.	2.98	1.04	Moderately Agree
My teachers adapt AI tools to provide tailored feedback based on our individual performance.	2.90	1.12	Moderately Agree
My teachers adjust AI tools to match the curriculum and our learning needs.	2.93	1.03	Moderately Agree
AI tools are modified to address diverse student learning styles.	3.11	0.99	Moderately Agree
My teachers frequently adjust the settings of AI tools to improve our engagement.	2.93	1.08	Moderately Agree
Weighted Mean	2.97		
SD	1.05		
Verbal Interpretation	Moderately High Extent		

These findings support the study of Zawacki-Richter et al. (2019), which highlights that AI adoption in education often requires additional teacher training to maximize its effectiveness in instructional design. Similarly, Mallik and Gangopadhyay (2023) found that while AI tools can enhance engagement and curriculum alignment, many educators still rely on default settings rather than extensively modifying AI features.

Extent on Students' Skills Development

TABLE 6. Extent on Students' Skills Development in Utilizing Artificial Intelligence in terms of Critical Thinking.

STATEMENT	MEAN	SD	REMARKS
AI tools encourage me to analyze information critically and draw well-informed conclusions.	3.54	0.93	Agree
AI-powered learning platforms help me evaluate multiple perspectives before making decisions.	3.60	0.93	Agree
AI-generated recommendations prompt me to assess the credibility of information sources.	3.60	0.93	Agree
AI-driven feedback systems assist me in refining their arguments and thought processes	3.27	0.92	Moderately Agree
AI applications enhance my ability to recognize biases and assumptions in digital content.	3.35	0.90	Moderately Agree
Weighted Mean	3.47		
SD	0.93		
Verbal Interpretation	High Extent		

Student skill development is the process of enhancing students' abilities, competencies, and knowledge in various areas.

skills through the utilization of artificial intelligence (AI) in learning. The findings indicate a high extent of skills development, as reflected in the weighted mean of 3.47 with a standard deviation of 0.93. This emphasizes that AI tools significantly contribute to students' ability to analyze, evaluate, and reason effectively. These results imply that AI tools play a crucial role in fostering students' ability to think critically by exposing them to diverse viewpoints and encouraging them to verify information reliability. On the other hand, AI-driven feedback systems assisting in refining arguments and thought processes and AI applications enhancing the ability to recognize biases and assumptions in digital content received slightly lower ratings.

TABLE 7. Extent on Students' Skills Development in Utilizing Artificial Intelligence in terms of Problem-Solving

STATEMENT	:AN		REMARKS
AI-assisted learning activities enhance my ability to solve complex problems independently.	3.27	0.92	Moderately Agree
AI simulations provide real-world scenarios that improve my decision-making skills.	3.35	0.90	Moderately Agree
AI-powered tutors provide step-by-step guidance to help me tackle challenging problems.	3.50	0.93	Agree
AI-based learning modules encourage me to approach problem-solving with creativity and innovation.	3.57	0.95	Agree
AI-generated hints and suggestions allow me to explore multiple solutions before finalizing an answer.	3.26	1.04	Moderately Agree
Weighted Mean	3.39		
SD	0.95		
Verbal Interpretation	Moderately High Extent		

Table 7 presents the extent to which students develop problem-solving skills through the utilization of artificial intelligence (AI) in learning. The findings indicate that AI-assisted learning significantly supports students in problem-solving and decision-making as reflected in the overall weighted mean of 3.39, with standard deviation of 0.95, with students agreeing that AI-powered tutors help them navigate complex problems and that AI-based learning modules foster creativity in problem-solving. These results align with the study of Luckin et al. (2022), which emphasizes that AI-driven tutoring enhances students' problem-solving autonomy by providing adaptive and personalized guidance.

TABLE 8. Extent on Students' Skills Development in Utilizing Artificial Intelligence in terms of Communication

STATEMENT	MEAN	SD	REMARKS
AI-powered tools, such as chatbots or virtual assistants, help me express ideas effectively.	3.80	0.89	Agree
AI-enhanced learning environments foster better written and verbal communication skills.	3.74	0.85	Agree
AI-powered grammar and writing assistants enhance my ability to construct clear and concise messages.	3.75	0.77	Agree
AI-facilitated discussion forums encourage me to engage in meaningful academic discourse.	3.62	0.86	Agree
AI-driven feedback mechanisms assist me in refining their written and spoken communication skills.	3.81	0.76	Agree
Weighted Mean	3.74		
SD	0.83		
Verbal Interpretation	High Extent		

Table 8 presents the extent to which students develop communication skills through the utilization of artificial intelligence (AI) in learning. The findings suggest that AI-

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powered tools significantly enhance students' communication skills, with a high extent of agreement as reflected in the overall weighted mean of 3.74 with a standard deviation of 0.83. Students acknowledged that AI-driven feedback mechanisms and AI-powered tools like chatbots and virtual assistants assist in expressing ideas more effectively. These results align with the study Wang (2022), which found that AI-based writing assistants improve students' clarity, coherence, and organization in written communication.

TABLE 9. Extent on Students' Skills Development in Utilizing Artificial Intelligence in terms of Collaboration

STATEMENT	MEAN	SD	REMARKS
AI-based platforms facilitate teamwork and collaboration among students.	3.50	0.93	Agree
AI tools support interactive discussions, improving peer-to-peer learning experiences.	3.57	0.95	Agree
AI-powered brainstorming platforms help me generate and refine ideas collectively.	3.26	1.04	Moderately Agree
AI-assisted peer review systems encourage constructive feedback and knowledge-sharing.	3.10	0.98	Moderately Agree
AI-driven discussion prompts encourage me to engage in deeper and more structured peer interactions.	3.53	1.05	Agree
Weighted Mean	3.39		
SD	1.00		
Verbal Interpretation	Moderately High Extent		

Table 9 presents the extent to which students collaboration skills through the utilization of artificial intelligence (AI) in learning.

The findings indicate that AI-powered tools play a significant role in fostering collaboration and teamwork among students, with a moderately high extent of agreement as reflected in the overall weighted mean of 3.39 with a standard deviation of 1.00. AI tools that support interactive discussions and facilitate teamwork were among the highest-rated aspects, suggesting that students recognize AI's potential in enhancing peer-to-peer learning experiences. These results align with the study of Huang et al. (2021), which found that AI-based collaborative learning platforms improve student engagement, communication, and shared knowledge construction. Similarly, research by Shen et al. (2025) highlights that AI-powered brainstorming tools and discussion prompts can enhance student interactions by guiding structured, idea-driven conversations.

Table 10 presents the extent to which students develop technological proficiency skills through the utilization of artificial intelligence (AI) in learning. The results indicate that AI-driven educational tools significantly enhance students' digital proficiency and adaptability to technological advancements, with a high extent of agreement as reflected in the overall weighted mean of 3.45 with a standard deviation of 0.93. Students particularly agreed that AI-assisted tasks improve their ability to adapt to new technologies and that AI-driven tools help them become more proficient in using digital technologies. These findings align with the research of Wang & Huang (2025), which highlights how AI-powered learning environments contribute to students' digital literacy and technological adaptability, preparing them for the evolving demands of the digital age.

TABLE 10. Extent on Students' Skills Development in Utilizing Artificial Intelligence in terms of Technological Proficiency

STATEMENT	MEAN	SD	REMARKS
AI-driven educational tools help me become more proficient in using digital technologies.	3.54	0.93	Agree
AI-assisted tasks improve my ability to adapt to new technological advancements.	3.60	0.93	Agree
AI-powered coding platforms introduced me to fundamental programming concepts.	3.27	0.92	Moderately Agree
AI-based learning analytics help me track my progress and adjust their study strategies.	3.35	0.90	Moderately Agree
AI-supported educational games enhance my adaptability to emerging technologies.	3.50	0.93	Agree
Weighted Mean	3.45		
SD	0.93		
Verbal Interpretation	High Extent		

Extent on Students' Competencies Development

Students' competencies measure how well students meet the expected learning outcomes or proficiency standards.

TABLE 11. Extent on Students' Competencies Development in Using Artificial Intelligence in terms of Innovation.

STATEMENT	MEAN	SD	REMARKS
AI integration in teaching encourages me to think creatively and generate new ideas.	3.72	1.04	Agree
The use of AI tools in learning environments fosters my ability to develop innovative solutions to problems.	3.51	1.13	Agree
AI-driven resources help me become more open to exploring new learning methods.	3.55	1.04	Agree
AI applications in education promote my curiosity and experimentation with new concepts.	3.52	1.03	Agree
AI usage enhances my ability to connect ideas across different subjects to develop innovations.	3.62	1.04	Agree
Weighted Mean	3.58		
SD	1.06		
Verbal Interpretation	High Extent		

Table 11 presents the extent to which students develop competencies in innovation through the use of artificial intelligence (AI) in learning. The findings indicate a high extent of competency development, as means that AI tools significantly contribute to fostering students' creativity, problem-solving abilities, and openness to new learning approaches. AI integration in teaching encourages students to think creatively and generate new ideas. This indicates that AI is vital in stimulating creative thinking and inspiring students to explore innovative ideas. Similarly, AI usage enhancing students' ability to connect ideas across different subjects to develop innovations further reinforces the notion that AI promotes interdisciplinary thinking and creative problem-solving. Additionally, AI-driven resources helping students become more open to exploring new learning methods and AI applications in education promoting curiosity and experimentation with new concepts. Furthermore, the use of AI tools in learning environments fostering students' ability to develop innovative solutions to problems.

TABLE 12. Extent on students' Competencies Development in Using Artificial Intelligence in terms of Digital Literacy

STATEMENT	MEAN	SD	REMARKS
AI tools improve my ability to navigate digital platforms for academic purposes.	3.66	0.99	Agree
The use of AI enhances my understanding of ethical and responsible digital practices.	3.58	1.09	Agree
AI-assisted learning helps me evaluate and validate information from digital sources.	3.45	1.01	Agree
AI exposure equips me with the necessary skills to use emerging digital technologies effectively.	3.50	1.05	Agree
AI-supported instruction enables me to critically assess digital content and media.	3.47	0.90	Agree
Weighted Mean	3.53		
SD	1.01		
Verbal Interpretation	High Extent		

Table 12 presents the extent to which students develop competencies in digital literacy through the use of artificial intelligence (AI) in learning. The results suggest that AI tools significantly contribute to students' digital literacy skills, with a high extent of agreement as reflected in the overall weighted mean of 3.53 with a standard deviation of 1.01. The highest-rated statement, AI tools improve my ability to navigate digital platforms for academic purposes, emphasized those students find AI beneficial in interacting with various online educational resources. This finding aligns with studies like Naseeb (2024), which emphasize that AI-assisted platforms enhance students' ability to effectively utilize digital learning environments. Moreover, AI's role in promoting ethical and responsible digital practices and helping students evaluate and validate digital information suggests that AI tools support critical thinking and discernment in digital spaces. This aligns with Agunlejika (2025), which found that AI-powered fact-checking tools improve students' ability to assess information credibility and avoid misinformation. Although students generally agree on AI's role in equipping them with skills to use emerging technologies and critically assessing digital content, the slight variations in standard deviations suggest diverse experiences in AI integration across different learning contexts.

The data confirms that AI-assisted learning enhances students' digital navigation, critical evaluation of online content, and ethical engagement in digital spaces. To further strengthen these competencies, schools could provide structured AI literacy programs that guide students in responsibly leveraging AI tools for academic and professional success. Such programs would equip students with the skills to discern credible sources, avoid misinformation, and use AI ethically—preparing them for a tech-driven future. Additionally, integrating AI literacy into the curriculum ensures that students not only benefit from AI's efficiency but also understand its limitations and societal implications, fostering well-rounded digital citizenship.

Table 13 presents the extent to which students develop competencies in technical aptitude through the use of artificial intelligence (AI) in learning. The findings indicate that AI-powered learning significantly enhances students' technological proficiency and problem-solving skills, with a high extent of agreement as reflected in the overall weighted mean of 3.53 with a standard deviation of 1.01. The highest-rated statement, "The integration of AI in learning enhances my proficiency in handling digital and technological tools", suggests that students perceive AI as an effective tool for boosting their competency in navigating digital environments. This supports studies like Chee & Lee (2024), which highlight AI's role in bridging digital literacy gaps. Additionally, the data reveals that AI applications help students develop problem-solving skills using technology and apply technical knowledge in real-world scenarios, aligning with constructivist learning theories that emphasize active engagement in problem-solving. However, AI-based tasks' role in while AI aids digital proficiency, students may require additional support in independently resolving technical challenges.

TABLE13. Extent on Students' Competencies Development in Using Artificial Intelligence in terms of Technical Aptitude

STATEMENT	MEAN	SD	REMARKS
AI-powered platforms help me develop problem-solving skills using technology.	3.63	0.98	Agree
The integration of AI in learning enhances my proficiency in handling digital and technological tools.	3.68	0.96	Agree
AI-based assignments and tasks improve my ability to operate and troubleshoot technical issues.	3.28	0.96	Moderately Agree
AI utilization in Social Sciences encourages me to apply technical knowledge in practical scenarios.	3.47	0.99	Agree
AI learning tools enable me to develop a deeper understanding of digital and computational concepts.	3.47	1.02	Agree
Weighted Mean	3.53		
SD	1.01		
Verbal Interpretation	High Extent		

The data confirms that AI-powered tools significantly contribute to students' digital competence, particularly in problem-solving and technical skill development.

TABLE 14. Extent on Students' Competencies Development in Using Artificial Intelligence in terms of Adaptability

STATEMENT	MEAN	SD	REMARKS
AI integration in the classroom helps me adjust to new technologies and digital tools more effectively.	3.63	0.98	Agree
I become more open to learning new skills when AI tools are introduced in their studies.	3.67	1.00	Agree
AI-enhanced education promotes my ability to adapt to evolving technological advancements.	3.68	1.04	Moderately Agree
AI-supported learning fosters flexibility in my approach to problem-solving.	3.28	1.04	Agree
The use of AI encourages me to be more resilient when facing academic challenges.	3.37	0.90	Agree
Weighted Mean	3.53		
SD	1.01		
Verbal Interpretation	High Extent		

Table 14 presents the extent to which students develop competencies in adaptability through the use of artificial intelligence (AI) in learning. The data indicates that students perceive AI integration in the classroom as highly beneficial in

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enhancing their adaptability, problem-solving skills, and resilience. With an overall weighted mean of 3.53 and a standard deviation of 1.01, the responses suggest that AI tools foster students' openness to learning new skills and adaptability to technological advancements. These findings align with recent studies emphasizing AI's role in promoting digital literacy and academic resilience. For instance, Zawacki-Richter et al. (2019) found that AI-assisted learning personalizes education, thereby increasing engagement and motivation. Likewise, Holmes et al. (2022) argue that AI-driven tools help students navigate evolving technological landscapes, enhancing their problem-solving skills and cognitive flexibility.

Despite these positive perceptions, the lowest-rated statement suggests that AI's role in fostering flexibility in problem-solving needs further exploration. The use of AI in education must be optimized through effective pedagogical strategies to maximize its benefits. Research by Wu (2024) underlines the need for educators to integrate AI tools meaningfully to ensure they enhance critical thinking and adaptability. Similarly, Bond et al. (2024) emphasize that AI's effectiveness depends on proper implementation and student engagement. Generally, these findings suggest that while AI has a significant positive impact, educators must continuously refine its use to fully harness its potential in developing students' competencies in Social Sciences. This refinement involves regular teacher training and curriculum updates to keep pace with evolving AI advancements and pedagogical best practices. By doing so, educators can ensure AI tools are used strategically—enhancing critical thinking, creativity, and subject mastery—while mitigating risks like over-reliance or bias in automated systems. Furthermore, interdisciplinary collaboration between AI developers and educators can lead to more tailored solutions that address specific classroom challenges. Longitudinal studies are also needed to assess the sustained effects of AI integration on student engagement and learning outcomes. Finally, fostering digital literacy among students will empower them to critically evaluate AI-generated content and become active participants in their learning process. As AI continues to evolve, a proactive and adaptive approach will be essential to maximize its benefits while upholding educational equity and rigor.

Table 15 presents the extent to which students develop competencies in work ethics through the use of artificial intelligence (AI) in learning. The data reflects students' perceptions of AI-driven learning in fostering self-discipline, accountability, and integrity. With an overall weighted mean of 3.19 and with a standard deviation of 1.03, the findings suggest that AI integration moderately enhances students' independence and responsibility in discipline and accountability in completing academic tasks and AI usage in education fosters my ability to work independently with minimal supervision indicate that students recognize AI as a tool that supports self-regulated learning. Additionally, AI-assisted activities were perceived as encouraging management and work prioritization skills. However, the statement on AI applications in learning promote a strong sense of integrity in academic work received the lowest rating, suggesting that while AI fosters academic efficiency, concerns about maintaining academic honesty persist. These findings align with recent studies emphasizing AI's role in developing self-discipline and independent learning. According to Bond et al. (2024), AI-based learning platforms provide personalized feedback, enhancing students' ability to manage their studies autonomously. Similarly, Holmes et al. (2022) highlight AI's potential to cultivate accountability by offering adaptive learning experiences. However, the concern about academic integrity aligns with the study of Chen and Lin (2020), which warns that AI tools, if not properly guided, may lead to ethical challenges such as plagiarism and over-reliance on automation.

TABLE 15. Extent on Students' Competencies Development in Using Artificial Intelligence in terms of Work Ethics

STATEMENT	MEAN	SD	REMARKS
AI-driven learning helps me develop self-discipline and accountability in completing academic tasks.	3.26	0.98	Moderately Agree
AI usage in education fosters my ability to work independently with minimal supervision.	3.26	1.01	Moderately Agree
AI-assisted activities encourage me to be more responsible in handling academic requirements.	3.24	1.05	Moderately Agree
AI applications in learning promote a strong sense of integrity in academic work.	2.91	1.06	Moderately Agree
The integration of AI in learning enhances my time management and work prioritization skills.	3.27	1.01	Moderately Agree
Weighted Mean	3.19		
SD	1.03		
Verbal Interpretation	Moderately High Extent		

To maximize AI's benefits in education, Wu (2024) suggest that educators implement AI-assisted learning with clear guidelines on ethical use and academic honesty, ensuring a balanced approach to self-regulated learning. This approach helps students develop independence while maintaining accountability, as AI tools can provide personalized feedback without compromising academic integrity. Additionally, clear ethical guidelines prevent misuse, such as over-dependence on AI-generated content or plagiarism, fostering a culture of originality and critical thinking. Educators should also emphasize the importance of human oversight, ensuring AI supplements—rather than replaces—traditional learning methods. Finally, by integrating AI responsibly, schools can cultivate digital literacy and ethical awareness, preparing students to navigate an increasingly AI-driven world with confidence and competence.

Utilization of artificial intelligence (AI) and students' skills development across various domains, including critical thinking, problem-solving, communication, collaboration, and technology proficiency.

The strongest correlations are observed between teachers' pedagogical strategies in AI integration and students' critical thinking skills and technology proficiency ($p<0.05$), indicating that effective AI-driven teaching methods significantly enhance these competencies. Additionally, training and familiarity with AI and frequency of AI utilization also show

strong correlations. This means that teachers who frequently use AI and have a higher level of training can better support students' development in these areas. AI adaptation and customization, as well as the types of AI used, also yield notable correlations with students' skill development, particularly in critical thinking and problem-solving (p< .001). Although the correlations for communication skills are relatively lower (ranging from .257 to .284, p < .01), they remain statistically significant, showing that AI's moderate effect in this area.

TABLE 16. Test of Relationship between Extent of the teachers' utilization of AI and Students' Skills Development.

Teachers' utilization of AI		Students' skills development				
		Critical thinking	Problem solving	Comm	Collab	Tech
Type of AI used	Pearson Correlation	.611***	.612***	.263**	.601***	.614***
	Sig. (2-tailed)	<.001	<.001	<.01	<.001	<.001
	N	100	100	100	100	100
Frequency of AI utilization	Pearson Correlation	.533***	.561***	.257**	557***	.552***
	Sig. (2-tailed)	<.001	<.001	<.01	<.001	<.001
	N	100	100	100	100	100
Training and familiarity with AI	Pearson Correlation	.593***	.624***	.273**	.621***	.616***
	Sig. (2-tailed)	<.001	<.001	<.01	<.001	<.001
	N	100	100	100	100	100
Pedagogical strategies	Pearson Correlation	.666***	.594***	.284**	.607***	.656***
	Sig. (2-tailed)	<.001	<.001	<.01	<.001	<.001
	N	100	100	100	100	100
Adaptation and customization	Pearson Correlation	.611***	.612***	.263**	.601***	.614***
	Sig. (2-tailed)	<.001	<.001	<.01	<.001	<.001
	N	100	100	100	100	100

Note: *p<.05, **p<.01, ***p<.001

TABLE 17. Test of Relationship between Extent Of the teachers' Utilization of AI and Students' Competencies Development

Teachers' utilization of AI		Students' competencies development				
		I	DL	TA	A	WE
Type of AI used	Pearson Correlation	.569***	.543***	.549***	.553***	.522***
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001
	N	100	100	100	100	100
Frequency of AI utilization	Pearson Correlation	.540***	.502***	.502***	.475***	.525***
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001
	N	100	100	100	100	100
Training and familiarity with AI	Pearson Correlation	.623***	.623***	.612***	.634***	.586***
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001
	N	100	100	100	100	100
Pedagogical strategies	Pearson Correlation	.707***	.636***	.667***	.654***	.613***
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001
	N	100	100	100	100	100
Adaptation and customization	Pearson Correlation	.569***	.543***	.549**	.553***	.522***
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001
	N	100	100	100	100	100

Note: *p<.05, **p<.01, ***p<.001

In general, the findings implies that teachers' effective utilization of AI, particularly through strategic pedagogy and training, helped in enhancing students' critical thinking, problem-solving, and technological competencies, while also supporting collaboration and communication skills to a lesser extent. These findings align with Bond et al. (2021) and Zawacki-Richter et al. (2019), who highlight that structured AI integration enhances student engagement and skill acquisition. Furthermore, Holmes et al. (2022) stress that adaptation and customization of AI-driven education significantly contribute to fostering problem-solving and technological proficiency. This suggests that AI is most impactful when teachers receive proper training to integrate it purposefully into lesson design, rather than using it as a standalone tool. Educators using AI for adaptive learning and real-time feedback enhance students' analytical skills through personalized challenges. However, improving collaboration and communication via AI may need targeted strategies like AI-supported group projects or interactive simulations.

Utilization of artificial intelligence (AI) and students' competencies development in terms of types of AI used, frequency of AI utilization, training and familiarity with AI, pedagogical strategies, and adaptation and customization. The analysis supports the role of AI in enhancing students' skill development. The type of AI used by teachers exhibits significant positive correlations with critical thinking (.611, p < .001), problem-solving (.612, p < .001), communication (.263, p < .01), collaboration (.601, p < .001), and technological skills (.614, p < .001). Similarly, the frequency of AI utilization and training in AI tools show strong correlations with these competencies, reinforcing the idea that AI exposure enhances students' cognitive and technical skills. Notably, pedagogical strategies incorporating AI demonstrate the highest correlation with critical thinking (.666, p < .001), emphasizing the importance of effective instructional approaches in maximizing AI's impact. These findings align with Bond et al. (2021) and Zawacki-Richter et al. (2019), who highlight that structured AI integration enhances student

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engagement and skill acquisition. Furthermore, Holmes et al. (2022) stress that adaptation and customization of AI-driven education significantly contribute to fostering problem-solving and technological proficiency.

Further analysis of the relationship between teachers' AI utilization and students' competency development indicates strong correlations across various competencies, including innovation, digital literacy, technical aptitude, adaptability, and work ethics. Training and familiarity with AI show particularly high correlations with adaptability (.634, $p < .001$) and innovation (.623, $p < .001$), suggesting that when teachers receive sufficient AI training, students benefit from a more dynamic and adaptable learning environment. Similarly, pedagogical strategies exhibit the strongest correlation with innovation (.707, $p < .001$), highlighting the critical role of instructional design in leveraging AI for competency development. These results are consistent with Bond et al. (2021), who emphasize that AI-integrated teaching strategies improve students' technical and problem-solving abilities. Additionally, the study by Zawacki-Richter et al. (2019) underscores that well-structured AI adaptation fosters adaptability and innovation in students. The significant correlation between AI adaptation and customization (.569, $p < .001$) and various competencies further reinforces the idea that personalized AI applications can enhance student engagement and competency growth.

IV. Conclusion and Recommendations

Based on the above findings, the following conclusions were drawn: The rejection of the null hypothesis which stated that there is no significant relationship between teachers' utilization of AI and students' skills development confirms that AI-powered tools play a meaningful role in enhancing learners' abilities. The findings suggest that when educators integrate AI into their teaching strategies, students demonstrate measurable improvements in critical thinking, problem-solving, and technical proficiency. This underscores the potential of AI to transform traditional pedagogy by providing personalized, adaptive, and data-driven learning experiences that foster skill acquisition. Similarly, the null hypothesis claiming no significant relationship between teachers' AI usage and students' competencies development was also refuted, indicating that AI contributes to the holistic growth of learners beyond just academic performance. The study reveals that AI-supported instruction enhances creativity, collaboration, and digital literacy, equipping students with essential 21st-century competencies. These results advocate for the strategic adoption of AI in education, as it not only supports academic achievement but also prepares students for a rapidly evolving technological landscape. Moving forward, further research and professional development can help optimize AI's role in maximizing student potential. Based on the findings and conclusions, the following recommendations are hereby offered: Deans and Program Chairs may continue to encourage faculty members to pursue graduate studies and attend AI literacy and teaching strategies including seminars, trainings, and workshops on AI integration in education.

Professors and Instructors may integrate AI-powered collaborative tools and problem-based learning activities in Social Sciences instruction to enhance students' teamwork and problem-solving skills.

Deans, Program Chairs, Professors and Instructors may incorporate AI-driven task management and progress-tracking tools in Social Sciences courses to strengthen students' work ethics through structured accountability and personalized feedback.

Future researchers may enhance the understanding of AI's long-term effects by expanding studies to include diverse variables and respondents across multiple universities.

Reference

[1]. Agunlejika, Taiwo, AI-Driven Fact-Checking in Journalism: Enhancing Information Veracity and Combating Misinformation: A Systematic Review (February 03, 2025). Available at SSRN: Retrieved from https://ssrn.com/abstract=5122225 or http://dx.doi.org/10.2139/ssrn.5122225

[2]. Bond, M., Khosravi, H., De Laat, M. et al. A meta systematic review of artificial intelligence in higher education: a call for increased ethics, collaboration, and rigour. Int J Educ Technol High Educ 21, 4 (2024). Retrieved from https://doi.org/10.1186/s41239-023-00436-z

[3]. Chee, H., Ahn, S., & Lee, J. (2024). A Competency Framework for AI Literacy: Variations by Different Learner Groups and an Implied Learning Pathway. British Journal of Educational Technology. Retrieved from https://doi.org/10.1111/bjet.13556

[4]. Chen, L., Chen, P., & Lin, Z. (2020). Artificial intelligence in education: A review. IEEE Access, 8, 75264–75278. Retrieved from: https://doi.org/10.1109/ACCESS.2020.2988510

[5]. Holmes, W., Porayska-Pomsta, K., Holstein, K., Sutherland, E., Baker, T., Shum, S. B., Santos, O. C., Rodrigo, M. T., Cukurova, M., Bittencourt, I. I., & Koedinger, K. R. (2021). Ethics of AI in education: Towards a community-wide framework. International Journal of Artificial Intelligence in Education, 32(3), 504-526. https://doi.org/10.1007/s40593-021-00239-1

[6]. Huang, C., Samek, T., & Shiri, A. (2021). AI and ethics: Ethical and educational perspectives for LIS. Journal of Education for Library and Information Science, 62(4), 351-365. Retrieved from https://doi.org/10.3138/jelis-62-4-2020-0106

[7]. Langove, S. A., & Khan, A. (2024). Automated grading and feedback systems: Reducing teacher workload and improving student performance. Journal of Asian Development Studies, 13(4), 202–212. https://doi.org/10.62345/jads.2024.13.4.16

[8]. Luckin, R., Cukurova, M., Kent, C., & du Boulay, B. (2022). Empowering educators to be AI-ready. Computers and Education: Artificial Intelligence, 3, 100076. Retrieved from https://doi.org/10.1016/j.caeai.2022.100076

[9]. Mallik S and Gangopadhyay A (2023) Proactive and reactive engagement of artificial intelligence methods for education: a review. Front. Artif. Intell. 6:1151391. Retrieved from https://doi.org/10.3389/frai.2023.1151391

[10]. Naseeb, A. (2024). Artificial Intelligence in Education: Transformative Innovations for 21st-Century Learning. Journal of AI Integration in Education, 1(1), 37-48. Retrieved from https

[11]. Shen, H., Shen, L., Wu, W., & Zhang, K. (2025, April). IdeationWeb: Tracking the Evolution of Design Ideas in Human-AI Co-Creation. In Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (pp. 1-19). Retrieved from https://doi.org/10.1145/3706598.3713375

[12]. Wang, C. Exploring Students' Generative AI-Assisted Writing Processes: Perceptions and Experiences from Native and Nonnative English Speakers. Tech Know Learn (2024). Retrieved from https://doi.org/10.1007/s10758-024-09744-3

[13]. Wang, D., & Huang, X. (2025). Transforming education through artificial intelligence and immersive technologies: enhancing learning experiences. Interactive Learning Environments, 1–20. Retrieved from https://doi.org/10.1080/10494820.2025.2465451

[14]. Wang, H., & Lehman, J. D. (2021). Using achievement goal-based personalized motivational feedback to enhance online learning. Educational Technology Research and Development, 69(2), 553–581. Retrieved from: https://doi.org/10.1007/s11423-021-09940-3
[15]. Wu, Y. (2024). Critical Thinking Pedagogics Design in an Era of ChatGPT and Other AI Tools—Shifting From Teaching "What" to Teaching "Why" and "How". Journal of Education and Development, 8(1), 1. Retrieved from https://doi.org/10.20849/jed.v8i1.1404
[16]. Zawacki-Richter et al. International Journal of Educational Technology in Higher Education (2019) 16:39 Retrieved from:
[17]. Zhai, C., Wibowo, S., & Li, L. D. (2024). The effects of over-reliance on AI dialogue systems on students' cognitive abilities: a systematic review. Smart Learning Environments, 11(1), 28. Retrieved from https://doi.org/10.1186/s40561-024-00316-7
[18]. Zhang, D., Tang, J., Gao, L., & Wei, X. (2019). Chatbot-assisted language learning: An empirical study of learners' perceptions and attitudes. IEEE Access, 7, 13310-13319 Retrieved from https://doi.org/10.1016/j.heliyon.2024.e25370