

Computer Aided Instruction (CAI) on the Social Studies Performance of Grade 8 Students

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ABSTRACT

This study investigates the motivation, perception of computer-aided instruction (CAI), and academic performance in Social Studies among Junior High School students at Lamblight International School in Negros Occidental for 2025-2026. Utilizing a descriptive-correlational design, it analyzes the relationships between these factors using quantitative methods, including mean, standard deviation, and Pearson Product Moment Correlation Coefficient. Results reveal varied motivational experiences, with an average engagement level of 3.64, indicating general agreement towards learning Social Studies. While students expressed strong readiness for class (mean 4.45), concerns regarding lesson variety (mean 2.65) suggest areas for improvement. The perception of CAI yielded a mean score of 3.32, categorized as "Somewhat Agree," with an emphasis on its effectiveness in understanding concepts (mean 4.77). However, issues surrounding computer usage restrictions were highlighted. Academically, 90.32% of students attained "Outstanding" performance (90-100), while only 9.68% achieved "Very Satisfactory" (85-89). A significant correlation ($p=0.001$) was found between motivation and academic performance, emphasizing the need for increased student engagement. Additionally, a strong positive relationship ($r=0.980$, $p<0.01$) exists between academic performance and perception of CAI, suggesting that fostering positive views on technology enhances learning outcomes. Overall, while students demonstrate high engagement levels, there is a need to improve instructional strategies and technology integration. The findings emphasize the critical role of motivation and positive perceptions of learning tools in optimizing educational experiences in Social Studies. Future research should explore long-term impacts of teaching methods on student performance.

Keywords: computer-aided instruction, academic performance, social studies, descriptive-correlational, motivation

INTRODUCTION

The rapid advancement of technology in education and the recognition of digital tools in enhancing teaching and learning, particularly in teaching Social Studies, has been increasingly adapted around the world. Our lives today in this era remain dependent in traditional or lecture-based instruction which may limit engagement of students and critical thinking. This is an era of what people called 21st century learners and also known as ICT citizens, the gap between the reality in using technology and the old way of learning methods in instruction presents a greater challenge in education. The main concern in this idea is that the continued reliance on passive learning techniques which clearly questions the effectiveness of current educational pedagogies and practices in promoting meaning and creative understanding subjects which require contextual analysis, interpretation, and active engagement like in Social Studies. This mere situation sheds light on the idea to explore varied instructional strategies and innovative techniques that can help bridge the gap between conventional teaching and new way of teaching that meet the demands of 21st century learners.

Globally, the integration of technology in education has been recognized as a key driver in improving the quality of instruction and learning outcomes. As discussed by Serin (2011), the term "learning through computers" involves the use of a computer as an aid for teachers to do presentations and to get learners to practice and drill. Technology-assisted instruction provides a systematic approach to planning, implementing, and evaluating the teaching-learning process (Shahid et al., 2019). Various technological tools such as online written materials, videos, graphics, computer software, and interactive models have been widely utilized to enhance lesson delivery

and make learning more engaging and accessible (Abdulrahman et al., 2020). The use of digital learning tools not only increases student engagement but also supports personalized learning and the development of critical 21st-century skills such as problem-solving, collaboration, and digital literacy (Home et al., 2022). As a result, many educational systems around the world have increasingly adopted technology-driven approaches to improve instructional effectiveness.

One of the most prominent applications of technology in education is Computer-Assisted Instruction (CAI), which involves the use of computers as instructional tools to support teaching and learning processes. Through the help of this assisted instruction, it can help teachers present their topics in interactive and multimedia formats. This enables students to engage in self-paced learning activities which can promote independent learning. Another benefit of this assisted instruction is that it emphasizes the role of computers not only as tools but also as learning environments where students actively interact with instructional materials. This strategy can shift the role of teachers from teaching-centered to facilitator with the help of computers which provide structured and adaptive learning experiences to students (Anugrah et al., 2022; Chen et al., 2023). Similarly, computer-assisted instruction encourages deeper understanding to students by focusing on enhancing their comprehension rather than mere memorization. In this way, it helps support the shift from being teacher-centered to student-centered learning (Bhardwaj et al., 2025). Technology-based techniques like these have been shown to create more dynamic and interactive learning environments that enhance both cognitive and affective learning outcomes.

These ideas and its effectiveness in improving student achievement and motivation across different subject areas are supported further by some empirical studies. When students are exposed to CAI demonstrate higher academic performance compared to those taught using traditional methods (Abanikannda & Adeniji, 2018). Computer-assisted instruction has also been found to help increase motivation of the students and create positive attitudes toward learning by making lessons more interactive and engaging (Oyeleke & Olagbaju, 2021). This beneficial effect can be traced back during the time of COVID-19 pandemic when everything transitioned to online modality. The use of technology-based instruction which is the very essence of computer-assisted instruction learning played an important role in ensuring continuity of education with students showing notable improvements in performance even in remote learning environments (Julian, 2023). This only means that computer-assisted instruction has the potential to be an effective instructional strategy in modern education.

Furthermore, a policy guidelines in the Philippines which is specifically created by the Department of Education (DepEd) through their memorandum (DepEd Order No. 76 series of 2010) which focuses on the Implementation of the 2010 Secondary Education Curriculum (SEC), it states that the use of ICT as an integral part of the curriculum will be pursued in schools where technologies are already available. They firmly believe that technology is a big help to the Department of Education in strengthening the information systems, the improvement of technology infrastructure, the improvement of teaching and learning, and the improvement of communication and engagement. This effect can be seen through a study conducted to demonstrate the positive impact of CAI on student performance. In this study, it was highlighted that the use of computer-assisted instruction among Grade 8 learners has resulted in significant improvements in academic achievement compared to traditional teaching methods (Estrella, 2022). Additionally, the beneficial effects of CAI has been associated with increased motivation and higher assessment scores among Filipino learners (Rogayan, 2021). But, on the other hand, the effectiveness of CAI largely depends on proper proper implementation, teacher competence, and the quality of instructional design (Julian, 2023; Santos, 2024).

Despite the developments of using computer-assisted instruction, its integration in actual classroom practice remains inconsistent particularly in some local schools located in far-flung areas. In subject areas such as social studies, lecture-based discussion in teaching is still predominant often with limited use of interactive and technology-driven strategies. The effectiveness of implementation of CAI often stems from lack of structured programs, limited access to technological resources, and insufficient teacher training. This often results in difficulty understanding abstract historical concepts and may lead to exhibiting lower engagement and motivational level in learning the subject. This disconnection between the policy and its practical application shows the needs for some context-specific studies that examine how CAI can be effectively utilized in real classroom settings.

These information create a baseline of ideas pointing that there is a substantial amount of evidence which shows the benefits of CAI. However, it cannot be argued that there still remains a lack of localized research focusing specifically on its application in Social Studies instruction within Lamblight International School. There are also limited exploration on how CAI influences both academic performance and student engagement in social studies through the evidences shown in some studies highlighted in this research. Thus, it explains the need to address issues and conduct further investigation to determine the effectiveness of CAI in enhancing learning outcomes in specific local contexts.

To help address this gap of the study, this study is created to help determine the effectiveness of Computer-Assisted Instruction (CAI) in improving the academic performance and engagement of Grade 8 students in Social Studies at an international school in Bacolod City. It also seeks to determine whether the use of CAI significantly enhances students' understanding of selected topics compared to traditional teaching methods. It is expected that in the finding of this study, it can help provide empirical evidence that can guide teachers, school administrators, and policymakers in designing and implementing more effective and technology-integrated instructional strategies in Social Studies education.

The significance of this study lies on those who are part of the field of education. First, the classroom teachers who can implement and adhere to the use of a computer laboratory, acquire more televisions, DLPs, and speakers to be utilized in teaching social studies topics, which could lead to significant improvements in students' learning. Next, the students who have opportunities to utilize this strategy for a more interactive, meaningful, and enjoyable learning experiences that may improve academic performance and motivation. It will also provide information through its data for supervisors in the curriculum expert area and school principals as well on its effects on the performance of the students. This serves as an instructional guide on the use of computer-aided instruction.

The idea of using computer-assisted instruction or also known as CAI has been widely examined in the field of education, with studies highlighting its potential to improve academic performance across different grade levels and subject areas. This kind of instruction is defined as the use of computer-based programs and multimedia tools to deliver instructional content, provide interactive activities, and offer immediate feedback to learners (Ran et al., 2022). Cognitive and constructivist learning theories are the main theories in which this study is grounded in focusing on the multimedia principle which emphasizes the integration of visual and auditory inputs for effective knowledge construction (Ran et al., 2022). With the help of this framework, this kind of instruction can create active learning space and retention in support by allowing students to engage with lessons in more interactive ways compared to traditional instruction.

Additionally, a study conducted by Larwin (2011) focusing on the student achievement stated that moderate improvements are seen in students when CAI was integrated into classroom instruction. However, Ran et al. (2022) argued through his study which explained that they found small but statistically significant effects of educational technology on learning outcomes. This suggests that computer-aided instruction is only effective when it acts as a supplemental force rather than the main driving force of achievement which is the teacher-led instruction. This also highlights the importance of quality program design, including multimedia features, structured feedback, and alignment with curricular objectives.

In an article by Walsh (2012), 'Learning Theories Associated with Computer Assisted Instruction', he mentioned that the advantage of CAI includes assisting or enhancing learning, offering quick responses, and enhancing programs. The user can additionally move through the tasks at their own speed, starting from one phase after another. However, in order for there to be authentic learning, factors for facilitating CAI need to maximize learning principles. The essence of courses reflecting society depends on the teacher's program selection to enthuse students and give them the fundamentals of learning. Wilson & Brown et al., (2018), in their study, 'Breaking with Tradition: A Scoping Meta-Analysis Analyzing the Effects of Student-Centered Learning and Computer-Aided Instruction on Student Performance in Anatomy', found that students' knowledge gains greatly increased when CAI exposure was reinforced compared to a single, isolated incident, over several occurrences. Given that positive student results were found after more extensive, repeated exposure to CAI interventions, a novelty impact is unlikely to have had any influence. The novelty effect is a phenomenon in which initial performance improvements are brought on by the novelty of the treatment, but with time, performance

improvements decline as the technology, in this example, loses its novelty. Additionally, knowledge gains were more pronounced when CAI was implemented as a supplement to traditional approaches in a way that allowed for repeated exposure over longer durations of time (Wilson & Brown, et al., 2018).

The use of computer-assisted educational interfaces positively affects academic achievement (Gündüz et al., 2022). However, this effect does not occur directly, but as a result of increased motivation and attitudes towards the lesson (Keller et. Al., 2010). In almost all studies in the literature, it is stated that CAL increases motivation and retention, especially academic achievement. Kulik, Kulik, and Bangert-Drowns (1985) analyzed 200 studies comparing computer-assisted instruction with ongoing instruction and stated that CAL increased student achievement by 20%. Similarly, Camnalbur (2008) analyzed 78 quantitative studies comparing CAL with the traditional method and found that CAL method was more successful than the traditional method in terms of students' academic achievement. The main benefits of CAL (Barker et al., 1985), whose primary objectives are effective teaching, individual learning, and providing interactive materials, are that it gives most of the management to the student, increases motivation, eliminates time and space problems, can be repeated as many times as desired, can be designed in the form of feedback, deduction or induction, and can offer many multimedia in a single environment (Trey & Khan, 2008).

In a study conducted by Estrella (2020) on the 'Impact of Using Computer-aided Instruction (CAI) in the Performance of Grade 8 Students in Araling Panlipunan', results show that using computer-aided instruction improves the effectiveness of teaching performance of the students. Additionally, it is recommended that Araling Panlipunan teachers incorporate computer-assisted instruction frequently into their lessons. Through seminars, training, and the school-based learning action cell (LAC), teachers should develop their skills in creating computer-aided education.

According to Agcaoili and Oshihara (2014), the use of ICT could increase students' interest in learning social studies. The usage of technology can increase students' interest since they are more familiar with it and appreciate learning from computer-based instructions more (Cox, 2011, as cited in Mauricio et al., 2017). Study revealed that the students' learning experiences are relatively higher when enhanced through the use of video lectures, assignments and materials designed for online courses (Soffer et al., 2016).

According to Julian and Co, et al., (2023), in their study, 'Student Performance in Social Studies with Computer-Assisted Instruction During Pandemic in Secondary School of Zambales, Philippines', they found out that there is a significant difference in the academic performance of students with and without Computer-Assisted Instruction (CAI). During the third quarter, the mean academic performance of grade 9 students receiving Computer Assisted Instruction (CAI) was 87.20, or 87 percent described as "Very Satisfactory" (Julian and Co, et al., 2023). Based on the key characteristic of CAI in enhancing students' knowledge by offering simulated real-life situations, which is mirrored in their highly excellent third-grade academic achievement, the assessment of learning with the usage of CAI during the third quarter is extremely satisfactory.

In a study conducted by Lucero (2021), 'Instructional Strategies of Teachers and Academic Performance of Intermediate Learners in Araling Panlipunan', that aimed to determine the relationship between the instructional strategies utilized by teachers and the academic performance of intermediate learners in Araling Panlipunan, it was found out that, the use of LED TV caters learners with different learning styles which made the teaching learning process effective. According to Hedges and the AFIRM Team (2017), technology-aided instruction places a strong emphasis on using technology as the primary element supporting the achievement of a goal for the students, such as mastering a certain skill.

Integrating ICT into Social Studies instruction demonstrates strong potential to enhance teaching strategies, student engagement, and digital skill development. There are tools that can help encourage active participation and make lessons more interactive such as e-learning platforms and electronic assessments which can also help equip students with essential 21st-century competencies. But challenges are still prevalent in this set-up such as students' limited application of technology, reliance on traditional materials, and varying interest in history topics highlight the need for more effective approaches. With the help of the aforementioned insights about the exploration on how computer-aided instruction (CAI) can directly influence academic performance among Junior High School students at Lamblight International School, it can help build a creative learning space for

students. By developing an instructional guide, it aims to strengthen CAI integration, address existing gaps, and create a more engaging and effective Social Studies learning experience.

Theoretical Background

This study is anchored on the Cognitive Constructivism Theory of Piaget and supported by Effective Computer-based Instruction for Adults.

Cognitive Constructivism. Cognitive Constructivism is a learning theory propounded by Jean Piaget. This theory emphasizes the importance of learning as an active and constructive process where learners actively engage in the new knowledge upon the foundation of the pre-existing knowledge.

It is believed that teachers who embrace constructivism encourages their learners to explore and question the world around them, rather than merely memorizing facts and figures. In the current age of science and technology, the role of computers in education has now become an important issue confronting large numbers of teachers throughout the world (Ozkale & Koc, 2020).

For instance, a study conducted by Ercan (2014) showed that multimedia has an important role for students' achievement. Considering these achievements that students are expected to gain in history lessons, it is optimized that the teaching should address the affective aspect of the students. In this regard, different teaching methods and techniques are applied in order to endear the history lesson to students and to increase the level of achievement of the gains.

One of these methods is computer-assisted instruction (Yagci, 2017). Computer- Aided Instruction (CAI) provides an interactive environment for learners where they can explore, experiment and construct knowledge. CAI uses multimedia elements such as text, graphics, animations and to enhance understanding and retention. With appropriate tools such as simulations and educational games support this foster active engagement.

Theory of Effective Computer-Based Instruction for Adults. According to Lowe (2004) this theory presents components that concurs the effectiveness of computer based- instruction for adults. It includes learning outcome, self-directedness, computer self-efficacy, learning goal level, instructional strategy design, computer-based instruction (CBI) design and external support.

The learning outcomes deals with meeting goal through relevant instruction carried out through computer. Self-directedness deals on approach allowing learners to become motivated in assuming ones responsibility and collaborative control of mental and contextual processes for meaningful educational results. Computer self-efficacy deals on ones capacity to successfully engage in CBI.

The learning goal level deals as necessary performances enabling effective cognitive and psychomotor domains towards the desired outcomes. Instructional design speaks of essential process for content in terms of sequencing, presenting, decision-making and delivery. CBI design talks about programming content and design, while external support deals process and design outside the CBI design.

The frameworks mentioned above is necessary for computer assisted instruction to be successful. However, there are factors affecting the computer-assisted instruction process, it includes various variables such as lesson outcomes, student motivation, innovations, interaction, individual learning differences, the type, scope and quality of the courseware, the teacher's perception, attitude, expectation and changing role in computer-assisted education, the integration of the curriculum with the education program, and the way computer-assisted education is carried out in the school (Cotton, 2008; Paje, Rogayan & Dantic, 2021 Şahin & Yıldırım 1999; Warschauer & Healey 1998).

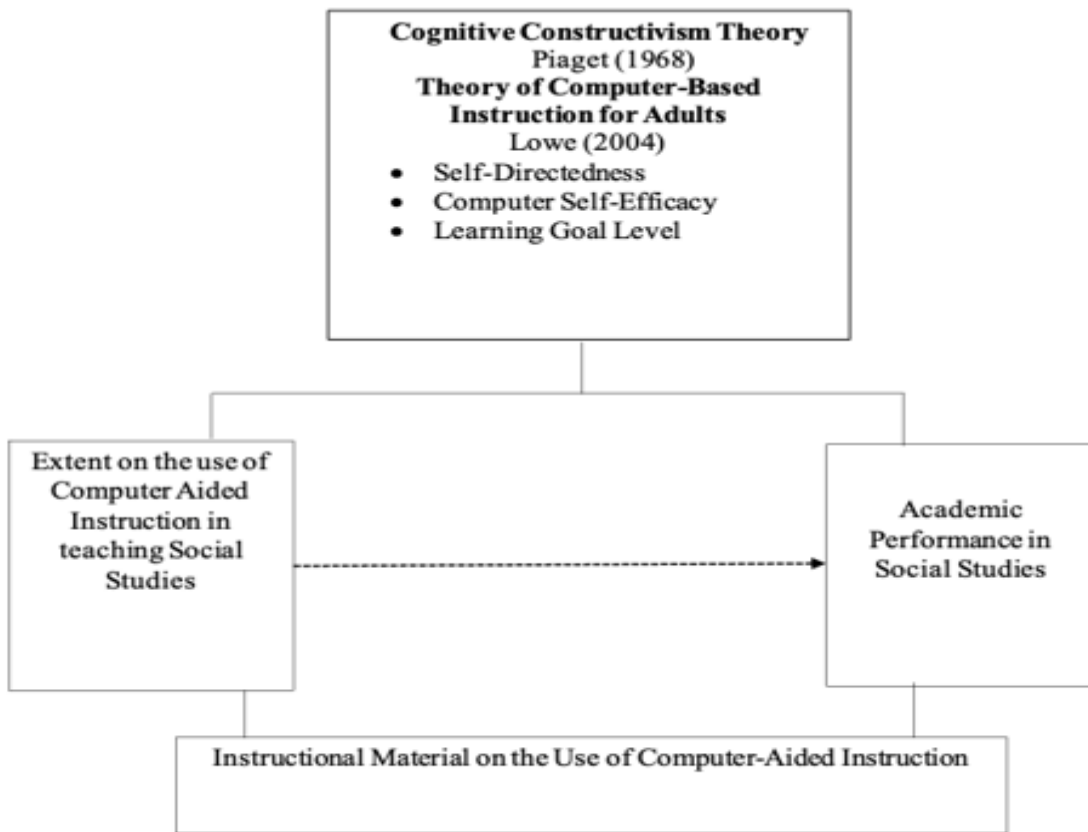


Figure 1. Schematic Diagram of the Theoretical Framework

Statement of the Problem

This study aims to determine the extent of motivation, the perception towards the use of computer-aided instruction, and the level of academic performance towards learning social studies of Junior High School students at an international school in Bacolod City for School Year 2025-2026.

Specifically, this study seeks to answer the following questions:

1. To what extent do the Junior High School Students manifest the following:
 - 1.1 motivation towards learning Social Studies; and
 - 1.2 perception towards the use of Computer-Aided Instruction (CAI) in learning Social Studies?
2. What is the level of academic performance of Junior High School students in Social Studies?
3. Is there a significant relationship between the academic performance in Social Studies and:
 - 3.1 motivation towards learning Social Studies; and
 - 3.2 perception towards the Use of Computer-Aided Instruction (CAI) in learning Social Studies ?
4. Based on the findings, what instructional materials can be developed?

Null Hypothesis

At 0.05 level, the hypothesis will be tested:

H₀₁: There is no significant relationship between students' motivation towards learning Social Studies and their academic performance.

Ho2: There is no significant relationship on the extent of using Computer Aided Instruction and the academic performance of grade 8 students in Social Studies.

METHODOLOGY

Design

The study utilized the descriptive – correlational research design. This quantitative research design is appropriate for this study since it provides numerical data for correlation analysis, especially to comprehensively investigate the relationship between the extent of motivation and perception of the respondents toward learning social studies and their academic performance.

The descriptive survey design enables the measurement and statistical analysis of factors which includes the level of the academic performance of students and the frequency of integrating computer-aided instruction (CAI) in teaching and learning Social Studies. In this study design, it provided an insight into the extent of using computer aided instruction (CAI) in teaching Social Studies and the academic performance of the students.

Environment

The study was implemented at Lamblight International School, a Department of Education accredited progressive international school based in Bacolod City, Philippines. Lamblight International School is partnered with Wolsey Hall Oxford College, the world's most experienced homeschooling college, established in 1894.

They are one of just four online schools that are Cambridge approved for Lower Secondary, IGCSE and A level courses, and is also the first Cambridge approved online Primary school.

Participants

The participants of the study were the 31 junior high school students enrolled at Lamblight International School at Bacolod City, Negros Occidental, Philippines for the school year 2025-2026. The total population of 31 were considered as the participants of the study using with a varying allocation of students per section. No sampling technique were used since the researcher will use complete enumeration provided that they will be qualified as participants based on the criteria set for the study.

Table 1 Distribution of the Participants

Section	No. of Respondents	Percentage
Grade 7	5	16.13%
Grade 8	14	45.16
Grade 9	9	29.03
Grade 10	3	9.68
Total	31	100%

Inclusion Criteria. The participants were selected based on the following criteria: 1) they belong to either of the year level, regardless of age and gender; 2) they are currently enrolled for the school year 2025 – 2026; 3) they are willing to participate in the study; 4) they have signed the informed consent; and 5) they are willing to do the survey with the presence of a guidance counselor.

Exclusion Criteria. There are other grade levels, like the senior high school, that will not be included to this study. Moreover, all the prospective respondents who do not satisfy the mentioned inclusion criteria were automatically be excluded from participating in the study.

Data Gathering Tools

The main instruments for this study were two adapted and revised questionnaires. The first one was an adapted questionnaire from Rusell and Hollander (1975) to determine students' motivation towards learning Social Studies. Next, an adapted questionnaire from Iddrisu (2019) to determine the extent of utilization of CAI in teaching Social Studies. Both instruments were revised to better fit the purpose of the study. The research instrument was put through face and content validation process by a jury of three specialists who hold masters/and doctoral degrees using Good and Scates validation instrument. The researcher-made questionnaire was valid since the result obtained was 4.78 and interpreted as excellent.

It was also subjected to reliability test using Cronbach's Alpha Formula. Both the computer value and internal consistency interpretation were presented to ensure that instruments are reliable for the conduct of the study. The results obtained were 0.91 and 0.90 interpreted as excellent. Furthermore, the researcher utilized secondary data on the academic performance of the junior high school students as reflected in their first quarter grade in Social Studies.

For the level of motivation of the students and the extent of the perception of students of computer-aided instruction as tools in learning Social Studies, the following scale was used:

Table 2. Instrument parameter scale

Scale	Response	Description	Ranges of Mean
5	Strongly Agree	Highly Motivated	4.21 – 5.00
4	Agree	Motivated	3.41 – 4.20
3	Somewhat Agree	Moderately Motivated	2.61 – 3.40
2	Disagree	Slightly Motivated	1.81 – 2.60
1	Strongly Disagree	Not Motivated at all	1.00 – 1.80

Data Gathering Procedure

This section explains this study's data collection procedures and statistical analysis.

Pre-Data Gathering. The data collection commenced by obtaining permission from the Dean of Graduate Studies of Education at the University of the Visayas, followed by a letter to the school principal for distributing questionnaires and conducting the study. Parental consent was obtained before engaging students in the study, and clear explanations were provided regarding how any information obtained from their involvement would be handled with the utmost confidentiality and used to further the study's objectives. The researcher submitted a proposal to the Institutional Review Board (IRB) to ensure ethical guidelines were followed and participants were protected.

Actual Data Gathering. After all the approvals had been granted, the researcher scheduled the conduct of the survey to the Grade 8 students. The survey took 1 hour. One section answered the survey in the selected schedule in the morning and the other section answered the survey in the afternoon.

The teacher distributed, first, the assent form for the students and the parents' consent form, second, the questionnaires to the students inside the classrooms and solicited their permission beforehand and with the guidance of the researcher and the guidance counselor.

The content was carefully explained, assuring participants of confidentiality, and the surveys were collected from the respondents and make sure that each question was answered completely and truthfully.

Post-Data Gathering. All the data gathered was organized, analyzed and interpreted. Moreover, the answered questionnaires will be kept in the cabinet of the researcher in which nobody could access without her permission. However, these questionnaires were shredded after a year or after the publication of the study.

Data Analysis

The study used the mean, standard deviation and Pearson Product Moment Correlation Coefficient. The mean and standard deviation were utilized to determine the extent of using CAI in teaching Social Studies.

Additionally, the Pearson Product Moment Correlation Coefficient were employed to determine the relationship on the extent of using Computer Aided Instruction and the academic performance of junior high school students in Social Studies.

Ethical Consideration

This paper has undergone review by the UV-IRB, bearing reference number 2025-0371. Strict privacy and confidentiality protocols were followed, ensuring that all data and questionnaires were securely stored.

The identities of respondents were kept confidential in the research publication. Data protection was maintained in accordance with the DATA PRIVACY ACT of 2012. Assent forms were given to all participants in the study.

RESULTS AND DISCUSSIONS

This chapter contains the presentation, analysis, and interpretation of the data on the extent of motivation, the perception towards the use of computer-aided instruction, and the level of academic performance towards learning social studies of Junior High School students at an international school in Bacolod City.

Extent of Manifestation of Junior High School Students

The table below shows as to what extent do the Junior High School students manifest their motivation towards learning social studies and perception towards the use of Computer-Aided Instruction (CAI) in learning Social Studies using weighted mean and standard deviation with verbal interpretation.

Table 3

Extent of Manifestation of Junior High School Students in terms of motivation towards learning social studies

Indicator	Mean	SD	Verbal Description
1. I am always excited to attend my SS class this school year.	4.35	0.65	Strongly Agree
2. I don't like SS at all. It is difficult to learn.	3.35	1.28	Somewhat Agree
3. I love SS, it gives me opportunities to experiment, discover and explore the things around me.	3.61	1.31	Agree
4. I'm always prepared in my SS class.	4.45	0.76	Strongly Agree
5. I participate actively in SS activities by asking questions.	3.55	1.32	Agree
6. I feel bored in my SS class.	3.68	1.20	Agree
7. I got good grades in SS.	3.55	1.01	Agree
8. I study my lessons before a test or quiz.	3.61	1.16	Agree
9. The terms/words used in the test are difficult to understand.	3.29	1.46	Somewhat Agree
10. I have a good relationship with my SS teacher.	4.03	0.86	Strongly Agree

11. My SS teachers present the lessons in a variety of ways.	2.65	1.26	Somewhat Agree
12. I don't understand the way my SS teachers explain the lessons.	3.52	1.21	Agree
Total	3.64	1.12	Strongly Agree

Note. 4.21-5.00- Highly motivated/Strongly Agree; 3.41-4.20- Motivate/Agreed; 2.61-3.40-Somewhat Motivated/Somewhat Agree; 1.81-2.60- Least Motivated/Disagree; 1.00-1.80-Not Motivated/Strongly Disagree

The results of this study reveal a significant range of motivational experiences among junior high school students in their social studies classes. An overall mean score of 3.64 was indicated in the table which means that there is a motivating level of engagement towards learning social studies. The highest indicator in the table points out to the mean score of 4.45 which reflects on the idea that students feel highly motivated and are always prepared for their social studies class. However, there is a lower indicator with a mean score of 2.65 which means that the response regarding the variety of lesson presentation by their teachers. Critical areas for improvement can be drawn out of this variance from the mean scores and also the strengths in student engagement within the social studies curriculum.

This shows the level of motivation and readiness of students to participate and engage in the lessons in social studies. However, there might also be a significant opportunity for teachers to enhance the level of engagement in the classroom by diversifying their teaching approaches. This points to areas where teachers can improve their practice particularly in the high motivation in preparedness but lower motivation related to lesson presentation. This idea is supported by Han (2021) which they explained that the idea that diverse teaching methods enhance student motivation. A positive correlation between varied teaching strategies and student engagement was shown in his research. It was indicated that collaborative group work and problem-based learning as active learning strategies have been found to increase student participation and motivation compared to traditional lecture-based approaches (Martinez & Gomez, 2025).

On the other hand, there is a suggestion which needs for diversification to teachers about their approaches on the study pointing to the lower motivation related to lesson presentation. A study conducted by Zahid and Nawab (2025) explained that no single teaching strategy consistently engages all learners. Varied learning styles are the reasons why teachers have to align their methods based on the students' needs. It was suggested that teachers can get benefits from the idea of incorporating varied techniques, such as multimedia elements, hands-on activities, and real-world applications, to cater to diverse learning styles and enhance understanding. It is indicated that the alignment between teaching styles and student learning preferences significantly impacts learning effectiveness. By understanding their students' preferences and adapting their teaching accordingly, teachers can create a more engaging and effective learning environment.

Table 4

Extent of Manifestation of Junior High School Students in terms of perception towards the use of Computer-Aided Instruction in learning Social Studies

Indicator	Mean	SD	Response
1. Computer-Aided Instruction make me participate actively in the teaching and learning process.	4.42	0.92	Strongly Agree
2. My school lacks enough digital resources to support Computer-Aided Instruction.	1.48	0.51	Strongly Disagree
3. Use of Computer-Aided Instruction in teaching helps me to perform well in class.	4.48	0.72	Strongly Agree

4. Computer-Aided Instruction promotes cooperative learning among students in a Social Studies class.	4.42	0.76	Strongly Agree
5. Computer-Aided Instruction promotes better understanding of concepts and easy application of knowledge gained in Social Studies.	4.77	0.43	Strongly Agree
6. Computer-Aided Instruction helps students to assess their own learning.	4.52	0.96	Strongly Agree
7. Our teacher does not allow us to use computers and therefore I have no idea on how to use it.	1.19	0.40	Strongly Disagree
8. Computer-Aided Instruction helps me to access authentic and current information on issues in Social Studies.	4.61	0.50	Strongly Agree
9. Computers scare and therefore I do not follow the instructions when my teacher uses them in Social Studies instruction.	1.65	0.55	Strongly Disagree
10. I do not have enough skills to use Computer-Aided Instructions.	1.61	0.50	Strongly Disagree
Total	3.32	0.62	Somewhat Agree

Note. 4.21-5.00-Very useful/Strongly Agree; 3.41-4.20-Useful/Agree 2.61-3.40-Somewhat useful/Somewhat Agree; 1.81-2.60-Less useful/Disagree; 1.00-1.80-Not Useful/Strongly Disagree

The results of the study indicate a generally positive perception among junior high school students regarding the use of Computer-Aided Instruction (CAI) in learning Social Studies, with an overall mean score of 3.32, categorized as "Somewhat Useful." Among the various indicators, the highest score of 4.77 reflects that students feel strongly that CAI promotes better understanding of concepts and facilitates the easy application of knowledge gained in Social Studies. On the other hand, a strong disagreement as shown in the lowest score of 1.19 explains the notion that restrictions for teachers on computer usage leave students with no knowledge of how to operate them. This means that enthusiasm of students to learn with the help of technology in which teachers and their practices can be aligned to enhance digital literacy and engagement in the classroom.

While students appreciate the benefits of CAI, there is a significant opportunity for teachers to foster greater digital literacy and engagement. This notion is supported by the findings of the study conducted by Cabalbag (2025) in which they explained that the effective integration of technology in the classroom can lead to improved learning outcomes. When students are active and highly engaged with technology, they explained that their comprehension and retention level of material increase. They help explain the importance of this learning opportunity specially in social studies where difficult and complex concepts and current events can be better learned and understood through varied multimedia resources, maps, and simulations that bring the material to life.

It is evident that students can see the relevance of technology and its application with they engage with content through various means which can lead to better academic performance. This was testified by the study of Haleem et al. (2022) which they emphasize that providing students with opportunities to use technology independently contributes to their confidence and ability to navigate digital tools effectively. They explained that students become more adept at using technology when they are given the chance to explore digital tools on their own, whether through research projects, presentations, or collaborative work.

In contrast, there is a disconnection between the restrictions in teachers and their computer usage. Falloon (2022) emphasizes that technological skills are necessary for students and they should be empowered to apply their skills and not limit their exposure to it. It is imperative that teachers facilitate students in exploring their capabilities by helping them access technology to create an environment where they feel comfortable utilizing

digital technology. This can help promote a more flexible and supportive environment in order to better incorporate computer-assisted instruction, can help meet their diverse learning needs and can create a more engaging educational journey.

Level of Academic Performance of Junior High School Students in Social Studies

The table below shows the level of academic performance of Junior High School Students in learning Social Studies using frequency count and percentage distribution.

Table 5. Level of Academic Performance of Junior High School Students in learning Social Studies

Description	Bracket	Frequency	Percentage
Outstanding	90-100	28	90.32
Very Satisfactory	85-89	3	9.68
Satisfactory	80-84	0	0.00
Total		31	100.0

The table above shows the academic performance of junior high school students in social studies. It provides an overview of the highest percentage which is 90.32% which falls on the outstanding category. A small portion of students achieving very satisfactory academic performance with a percentage of 9.68% is in the scores ranging from 85-89 can be seen in the table as well. It can also be seen that none of the students scored in the satisfactory range of 80-84. The exceptional performance of the majority of the students is highlighted in the table and the differences among the scores. However, this raises questions about the kind of instructional strategies employed and the factors that contribute to the overall academic success in this subject area.

It is possible that there may be several factors that contribute to this result. Implementation of effective teaching strategies is one of them. It has been shown that different approaches that help cater different preferences in learning are particularly impactful in fostering student engagement and understanding (Zahid and Nawab, 2025). In the study of Zahid and Nawab (2025), they explained that effective teaching strategies are crucial with varied approaches catering to different learning preferences being particularly impactful. Visual aids, graphic organizers, and interactive activities may have been part of the strategies being pointed out in their study. This only means that innovative instructional methods can improve students' cognitive abilities and enhance performance (Shalgimbekova et al., 2024).

In addition, it is also demonstrated that quality of a teacher plays a major role especially with the professional training they have undergone, their experiences in teaching, and their expertise in the subject-matter (Engida et al., 2024). Ventista and Brown (2023) agreed with this idea because they conducted their study to explain that teachers with adequate training are more competent in managing student learning outcomes which leads to improved academic performance. Altes et al. (2024) also agreed with their findings stating that

Furthermore, teacher quality also plays a significant role, encompassing professional training, teaching experience, and subject-matter expertise (Engida et al., 2024). The findings of Ventista and Brown (2023) explained that experienced teachers tend to have a deeper understanding of student behavior, learning styles, and curriculum adaptation making them more effective in addressing diverse student needs. It helps them to effectively deliver lessons when they are equipped with essential pedagogical skills, classroom management techniques, and different instructional strategies.

In general, the success of students in the academe, particularly in social studies, shows the importance of using different and effective strategies in teaching which meet the various learning needs and styles of the students. The findings clearly construct factors which play a vital role in enhancing the engagement of the students and their achievement such as innovative instructional methods, teacher quality, and a supportive classroom environment.

Academic Performance and Extent of Manifestation of Junior High School Students

It is shown in the table below the significant correlation between the level of academic performance of junior high school students and the extent of manifestation on their motivation towards learning social studies and their perception towards the use of computer-aided instruction (CAI) in learning social studies using pearson's r.

Table 6. Relationship between the Level of Academic Performance of Junior High School Students and the extent of manifestation on their motivation in learning Social Studies

Variables	r -value	Strength of Correlation	p - value	Decision	Remarks
Academic Performance and Motivation in learning Social Studies	0.410	Strongly Positive	0.001	Reject Ho	Significant
Note. Significant at $p < 0.05$ (two-tailed)					

As shown above, the table reveals the significant correlation between the level of academic performance of junior high school students and their motivation to learn Social Studies using pearson's correlation coefficient. It shows the p-value which is 0.001 suggesting that this correlation is statistically significant which allows for the rejection of the null hypothesis. Thus, it implies that higher levels of motivation among students are associated with improved academic performance in Social Studies which highlights the importance of fostering student engagement and intrinsic interest in the subject matter to enhance educational outcomes. It can be inferred in the findings that enhancing the motivation of the students may lead to improved performance in the subject.

Studies have shown that students who are autonomously or intrinsically motivated, that is, driven by genuine interest, curiosity, or personal value, tend to exhibit higher achievement levels and greater competence in learning compared to their peers influenced by controlled or extrinsic motivation (Qureshi et al., 2024; Cronin-Golomb & Bauer, 2023). According to Deci and Ryan's Self-Determination Theory, intrinsic motivation is linked to greater academic achievement, as these students often seek deeper understanding and mastery of concepts, leading to enhanced performance (Ryan & Deci, 2024). This is being shown in the findings of the study of Harackiewicz et al. (2016) explaining that when students find personal relevance in their studies, such as connecting historical events to contemporary issues or relating content to their own experiences, they are more likely to engage actively and persist in their studies.

Additionally, Al-Shuaili (2025) explained in his study that intrinsic motivation fosters deeper engagement with the content, encouraging students to explore concepts beyond the basic requirements. He stated that intrinsically motivated students attribute their academic achievements to factors within their control, as outlined in the self-determination theory. While extrinsic motivation, involving external rewards or punishments, can also positively influence academic outcomes, it is essential to balance it with intrinsic factors to prevent dependency on external reinforcement (Bardach & Murayama, 2025).

Moreover, Shuhidan et al. (2025) indicated in their studies that students who rely mainly on extrinsic rewards may develop a superficial understanding of the material which focuses on achieving grades rather than mastering content. This reliance can diminish students' intrinsic interest over time making them less motivated in the long run.

Therefore, striking a balance between fostering intrinsic motivation, through relevance, autonomy, and meaningful feedback, and utilizing extrinsic rewards can create a more supportive learning environment. As such, educators can create a more engaging and motivating learning environment, which leads to improved academic performance in Social Studies, by implementing strategies that make information relevant, bring historical topics to life, and give students choices and hands-on experiences

Table 7. Relationship between the Level of Academic Performance of Junior High School Students and the extent of manifestation on using CAI in learning Social Studies

Variables	r -value	Strength of Correlation	p - value	Decision	Remarks
Academic Performance and Perception towards the use of CAI in learning Social Studies	0.980	Strongly Positive	<0.001	Reject Ho	Significant
Note. Significant at $p < 0.05$ (two-tailed)					

The table shows the significant relationship between level of academic performance of junior high school students and their perception towards the use of CAI in learning social studies. Based on the finding, it shows an r-value of 0.980 and a p-value of <0.01 which is lower than the significance level of 0.005 and is the threshold for determining the statistical significance. This means that the level of academic performance is positively correlated with the perception towards the use of CAI in learning social studies. This correlation implies that as students' perceptions of CAI as a beneficial learning tool increase, their academic performance also tends to improve significantly. This finding also means that fostering a positive perception of CAI among students may enhance their engagement and understanding of Social Studies content which can lead to better academic outcomes.

As technology continues to evolve and permeate educational settings, understanding how students perceive these tools becomes vital for educators. Bognar and Khine (205) indicated in their study that when students have a positive perception of CAI, they are more likely to engage with the material actively which leads to improved academic outcomes. Rogayan et al. (2021) also found that students perceived CAI as an effective instructional resource, which positively influenced their motivation and, consequently, their academic performance. This means that computer-assisted instruction has a positive effect on the students and it makes them more motivated to learn, most especially in social studies.

Moreover, the use of CAI has been linked to higher levels of engagement and interactivity in learning environments. Haleem et al. (2022) have found in their study that instructional technologies such as educational software, interactive simulations, and multimedia presentations can enhance students' understanding of complex concepts and provide instant feedback, which traditional teaching methods may lack. According to a study conducted by Rogayan et al. (2021), CAI promotes greater student achievement, particularly in subjects that require critical thinking and application of knowledge, such as Social Studies. This correlation between positive perceptions of CAI and improved academic performance suggests that integrating technology thoughtfully into the curriculum can create more dynamic and responsive learning experiences.

Furthermore, addressing the educational needs of diverse learners is essential in promoting positive perceptions of CAI and better academic performance. Research by Ingkavara et al. (2022) has indicated that CAI can cater to various learning styles and preferences, providing personalized pathways for students to explore subjects at their own pace. For example, visual learners benefit from multimedia resources, while kinesthetic learners engage more effectively through interactive simulations. By harnessing the strengths of CAI, educators can create inclusive classrooms that accommodate different learning needs, fostering a more equitable educational environment. Therefore, improving students' perceptions of CAI not only encourages their engagement and success in specific subjects like Social Studies but also supports overall academic achievement.

CONCLUSION

The research findings indicate that junior high school students' experiences in Social Studies are significantly influenced by their motivation, teaching methods, and perceptions of Computer-Aided Instruction (CAI). Students express high levels of engagement and readiness for their classes, yet there remains a notable gap in the variety of instructional approaches used which highlights areas for enhancement. The overwhelming majority

of students perform at an outstanding academic level suggesting effective instructional strategies that warrant further examination.

In addition to academic performance, motivation emerged as a crucial factor. There is a clear positive correlation between students' motivation and their academic success which sheds light on the necessity of encouraging engagement to improve learning outcomes. Furthermore, students' perceptions of CAI as a beneficial tool are directly linked to their academic achievements. This shows that cultivating a positive attitude towards technology can enhance understanding and performance in Social Studies.

In general, these findings emphasize the importance of enhancing motivational strategies and perceptions of learning tools to optimize educational experiences and outcomes for junior high school students in Social Studies. The study suggests that targeted interventions aimed at increasing motivation and improving teaching methods could lead to better academic results and a more engaging learning environment.

Educators and administrators should diversify instructional methods by incorporating a range of teaching strategies, such as interactive activities and project-based learning, to cater to diverse learning needs and increase student engagement. Additionally, embracing Computer-Aided Instruction (CAI) in a supportive environment can enhance students' understanding and application of concepts. It is essential for educators to foster intrinsic motivation by creating a classroom atmosphere that promotes curiosity, setting goals, and celebrating student achievements.

Curriculum developers play a crucial role in this process by enhancing CAI resources to ensure they are user-friendly and effectively educational. Regular evaluations of the impact of various teaching methods and technologies on student performance will allow for continuous improvement of instructional practices. Policy makers should support professional development initiatives that focus on innovative teaching strategies and the effective use of technology while also encouraging feedback mechanisms that facilitate communication among students, teachers, and parents regarding instructional effectiveness.

Teachers, in particular, should prioritize professional development focused on innovative teaching practices and the effective integration of technology in their classrooms. Engaging in collaboration with colleagues to share best practices can lead to richer instructional experiences for students. Furthermore, teachers should routinely solicit feedback from students to understand their perceptions of teaching methods and CAI enabling continuous adjustments to meet student needs better.

Parents and guardians also have a vital part to play; they should engage actively with their child's learning by encouraging discussions about Social Studies topics and supporting their use of technology as learning tools at home. Promoting positive learning habits, such as recognizing and rewarding efforts and progress, reinforces the value of engagement and persistence. By implementing these recommendations, stakeholders can create a more effective and engaging learning environment that boosts students' motivation, enhances their perception of learning tools which improves academic outcomes in Social Studies.

Students also play a critical role in their education; they should actively engage with the learning process by asking questions, participating in discussions, and utilizing available resources, including CAI tools, to deepen their understanding of Social Studies concepts. Setting personal learning goals and reflecting on their progress can foster intrinsic motivation. Additionally, forming study groups can help students collaborate and learn from one another enhancing both their academic performance and engagement.

Future researchers are encouraged to explore the long-term impacts of diverse teaching strategies and technology integration on student engagement and academic performance. Investigating the influence of motivation and perceptions on learning outcomes can yield valuable insights, enabling further development of effective educational practices. Additionally, longitudinal studies might provide deeper understanding of how students' attitudes towards learning evolve over time and how this influences their academic performances.

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