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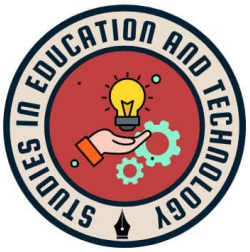

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RESEARCH ARTICLE

Performance Of Students in Social Studies Using Ai-Based Module

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This study examined the effect of an AI-based module in teaching Social Studies. A quasi-experimental design was employed to compare the performance and attitudes of Grade 11 students enrolled in the Technical-Vocational-Livelihood program at Isabela School of Arts and Trades-Cabannungan Annex, Cabannungan 1st, City of Ilagan, Isabela, during the School Year 2025-2026. Respondents were selected through stratified purposive sampling based on their previous General Weighted Average to ensure comparability between the experimental and control groups. Both groups were administered pre-tests and post-tests to measure learning gains. Findings revealed that although both groups showed statistically significant improvement, the experimental group achieved a significantly higher mean gain than the control group, indicating that the AI-based module was more effective in enhancing students' mastery of Social Studies competencies. Performance level analysis further showed that no student in the experimental group fell under the "Did Not Meet Expectations" category in the post-test, whereas a notable number of students in the control group remained at lower performance levels. Students' attitudes and engagement toward the AI-based module were assessed using a Likert-scale survey, which yielded generally positive perceptions in terms of usefulness, conceptual understanding, and motivation. The researchers suggested that researchers may conduct further studies examining the AI-Assisted module's effectiveness across other grade levels or subject areas to validate its broader applicability

Keywords: *AI-based module, Social Studies education, Artificial intelligence in education*

Introduction

Artificial Intelligence's (AI) rapid development has drastically changed numerous industries, including education, where it now plays a significant role in teaching, learning, and evaluation. Teachers now have access to resources that can produce explanations, examples, learning exercises, and adaptable content that can enhance conventional teaching, like ChatGPT and other AI tools. When properly created and contextualized, AI-assisted modules can be effective tools to promote learner-centered social studies training. In addition to offering richer material, these resources encourage self-directed learning, investigation, and a deeper comprehension of concepts. It has been demonstrated by Smith (2021) that AI-powered solutions improve learner engagement, enhance instructional delivery, and support individualized learning experiences.

While there is a growing body of literature exploring the integration of AI technologies in various educational contexts, the application within Social Studies remains relatively unexplored. There is a lack of comprehensive studies focusing on the effectiveness of AI-assisted modules in enhancing student learning outcomes, engagement, and academic performance within Social Studies. The Senior High School Curriculum in Social Science plays a crucial role in shaping our students' civic awareness, historical understanding, and critical thinking. However, several of the subject's least mastered competencies have been recognized based on recent academic records and teacher assessments. Many students score poorly on tests in these areas, especially in subjects like historical analysis, current global issues, and abstract sociopolitical concepts. Teachers also struggle to make lessons dynamic, relevant, and consistent with 21st-century learning requirements. Additionally, there is a dearth of research examining the perceptions, attitudes, and experiences of teachers and students regarding the use of AI in this subject.

Our school's performance statistics show that students struggle with specific Social Studies competencies, often scoring below mastery. Recognizing this persistent gap in mastery, the researcher created an AI-assisted module targeting the least learned competencies after identifying this ongoing mastery gap. This module seeks to increase students ' comprehension and retention with features including adaptive content sequencing, real-time evaluations, and intelligent feedback.

This study is directly related to the United Nations Sustainable Development Goal 4 (Quality Education), which seeks to ensure inclusive and equitable quality education and encourage lifelong learning opportunities for all. The use of an AI-enhanced instructional module in Social Studies contributes to this goal by encouraging innovative, technology-driven, and learner-centered instruction. The study uses artificial intelligence to improve students' engagement, comprehension, and academic achievement by delivering individualized and interactive learning opportunities. It also gives educators cutting-edge teaching tools that encourage digital literacy and 21st-century skills, which are essential for preparing students to be globally competitive and socially responsible citizens.

The researcher believes that artificial intelligence can serve as an effective tool for improving students' comprehension, participation, and appreciation of the subject. Through this endeavor, the study aims to emphasize the role of technology as a powerful instrument of communication and learning, thereby contributing to the continuous enhancement of quality education in the country.

Statement of the Problem

This study aims to determine the effect of an AI-assisted module in teaching Social Studies among Grade 11 students. Specifically, it sought to answer the following questions:

1. What is the demographic profile of the respondents in terms of:
   1.1 sex;
   1. 2 academic tracks; and
   1.3 socio-economic background?
2. What is the level of Performance of the Experimental and Control Groups in their pre-test and
   post-test?
3. What is the attitude of learners toward the use of the AI-assisted module in terms of:
   3.1 usefulness;
   3.2 ease of use;
   3.3 engagement; and
   3.4 relevance?

RELATED LITERATURE AND STUDIES

Education is just one of the many industries that artificial intelligence is quickly changing. Applications and solutions driven by AI are being created to support teachers in numerous aspects of their jobs, offer real-time feedback, and customize learning experiences. This individualized approach may result in better learning outcomes by addressing the various learning styles and speeds present in any classroom. AI-powered tutors can provide students with focused practice and further education. These online instructors can assist students with difficult concepts, respond to inquiries, and offer prompt feedback. They can provide helpful support and expand learning opportunities outside of the classroom, but they cannot take the place of a human instructor. created to support educators in numerous areas of their jobs, offer real-time feedback, and customize learning experiences. One application of AI in education is adaptive learning systems. These systems evaluate students' strengths and weaknesses using algorithms, adjusting the pace and content of instruction to meet each student's needs (EdApp, 2023).

According to a meta-analysis conducted by Steenbergen-Hu and Cooper (2019), instructional systems that use artificial intelligence produce moderate to significant gains in students' academic achievement when compared to traditional teaching techniques. These AI-based approaches are efficient when they provide prompt feedback and detailed explanations for failures. With these capabilities, AI-assisted learning modules become practical tools for bridging learning gaps, particularly when they target the competencies that students find most difficult.

A key additional benefit of AI in social science education, AI-based integration is that AI-based systems can reduce the cognitive load on teachers by alleviating the burden of grading tasks and facilitating more interactive classroom participation (Chen et al., 2020). This reduction in bureaucracy burden allows educators to allot more time on more relevant instructional activities, such as soliciting group discussions or making lessons interactive. Furthermore, the systems can provide instant feedback to the students so that they are steered on the right path towards eventually enhanced performance.

AI is highly useful to stimulate moral and philosophical debates in class, especially in social science education. With AI-simulation, real-life scenarios like political simulation and

historical reenactment are made experiences for the students so that an effective understanding of highly complex social issues is attained. Nevertheless, it is precisely such advances that make teachers all the more crucial so that one can meaningfully interpret and contextualize such situations (Ahmad et al., 2021).

Aladini conducted a quasi-experimental research study designed to measure the effects of AI application usage by Grammarly and Jasper on the students' logical reasoning skills as well as their writing skills academically. The study concentrated on the university student population. This therefore means that the AI tools improved and enhanced performances for the students in writing as well as in analytical views of issues. The AI applications also assisted in ordering arguments more logically for the students while improving quality outcomes produced from such work (Aladini, 2023). Such research would assume that AI might have a more significant relevance in social science education, where clarity in communication along with solid logical thinking is found to be imperative. Doing so, AI applications may be seen to develop curricula in social science more richly. The results further note that the adaptability of AI is in assisting all facets of scholarly development across diverse disciplines.

Similarly, Gyeltshen and English tested the efficacy of AI-supportive teaching strategies for social studies in sixth-grade education. It was found that the experimental AI-supported group of students performed better than those who were instructed by traditional approaches to understandability and critical thinking. A study reveals that the integration of AI tools in social sciences has been proven to facilitate better cognitive involvement for younger students who seek better results and enhance a better understanding of the material for students. This is because the environment is more immersive and interactive and then tailored to some students. Implications of Findings Based on the results, AI is urgently needed to improve the critical thinking ability of the learners at a very young age upon gaining understanding. This skill is considerably instrumental in grounding anything that has a basis for learning.

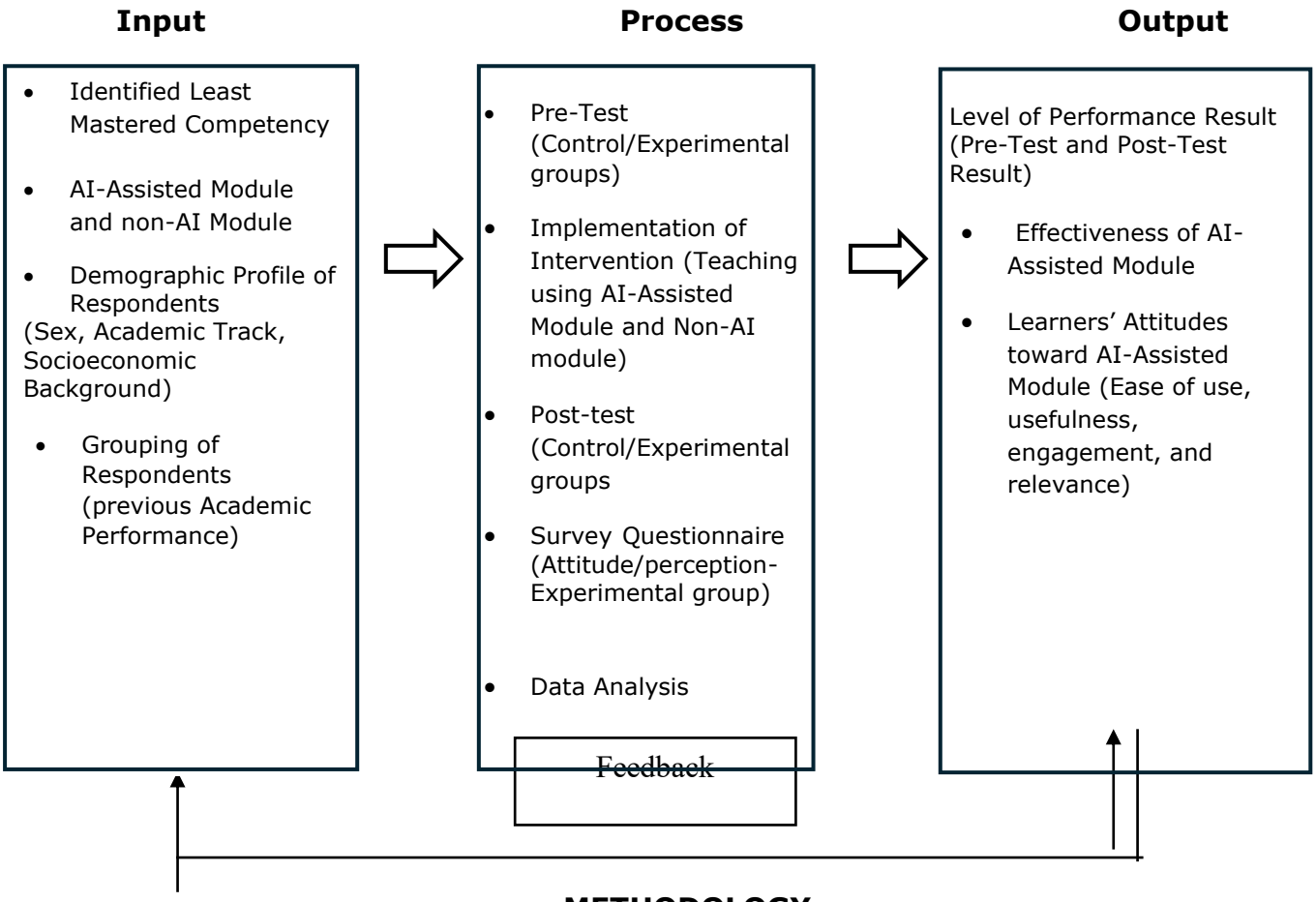
Akbayrak and Kaya conducted a quasi-experimental study to discover how AI would affect the instruction of social-institutional concepts in science. The result shows that the introduction of AI tools greatly improved the learning of social-institutional concepts for the students. Because the AI tools vividly rendered complex structures, complex social science ideas became better understood by the students. This therefore proves that AI may be suitable for teaching complex social science ideas, which otherwise would be hard to learn. The latter experiment showed AI's potential for creating even more interesting and efficient learning environments. Results showed that AI is very capable and may change the way teaching of social sciences is imparted through new types of presentations of complicated information.

Reyes and Santos (2023) worked with Grade 11 Social Studies students to explore the use of a data-driven digital module. They began by identifying the lessons that students struggled with the most through formative assessments and then used these insights to shape the module’s content and activities. Their findings showed a notable improvement in students’ posttest results, suggesting that adaptive and focused instruction can effectively help bridge learning gaps and support better understanding.

Villanueva (2022) also developed an e-learning package with built-in AI chat support to help students study in the Understanding Culture, Society, and Politics. The study found

that learners appreciated the chatbot's prompt responses and personalized review questions, which made the learning process more engaging and supportive. Results also indicated increased student engagement and performance after utilizing the module, demonstrating AI's potential to supplement traditional learning materials and make studying more

Another quasi-experiment of Pu et al. (2021) reported whether AI-based modules would change the teaching style of pre-service teachers in China. The finding of the experiment indicated that the pre-service teachers, who were provided with AI tools for teaching social sciences, became highly pragmatic and enthusiastic. It was one of the findings of this study that with the AI tools, it was possible to engage the pre-service teachers with the children at the primary school level in a more hands-on way to topics of social sciences (Pu et al., 2021). The current study provides better interfacing to AI with the process of teacher training because now it is possible to equip the future instructors with the opportunity to challenge the real classrooms to become more innovative and introduce more developed technologies in their practice. Teachers' equipment with AI will provide further development of their teaching methodology. This could also make social science education turn out more responsive and student-centered when equipping instructors with AI tools, claims research.



METHODOLOGY

This study employed a quasi-experimental non-equivalent group design to determine the effectiveness of an AI-assisted module in teaching Understanding Culture, Society, and Politics. A pre-test was administered to Grade 11 students prior to the intervention to confirm whether the identified least mastered competency from the previous school year remained a learning gap.

The least mastered competency was identified through an analysis of the Second Quarter Examination results for School Year 2024–2025, using Item Analysis and the Table of Specifications (TOS). Findings revealed that the competency "Examine Human Responses to Emerging Challenges in Contemporary Societies" had the lowest level of mastery, as reflected by the highest number of incorrect responses. This indicated students' difficulty in critical analysis and interpretation of societal responses to contemporary issues.

The Instrument of the Study

This study utilized four primary instruments, which are the previous Academic Grade of the respondents, the Traditional Module and AI-Assisted Learning Module, a Pre-test and Post-test, and a Survey Questionnaire. A structured Likert-scale survey questionnaire was used to assess students' perceptions in terms of usefulness, ease of use, engagement, and relevance.

Statistical Tools

Frequency Count and Percentage were used to determine the demographic profile of the students according to their sex, age, academic track, and socioeconomic background. Mean was employed to interpret the students' evaluation of the AI-assisted module in terms of usefulness, ease of use, engagement, and relevance. A t-test was used to compare the pre-test and post-test scores of the control and experimental groups, determining whether there was a significant difference in their academic performance.

FINDINGS

Table 1: Profile of the Respondents

Variable	Frequency (n = 30)	Percent % (100.0)
Sex		
Male	15	50.00
Female	15	50.00
Academic Track		
TVL-Home Economics-Cookery	10	33.30
TVL-Agri Fishery Arts-Agricultural Crops Production	17	56.70
TVL-Industrial Arts-Carpentry	3	10.00
Socio-Economic Background		
Less than PHP 12,030 Income	18	60.00
24,060 to 48,120 Income	8	26.70
48,120 to 84,210 Income	4	13.30

Table 1 shows the demographic characteristics of the 30 student respondents. It indicates that the distribution of respondents according to sex is evenly divided, with 15 males (50%) and 15 females (50%). This equal representation ensures that the study's outcomes reflect balanced perspectives from both male and female learners and are not disproportionately influenced by one gender group.

In terms of academic track, 17 respondents (56.7%) are enrolled in the TVL–Agri Fishery Arts–Agricultural Crops Production strand. Meanwhile, 10 respondents (33.3%)

belong to the TVL–Home Economics–Cookery strand, and 3 respondents (10%) come from the TVL–Industrial Arts–Carpentry strand. With respect to socio-economic background, 18 respondents (60%) come from families with a monthly income of less than PHP 12,030, placing them within the low-income bracket. A total of 8 respondents (26.7%) belong to families earning between PHP 24,060 and 48,120, while 4 respondents (13.3%) report a household income ranging from PHP 48,120 to 84,210.

Table 2: Level of Performance on the experimental and control groups in their pre-test and post-test

Performance	Experimental N=30				Control N=30			
	Pre-test		Posttest		Pre-test		Posttest	
	f	%	f	%	f	%	f	%
Outstanding	0	0.00	8	26.70	0	0.00	0	0.00
Very Satisfactory	0	0.00	10	33.30	0	0.00	0	0.00
Satisfactory	0	0.00	7	23.30	0	0.00	4	13.30
Fairly Satisfactory	0	0.00	5	16.70	0	0.00	12	40.00
Did Not Meet Expectation	30	100.00	0	0.00	30	100.00	14	46.70
	Mean =5.00 (Did Not Meet Expectations)		Mean =2.23, (Very Satisfactory)		Mean =5.00, (Did Not Meet Expectations)		Mean =4.33 (Fairly Satisfactory)	

Table 2 presents the performance level of students in both the experimental and control groups during the pre-test and post-test. For both groups, all 30 students (100%) fell into the Did Not Meet Expectations category and had a pre-test average score of 5.00 with 0.00 standard deviation. This means that all students in both groups had the same levels of low mastery, confirming similar baseline performance at the start of the study, and the results indicate both groups are at the same low level of mastery.

Out of 30 respondents in the experimental group during their post-test, 8 or 26.70 percent obtained a grade of Outstanding, followed by 10 or 33.30 percent got a grade of Very Satisfactory. A total of 7 or 23.30 percent obtained a grade of Satisfactory, and there were 5 or 16.70 percent who obtained a grade of Fairly Satisfactory. None of the students in the group fell under the Did Not Meet Expectations category, as indicated by a frequency of 0 or 0.00 percent. The post-test mean of 2.23, which corresponds to a very Satisfactory performance, indicates a noticeable improvement after the intervention.

For the control group, out of 30 students, the results show that no student was classified in the Outstanding or Very Satisfactory category, as indicated by a frequency and percentage of 0 and 0.0 percent, respectively. While 4 or 13.30 percent obtained a grade of Satisfactory, 12 or 40.00 percent fell under Fairly Satisfactory, and 14 or 46.70 percent fell under Did Not Meet Expectation. The post-test mean of 4.43, which corresponds to very Fairly Satisfactory, indicates that traditional teaching did not result in substantial gains.

Table 3: Attitude of Learners toward the Use of AI-Assisted Module in terms of Usefulness

Usefulness	Mean	Qualitative Description
1. AI-assisted modules help me learn faster by improving my understanding and efficiency.	3.37	Strongly Agree
2. AI-assisted modules help me better understand difficult topics in social studies.	3.30	Strongly Agree
3. AI-assisted modules give me more ways to learn and practice	3.37	Strongly Agree
4. AI-assisted modules help me think more critically and improve my problem-solving skills	3.07	Agree
5. AI-assisted modules make learning more engaging and more fun.	2.97	Agree
6. AI-assisted modules make me feel more prepared in class discussions and class activities.	3.10	Agree
7. AI-assisted modules give me access to more resources and information in social studies.	3.13	Agree
8. AI-assisted modules provide clear and easy-to-understand explanations about the subject matter.	3.17	Agree
9. AI-assisted modules personalize learning content according to my needs and preferences.	2.87	Agree
10. AI-assisted modules modify lessons aligned with my learning style and preferences.	3.03	Agree
General Mean	3.14	Agree

Legend: 3.26-4.00 = Strongly Agree; 2.51-3.25 = Agree

Table 3 shows that students generally have a positive attitude toward the AI-assisted module, with an overall mean of 3.14. They strongly agreed that the module helps them learn faster, improves understanding and efficiency with a mean of 3.37, and makes difficult topics easier to grasp with a mean of 3.30. Students also noted improvements in critical thinking and problem-solving, accessibility, and clarity of explanations, with a mean rating from 3.10 to 3.17.

The lowest-rated aspects were statement 9, which is module personalization, with a mean of = 2.87, and making the learning experience more enjoyable, with a mean of 2.97. Overall, students valued the module but indicated room for improvement in tailoring activities and increasing engagement.

Table 4: Attitude of Learners toward the Use of AI-Assisted Module in terms of Ease of Use

Ease of Use	Mean	Qualitative Description
1. The AI-assisted module is easy to read and understand.	3.03	Agree
2. The layout and format of the module were clear and organized, making it simple to follow.	3.03	Agree
3. The instructions in the module are clear and easy to apply.	3.03	Agree

4. The module guides me step by step in learning Social Studies.	3.03	Agree
5. The activities in the module are easy to follow and complete.	2.97	Agree
6. The organization of lessons in the AI-assisted module makes it easier to learn Social Studies.	3.07	Agree
7. The examples in the AI-assisted module make complex ideas easier to understand.	3.03	Agree
8. The AI-assisted module enhances my problem-solving skills in Social Studies.	2.97	Agree
9. The AI-assisted module provides clear guidance that helps me study independently.	3.03	Agree
10. The explanations in the AI-assisted module are clear even without teacher assistance.	3.07	Agree
General Mean	3.03	Agree

Legend: 2.51-3.25 = Agree

The table 4 shows the attitude of the learners toward the use of the AI-assisted module under the category of Ease of Use. The respondents have a positive attitude towards the module's ease of use, having an overall mean of 3.03, which is interpreted as Agree. This means that learners find the module clear, understandable, and easy to use. Likewise, respondents agreed that the module is easy to read and understand, and its layout and format are clear and well-organized. They also found the instructions simple to follow, and said that the module guides them step-by-step in learning Social Studies, both of which obtained a mean score of 3.03. These results show that the module is designed in a way that supports smooth and independent learning.

On the other hand, respondents also agreed that the activities in the module are easy to follow, with a mean of 2.97, and that the lessons are well-organized, with a mean of 3.07. They also agreed that the examples help make complex ideas easier to understand, with a mean of 3.03, and that the module enhances their problem-solving skills, with 2.97 mean. Although these two items received slightly lower means, they still indicate positive attitudes.

Likewise, the respondents value the indicator, stating that the module provides clear guidance that helps them study independently, with a mean of 3.03, and that the explanations are clear even without teacher assistance, with 3.07 mean. This means that the module supports self-paced learning and helps learners understand lessons on their own. In general, the findings indicate that students consider the AI-integrated module to be an effective educational resource for learning Social Studies, as it is perceived as concise, structured, and user-friendly.

Table 5. Attitude of Learners toward the Use of AI-Assisted Module in terms of Engagement

Engagement	Mean	Qualitative Description
1. Using the AI-assisted module in Social Studies class helps me understand concepts better.	3.10	Agree
2. AI-based lessons make learning more interesting and engaging.	3.00	Agree
3. I feel more motivated to participate in group or classroom discussions when AI-assisted modules are used in class.	2.90	Agree

4. AI-assisted lessons enable me to work more independently on tasks such as research, analysis, and problem-solving in social studies.	2.93	Agree
5. AI-assisted lessons allow me to work more independently on research, analysis, and problem-solving tasks in Social Studies.	2.90	Agree
6. I prefer AI-assisted learning methods over traditional ones, while still valuing both.	2.93	Agree
7. AI-driven quizzes and tests make me feel more confident about my learning compared to traditional assessments.	2.93	Agree
8. The AI-assisted module keeps me focused and attentive during lessons.	3.13	Agree
9. I enjoy collaborating with classmates during AI-assisted module activities.	3.00	Agree
10. The AI-assisted module helps me connect social studies lessons to real-world issues.	3.30	Agree
General Mean	3.01	Agree

Legend: 2.51-3.25 = Agree

As shown in the table, the findings indicate that the learners have a positive perception of the influence of the AI modules on their engagement in social studies, as shown by the overall mean of 3.01. This suggests that the module positively impacts how learners attend to, are motivated by, and interact with the activities of the class. The study reveals that respondents value the indicator, stating that the AI-assisted module in Social Studies class helps them understand concepts better, which obtained a mean of 3.10. They also believe the indicator with a mean of 3.00, that AI-based lessons make learning more interesting and engaging, and they enjoy collaborating with their classmates during AI-assisted module activities. Likewise, students agree that they feel more motivated to participate in group or classroom discussions when AI-assisted modules are used in class, and lessons allow me to work more independently on research, analysis, and problem-solving tasks in Social Studies, which both yielded a mean of 2.90.

Respondents agreed that AI-assisted lessons enable them to work more independently on tasks such as research, analysis, and problem-solving in social studies, AI-driven quizzes and tests make me feel more confident about my learning compared to traditional assessments, and they prefer AI-assisted learning methods over traditional ones, while still valuing both, which obtained a mean of 2.93. Respondents also agreed the most with the statement that the AI-assisted module keeps them focused and attentive during lessons, which obtained a mean of 3.13. they also believed in the indicator stating that the AI-assisted module helps them connect social studies lessons to real-world issues with a mean of 3.30.

It can be observed that although respondents still have a positive attitude toward the AI-assisted module in terms of their engagement, it indicates that some students may need more time or support to fully adjust to AI-integrated activities, especially those involving complex thinking skills or participation in discussions.

Table 6: Attitude of Learners toward the Use of AI-Assisted Module in terms of Relevance

Relevance	Mean	Qualitative Description
1. The AI-assisted module helps me analyze complex	3.00	Agree

social issues more effectively.		
2. AI-assisted modules encourage me to think deeply about different perspectives.	3.07	Agree
3. I-generated questions challenge me to apply knowledge in new ways.	3.17	Agree
4. The AI-assisted module helps me understand cause-and-effect relationships between social events and issues.	3.03	Agree
5. The AI-assisted module encourages me to explore questions that are relevant to real-life issues.	3.33	Agree
6. AI-assisted module features highlight issues that are meaningful to me.	3.13	Agree
7. The AI-assisted module provides problem-solving exercises that improve my reasoning skills in real-world situations.	2.93	Agree
8. The AI-assisted module connects Social Studies concepts to my daily life.	2.93	Agree
9. AI-assisted module activities are aligned with my academic needs.	2.87	Agree
10. AI-assisted module improves my awareness of social and civic responsibilities.	3.03	Agree
Mean	3.05	Agree

Legend: 2.51-3.25 = Agree

As shown in the table, respondents have a positive attitude toward the relevance of the AI-Assisted module to their learning in Social Studies, as denoted by the overall mean of 3.05. This response indicates that the module helped in the application of real-world situations to classroom content and helped the learners acquire an understanding of social issues.

Respondents agreed that the module helped them analyze complex social issues more effectively, which obtained a mean of 3.00. They believe the indicator with a mean of 3.07, stating that AI-assisted modules encourage them to think deeply about different perspectives, and they also felt that AI-generated questions encourage them to apply knowledge in new ways, with a mean of 3.17.

Likewise, respondents also agreed that the module helps them understand cause-and-effect relationships between social events and issues, increases their awareness of social and civic responsibilities, which both obtained a mean of 3.03. The response garnering the highest mean of 3.33 was recorded for the statement that the AI-assisted module encourages them to explore questions that are relevant to real-life issues. This also means that the students recognize the relevance of the module activities to real-life problems.

On the other hand, respondents also agreed that the module features highlight issues that are meaningful to them, with a mean of 3.13. Although slightly lower, students still agreed that the module provides problem-solving activities applicable to real-world situations, connecting Social Studies concepts to their daily life, with both means of 2.93, and aligns with their academic needs, which obtained a mean of 2.87.

These results suggest that the students consider the AI-assisted module as relevant and educationally beneficial, as they are able to relate the content from Social Studies to their daily life and to the issues facing society.

CONCLUSIONS

Based on the findings, the following conclusions were drawn:

1. The AI-assisted module significantly improved students' academic performance, as evidenced by the higher mean gain of the experimental group compared with the control group. This confirms that AI-enhanced instructional materials can meaningfully support learners even in printed format.
2. The least mastered competency identified through item analysis guided the development of the module, ensuring alignment with actual learning gaps. This competency-based approach proved effective.
3. Learners' qualitative feedback revealed specific areas that can further strengthen the AI-assisted module, particularly the need for more examples, visual elements, simplified instructions, and streamlined activities. These insights highlight the value of thematic analysis in refining instructional materials.
4. Overall, the integration of AI-generated explanations, hints, and structured guidance in the printed module contributed to improved mastery, validating the use of AI-informed content even in non-digital learning environments.

RECOMMENDATIONS

In light of the results and conclusions, the following recommendations were proposed:

1. Social studies teachers may enhance the module by adding more examples, real-world scenarios, and step-by-step explanations to support learners in understanding complex Social Studies concepts.
2. Social studies teachers may incorporate additional visual aids, including charts, pictures, infographics, and improved layout design, to increase engagement and support comprehension.
3. Social studies teachers may revise instructions to make them more concise, direct, and student-friendly, ensuring that learners can navigate tasks independently.
4. Social studies teachers may simplify and streamline activities, prioritizing mastery-focused tasks that align with target competencies.
5. Social studies teachers may consider producing a teacher's guide to accompany the printed AI-assisted module, providing educators with suggested pacing, answer keys, and facilitation notes.
6. Social studies teachers may explore future development such as hybrid versions of the module (printed + QR-linked AI feedback), especially once digital tools become more accessible.
7. Future researchers may conduct further studies examining the AI-Assisted module's effectiveness across other grade levels or subject areas to validate its broader applicability.

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