Experiences of Social Studies Teachers with Generative Artificial Intelligence (AI) Integration in Teaching

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ABSTRACT

This study had two primary objectives: to explore the integration of generative artificial intelligence (AI) in Social Studies instruction among educators at Montevista National High School and to examine the challenges, adaptive strategies, and pedagogical insights derived from their experiences. A descriptive qualitative research design was employed, involving ten (10) Social Studies teachers. Data were gathered through focus group discussions and analyzed using thematic analysis. Findings revealed that the integration of generative AI in instruction is significantly hindered by limited professional preparedness, ethical concerns such as data privacy and algorithmic bias, and infrastructural constraints. Despite these challenges, teachers demonstrated resilience by adopting collaborative and self-directed strategies to sustain instructional practices. However, these efforts were found to be insufficient without stronger institutional support, structured training, and clear implementation frameworks. A proposed capacity-building program was developed to enhance teachers' ability to integrate generative AI effectively and responsibly into classroom instruction. Conclusions emphasize that while generative AI holds substantial potential to transform Social Studies education, its effective and sustainable use depends on addressing systemic, ethical, and pedagogical challenges. The study recommends structured professional development programs, collaborative learning networks, and supportive educational policies to ensure responsible and meaningful AI integration. Overall, the findings contribute to the growing body of knowledge on AI in education by providing context-specific insights that support innovation while maintaining a human-centered approach to teaching and learning.

Keywords: artificial intelligence, social studies education, teaching strategies, professional development, teacher preparedness, generative AI integration.

INTRODUCTION

The Problem and Its Setting

Over the past few years, keeping learners' attention during Social Studies emerged as a growing challenge, especially in the local setting where most learners get bored and sleep during classes. The repeated occurrence indicates that many learners struggle to engaged during classroom discussion and activities. Generative artificial intelligence including chatbots, automatic content generation software, and interactive learning applications provide benefits as well as issues in education, especially those associated with engagement, facilitation, ethics, and academic honesty (Kasneci et al., 2023). While some teachers may have been trained on AI-generative tools, there are still variations in their usage of instructional techniques in learning, where some teachers continue to use conventional techniques that restrict active learning and interaction among learners. This issue requires a thorough reflection of the existing teaching practices.

Learning engagement is seen as an essential predictor of academic achievement in the world. If learners are fully engaged, particularly when studying Social Studies, which demands critical and analytical thinking, they learn and understand more than when disengaged. Research conducted in the United Kingdom shows that digital literacy greatly improves engagement in social studies topics such as history, civics, and geography, making the material more interesting and interactive (Limniou, 2021). Even so, there remain inequalities in the world. The

digital divide, unequal access to materials, and differences in technology proficiency have been major limitations in the effectiveness of digital learning in numerous nations worldwide, including some regions within the United States. These factors have limited the engagement levels of students in digitally infused learning areas like Social Studies (Kallon, 2024). In nations like New Zealand, schools promptly adopted remote learning but experienced decreased engagement levels in Social Studies courses because most learners were not technologically proficient enough to use AI infused learning materials.

The shift to using digital learning is continuing to happen in the Philippines, yet engagement in the subject matter Social Studies is still difficult. Since the learning process entails critical thinking skills and participatory nature, digital proficiency and access to devices pose hindrances to making use of Araling Panlipunan for effective educational delivery. Various researches reveal that learners in the country are unable to participate actively in the subject matter due to a lack of engaging digital resources and integration of technology. Furthermore, the application of digital technologies in learning process are often challenged by limited school infrastructure, outdated teaching practices, and low self-efficacy of students and teachers with respect to technology (Villaseñor, 2024). Additionally, Filipino Social Studies instructors are insufficiently prepared for implementing AI and other innovative technology into lessons (Lacuna, 2025).

In the Davao Region, especially in Davao City, such obstacles are more apparent. Although there are efforts to integrate digital approaches into the Social Studies subject in certain schools, the lack of stable internet connectivity, insufficient resources for digital teaching, and inadequate training among teachers in AI-based instructions persist in impeding success. At several public secondary schools in the region, including those in Talomo District, Social Studies instruction is still anchored on traditional textbooks. This restricts the potential for interactive learning and limits students' ability to apply their critical-thinking skills in analyzing current societal problems through digital means (Florida, 2024).

On the local level, there are already social studies teachers in Montevista National High School who are utilizing artificial intelligence to engage their students. However, this application is inconsistent since not all teachers are interested in using this technology. Some of them are familiar with the traditional style of teaching which is more dependent on lectures, thus discouraging the utilization of technology which would require an interactive class. There may be opportunities provided by the Department of Education in terms of conducting seminars and trainings to improve this situation, yet these are short-lived solutions since what is learned from these sessions is not applied for long. The negative impact of this reluctance is evident in the students who lack exposure to technology-assisted teaching because of the reluctance of their teacher.

Although numerous studies have examined technology integration in education, relatively few have focused particularly on the how generative artificial intelligence applied in Social Studies instruction. Most existing research focuses on student performance, learner engagement, and general technology adoption, but fewer studies only investigate the personal experiences of Social Studies teachers on how generative AI was used in their lessons. Current knowledge remains limited regarding Social Studies teachers' readiness, challenges, adaptability, instructional approaches, and attitudes toward the use of generative artificial intelligence in teaching. This gap implies to further examine how Social Studies teachers perceive and experience the integration of generative AI in classroom instruction. Recent research suggests that the successful integration of AI-supported learning environments largely depends on teachers' attitudes, preparedness, and openness to adopt AI technologies (Viberg et al., 2024).

Statement of the Problem

The application of AI-supported technology in education opens prospects for interactive learning, but also poses problems such as the appropriate application of such technology in teaching, its evaluation, and teacher preparation for the integration of this technology in their practice (Crompton & Burke, 2023). This study explored how generative AI technologies are utilized in Social Studies instruction and how they affect the teaching and learning process. Specifically, the study aimed to examine the experiences, challenges, and opportunities associated with the application of AI-based tools among Social Studies teachers during classroom instruction. This study sought to answer the following research questions:

1. What are the challenges faced by Social Studies teachers in integrating generative artificial intelligence (AI) in teaching?

2. How do teachers cope with the challenges in integrating generative artificial intelligence (AI) in teaching?

3. Based on the findings of the study, what program may be proposed to capacitate teachers in integrating artificial intelligence (AI) in instruction?

METHODOLOGY

This study utilized a qualitative descriptive phenomenological research design to examine the experiences, perceptions, and insights of Social Studies teachers regarding the integration of generative artificial intelligence (GenAI) in classroom instruction. The qualitative approach was appropriate because it allowed the researcher to gain a deeper understanding of the teachers' lived experiences, including the challenges they encountered, the coping strategies they used, and the adjustments they made in integrating AI into teaching and learning. Through this approach, the study was able to explore how teachers experienced the use of AI technologies and how these experiences influenced their classroom practices and interactions with students.

Research Participants

The sample consisted of ten (10) Social Studies teachers from Montevista National High School. Participants were identified based on the inclusion criteria to ensure richness and credibility of data. These criteria include that participants is currently handling Social Studies subject, with minimum of one (1) year of teaching experience in Social Studies and demonstrated actual use or exposure to AI-related or digital tools such as Canva, Gemini, and other learning platforms.

Through this sampling, participants who did not satisfy the criteria were excluded from the study. This is significant considering that teachers' experiences should form the foundation for building a program for effective integration. This design supported my phenomenological aim to capture the genuine experiences, allowing researchers to dig into the adoptive strategies and insights towards capacitation.

Research Instrument

The study employed a focus group discussion (FGD) approach with the aid of a semi-structured interview guide to investigate the experiences of social studies teachers in using generative AI in their teaching in class. The guide questions were formulated according to the research objectives, research questions, and relevant literature to make sure that the guide aligns with the goals of the study. Through the use of the semi-structured interview guide, the researcher was able to pose follow-up questions to obtain valuable information from the participants.

As for the validity of the research instrument, guide questions were evaluated and validated by three experts in research whose doctoral degree may be either in the field of EdD or PhD before the conduct of the FGD. Suggestions made by these experts were taken into consideration to further improve the guide questions. Based on Creswell, J. W. and Poth, C. N. (2016), qualitative research instrument should undergo evaluation process before being used for qualitative research so that valuable information will be collected from respondents.

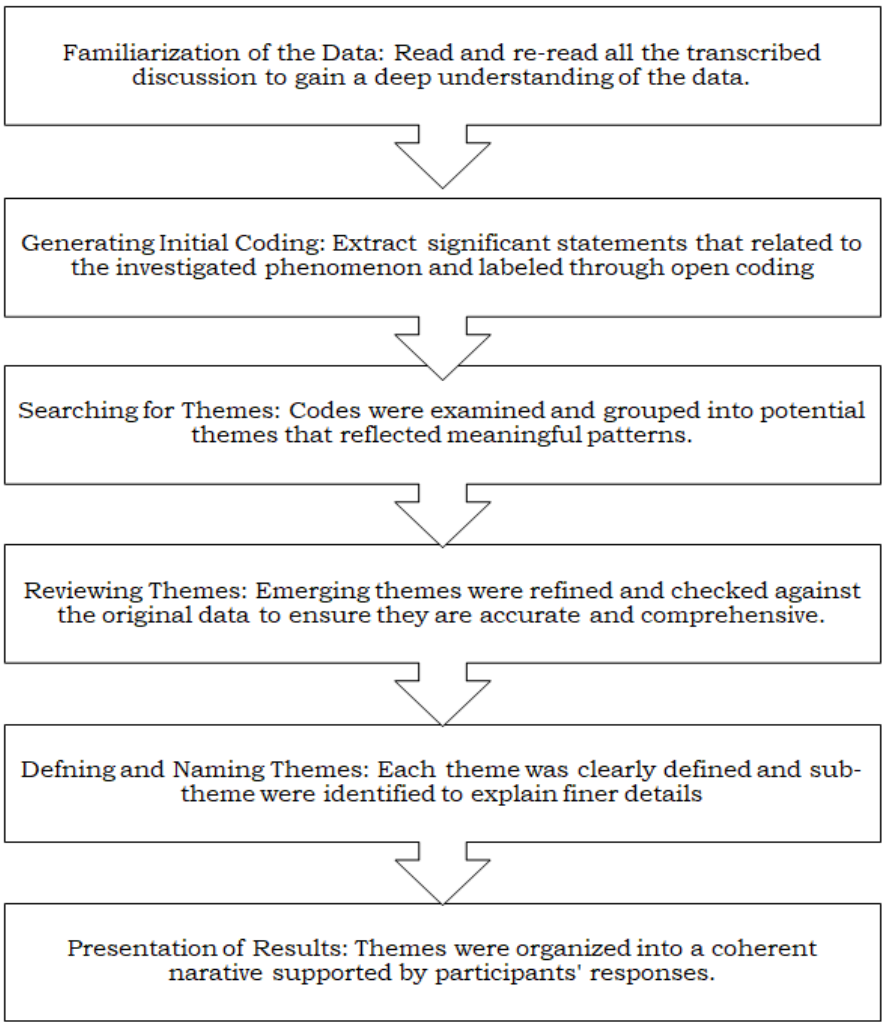


Figure 1. Analytical Framework of the Study

RESULTS AND DISCUSSION

The findings are organized under three broad areas: (1) *Challenges in AI Integration*, (2) *Coping Strategies and Professional Adaptations*, and (3) *Insights into Effective AI Use in Social Studies Instruction.* Each theme is supported by participant quotations and triangulated with recent literatures to ensure contextual and theoretical grounding.

Table 1Challenges Faced by Social Studies Educators in Generative Artificial Intelligence (AI) Integration

Emergent Themes	Core Ideas	Significant Narratives
Inadequate Technological Infrastructure	Infrastructure	Don't have stable connection. Because there are areas in our school where connectivity really does not reach. There are still classrooms and students who do not have access to TV, speakers, and other tools that can help support smooth classroom instruction. (FGD-P4).
	Accessibility	The limited access to resources, especially reliable internet. *(FGD-P10)*
Capacity Building and Professional Readiness	Upskilling	As teachers, we also need to undergo trainings like these so that we can become more skilled in using AI (FGD-P6)
	Constraints	We haven't had any structured capacity-building sessions yet, so most of what we do is self-taught. (FGD-P10)

Institutional Policies and Administrative Support	Provision	The provision of laptops, and it is easier and faster for us to finish our tasks. (FGD-P5).
	Motivation	When the institution recognizes our needs and provides even basic tools, we become more confident and more motivated (FDG-P6).
	Inconsistency	Some AI tools were introduced but not strictly implemented; they were only encouraged by institutional policies. (FGD-P2)
Technological Compatibility and Obsolescence	Compatibility	Some AI platforms require software or hardware that we do not have. (FGD-P10).
	Frustration	The app suddenly lags and crashes, and time runs out before it can even be fixed (FGD-P9).
Pedagogical Concerns Overreliance, Accuracy, and Ethics	Dependency	They rely too much on AI. They no longer think critically or fully understand the information they research. (FGD-P2)
	Inaccuracy	Their responses are not 100% accurate. (FGD-P3)
	Ethical risk	Content accuracy can provide wrong information. Ethical implications include worries about bias, plagiarism, and violation of privacy. (FGD-P10)
Preservation of Human-Centered Pedagogy	Hesitation	Personal and meaningful approach to teaching might be lost. The emotional connection of students to history and other civic issues in Araling Panlipunan might also disappear (FGD-P10)
	Balance	AI was used to support not as a substitute teacher (FGD-P4).
Digital Literacy as a Driver of Innovation and Anxiety	Intimidation	If teachers are comfortable with technology, of course we will be more willing to explore AI (FGD-P9).
	Inadequacy	As for my level of digital literacy, I would say I am still at level three out of ten (FGD-P8)
	Overwhelm	*T*eachers with low digital literacy often feel overwhelmed…view it as something too complicated or only for tech-savvy people. (FGD-P10)

Table 2 Coping Strategies for Generative Artificial Intelligence Integration in Social Studies Instruction

Emergent Themes	Core Ideas	Significant Narratives
Collaborative Coping and Peer Support	Exploration	*We* cope by doing what we are best at, such as researching online and asking our co-teachers who can help us with AI integration. (FGD-P5)
	Collaboration	We cope in a usual way. Asking expert co-workers and seeking advice and ideas from them. Most of the time, we really ask to be taught when it is already necessary. Because of this, we have collaboration so we can learn (FGD-P7)
	Teamwork	In the teaching profession, collaboration becomes a lifeline. We share strategies, demonstrate tools. It builds confidence and skills. It provides emotional encouragement. (FGD-P6)

Self-Directed Learning and Resourcefulness	Resilience	Teachers are now challenge of integrating AI teaching. Innovation is in demand even in the midst of limitations (FGD-P1).
	Resourcefulness	Through self-exploration and collaboration with my fellow teachers because we are known to be resourceful (FGD-P3).
Professional Development and Formal Training	Training	Teachers cope by attending seminars or trainings. We can only officially attend to it once it is supported by memorandum (FGD-P4)
	Ethics	Teachers can participate in training about digital ethics and AI literacy so that we can understand what the possible risks of using AI in education (FGD-P9)
	Upskilling	We really need training or seminars related to this. This will strengthen my skills in integrating into Araling Panlipunan class instruction. (FGD-P8)
	Regulation	if challenges such as academic integrity and students' overreliance on AI are properly addressed. Clear guidelines on the use of AI are necessary so that it can be used properly and responsibly (FGD-P2)
Gradual and Strategic Adoption of AI	Incrementalism	Many cope by starting with simple AI applications before fully integrating them into lessons. To focus on learning goals and not just the technology (FGD-P1).
	Alignment	I start with simple tools and aligning AI use with clear learning goals (FGD-P3-2.1).
	Caution	Start with small and easy tasks..can really build teachers' confidence. Transition in using AI becomes less intimidating. (FGD-P10-2.1)
Institutional Support and Structured Professional Development	Regulation	Better for teachers to receive capacity training and seminars . convenient to teach if we have premium access.. is already DEPED-regulated. (FGD-P5)
	Opportunity	More trainings, seminars and collaborative session among social studies educators so that I can grasp something new and valuable in the field of teaching (FGD-P3)
Self-Directed and Informal Learning	Continuity	Since there are no available trainings, what happens is we initiate searching online. We watch YouTube (FGD-P1).
Collaborative and Practice-Based Learning	Accessibility	Workshops and seminars allow teachers to practice hands-on, ask questions, and build confidence in. Seminars are accessible and free because many of us want to join (FGD-P8)
	Practice	Learning through collaboration, practice-based learning such as role play simulation and reflective discussions (FGD-P7). The sessions already include hands-on activities, demos, and real-life classroom applications (FGD-P10).
	Limitation	Program are still limited and often not tailored explicitly to Social Studies content (FGD-P4).

Capacity Building and Professional Readiness	Confidence	With proper guidance and support, these trainings help AI become a useful ally (FGD-P10).
S*trategies or teaching models do educators use to effectively integrate AI while maintaining curriculum goals.*	Engagement	It is quite applicable and practical to use ang game game-based teaching approach and interactive lecture in class using AI tools (FGD-P5)
	Enhancement	teaching models like Canva, Google Classroom, and ChatGPT are the most helpful. (FGD-P7).
	Flexibility	I used blended learning as long as it is aligned with the competencies..mostly blended learning, personalized learning, project-based learning (FGD-P6)
	Supplementation	AI activities that supplement our traditional teaching practices and are also aligned with competency-based objectives (FGD-P10)
Teachers address the equity gap among students with varying access to AI-driven educational technologies.	Limitation	Share devices, use printed versions of digital tasks, or schedule time in areas with internet access. (FGD-P3). Teachers also lend to make sure that the students can make outputs (FGD-P6).
	Accommodation	Use printed modules or activity sheets for students and time in using devices can also be divided so everyone can use them (FGD-P6).
	Bayanihan	Work in teams so they can also access and help their classmates (FGD-P10).
P*eer collaboration or community support play in helping teachers navigate AI integration.*	Intervention	Collaboration every Monday to address some of the problems … the use of technology. (FGD-P1)
	Mentoring	Mentoring and collaborative spaces like LAC sessions. it is better to help each other (FGD-P2)
	Empowerment	Not only for technical support but also emotional and professional support (FGD-P5)
	Bayanihan	Whoever knows a little teaches the others, and that builds trust and encouragement. (FGD-P10)

Activity Proposal of AISTEP

A. Profile of the Program	
Program Title	**AI-Enabled Social Studies Teaching Enhancement Program (AISTEP)**
Rationale	This proposed capability-building initiative called the AI-Enabled Social Studies Teaching Enhancement Program or AISTEP was created in response to the needs of Social Studies teachers from Montevista National High School concerning the adoption of generative artificial intelligence in education. Through the proposed program, Social Studies teachers will be able to hone their skills in using technology effectively and ethically by means of conducting training workshops, collaborative sessions, demonstration activities, and instructional design related to the proper

	application of generative AI for teaching Social Studies. In addition, the capability-building program is expected to contribute to teachers' digital preparedness, encourage more innovative approaches to teaching, and promote professional development among them in accordance with the Department of Education's expectations.
Program Objectives	The program aims to: • Enhance teachers' AI literacy and technical skills in using generative AI tools • Strengthen pedagogical integration of AI in Social Studies instruction • Promote ethical and responsible use of AI in the classroom • Foster collaborative learning environments through peer support and mentoring • Support sustained and effective implementation of AI-enhanced teaching strategies

B. Program Components

The components of this program include:

1. Training and Workshops

- Introduction to generative AI tools (e.g., content generation, lesson planning, assessment tools)
- Hands-on sessions on integrating AI into Social Studies lessons
- Workshops on designing inquiry-based and interactive activities using AI

2. Pedagogical Integration Sessions

- Aligning AI tools with learning competencies and objectives
- Developing AI-supported lesson plans
- Demonstration teaching and model classes

3. Ethical AI Use and Digital Responsibility

- Data privacy and protection
- Understanding algorithmic bias
- Promoting responsible and transparent AI use in education

4. Professional Learning Communities (PLCs)

- Regular meetings for sharing best practices and experiences
- Peer mentoring and coaching
- Collaborative lesson planning and reflection sessions

5. Technical and Administrative Support

- Provision of necessary digital tools and internet access
- IT support for troubleshooting AI tools
- Clear institutional guidelines and policies on AI use

C. Phased Implementation strategy

The proposed program will use a phased implementation strategy to help teachers gradually build their knowledge and skills in integrating AI into classroom instruction. This step-by-step approach allows teachers to gain confidence in using AI tools, starting from basic applications toward more advance instructional practices.

Phase	Courses
Phase 1 (Beginner)	Basic AI tools for lesson preparation and content generation
Phase 2 (Intermediate)	Use of AI for interactive learning and student engagement
Phase 3 (Advanced)	Integration of simulations, data analysis, and inquiry-based AI activities

D. Implementation Plan

Implementation Plan of AISTEP

Phase	**Activities**	**Timeline**	**Persons Involved**
Preparation	Needs assessment, planning, resource allocation	Month 1	School heads, coordinators
Training	Workshops and seminars	Months 2–3	Trainers, teachers
Implementation	Classroom integration and PLC sessions	Months 4–6	Teachers, administrators
Evaluation	Monitoring, feedback, revision	Month 7	School leaders, researchers

This section discusses the time frame and flow on how to implement this program.

E. Monitoring and Evaluation

This process determined the different phases, actions, timeline, and persons responsible for ensuring successful and efficient implementation of the project. The process produced the following:

- Ongoing feedback from teachers and students
- Classroom observation and performance evaluation
- Evaluation of the program's effectiveness and improvements.

F. Expected Outcomes

The positive impact that the suggested program is expected to achieve includes better competences of teachers in integrating artificial intelligence into their lessons in class. Through training and collaboration, the program expects to improve teaching and learning processes. Some of the expected impacts from this program include:

- Improved teacher competence and confidence in using AI
- Enhanced student engagement and learning outcomes
- Increased collaboration among teachers
- Ethical and responsible use of AI in instruction
- Sustainable integration of AI in Social Studies teaching

G. Sustainability Plan

To ensure long-term impact, the program will:

- Institutionalize regular training and refresher courses
- Strengthen PLCs as continuous support systems
- Integrate AI practices into school policies and curriculum planning
- Provide ongoing technical and administrative support

The study's main findings include:

1. The study determined that the integration of generative AI poses interconnected barriers to Social Studies teachers. These barriers included professional preparedness, digital literacy deficiency, unstable internet connectivity, lack of technology resources, data privacy and misinformation, opposition to change, and unequal student readiness towards generative AI usage in the classroom.

2. Various coping strategies were implemented, including self-directed learning, peer collaboration, involvement in professional learning communities, blended learning techniques, and continual exploration of AI technologies and digital platforms. Teachers engaged in evaluating AI-assisted materials effectively and modified their teaching strategies depending on learners' varying levels of digital literacy skills.

3. The study further found that teachers regarded generative artificial intelligence (AI) as an auxiliary educational resource that improves learner engagement, interaction in the classroom, creative abilities, and teaching effectiveness when used responsibly and ethically. The participants underscored that AI should supplement and not supersede educators in Social Studies education because human guidance, critical thinking, ethics, and interactions between educators and learners are crucial.

4. Based on the findings mentioned above, the recommended capacity building strategy was intended to enhance digital competence, pedagogical competence, ethical competence, and confidence in using generative artificial intelligence for classroom teaching. This strategy would involve consistent professional development, collaboration among participants, technical support, and policies encouraging proper and effective integration of AI in Social Studies lessons.

Implications

The outcomes of this study help make sense of the issues that relate to integrating generative artificial intelligence in Social Studies education. The results made it possible to point out some critical aspects that would have an impact on educational practice, institutional support, and future studies. This section presents the implications in terms of educational practice and future research..

Educational Practice. The findings indicate that there is a need for incorporating the concept of AI into the learning process through taking a holistic approach. Teachers should improve their technological competencies,

adopt a pedagogic strategy that complements the application of generative AI, and become ethically literate for the success of the incorporation. There should be leadership support, provision of appropriate infrastructure, and clear institutional policies to support the responsible adoption of generative AI in schools. Professional learning communities such as professional learning networks and mentoring systems, play a significant part in promoting the sharing of knowledge as well as problem-solving activities among the teachers.

For Further Research. Future researcher are encourage to focus on investigations of professional development models that promote sustainability and scalability by not only addressing the practical issues of integrating AI technology into classrooms but also the ethical concerns associated with the use of generative AI in Social Studies education. The findings presented in this paper reveal that teachers frequently depend on autonomous learning and teamwork owing to the lack of adequate training. Therefore, there is a dire necessity for researchers to examine professional development programs that are flexible, timely, and oriented towards disciplinary objectives, which will facilitate developing effective means of preparing educators to apply AI technology in their practice successfully.

Studies measuring the influence of generative AI-powered Social Studies teaching on engagement, critical thinking, and analysis over time need to be conducted. Though qualitative data obtained during this research indicates the usefulness of using AI tools in terms of increasing engagement and inquiry, the influence of AI technologies on cognitive development needs more exploration. It may be beneficial to conduct systematic longitudinal studies to find out if the gradual introduction of AI technologies aligned with teaching practice yields positive results concerning cognitive development of students.

It is important that research focuses on examining leadership, policies, and equity theories that affect the implementation of AI in education. While institutional support, resource availability, and policies were key facilitators in this study, there are significant hurdles in under-resourced settings and where fragmented policies prevail. Comparisons among schools with different amounts of administrative support can help identify useful organizational models and conditions for the sustainable implementation of AI technology. Also, student-focused studies focused on the accessibility and engagement of AI-enhanced lessons can be valuable in designing pedagogy for an equitable classroom.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations are put forward in order to facilitate an efficient and sustainable integration of generative AI into social studies teaching. These recommendations are consistent with the studies conducted by Kasneci, E., et al. (2023) and UNESCO (2023), which highlighted the necessity for teachers to be ready for working with AI technologies.

For Teachers. It is strongly recommended for social studies teachers to constantly improve their knowledge of AI and increase their pedagogical and moral competencies by joining various training, webinar, workshop sessions, and conducting independent research on AI in education. Also, teachers can engage themselves in the formation of Professional Learning Communities (PLC) where they will be able to exchange experiences and learn new ways of teaching from other educators. Teachers must adopt gradual approach in incorporating AI into lessons, making sure that their practice aligns with their goals and follows ethical guidelines (Kasneci et al., 2023).

For School Administrators. School leaders should provide strong institutional support through the establishment of consistent and discipline-based professional development sessions on the application of AI technology in education. It is also advised that the administrators ensure access to the required technological infrastructure including high-speed internet connection and necessary digital tools for implementing AI technology in the classrooms. Furthermore, schools must adopt policies that guide and regulate the adaptation of AI technology ethically (UNESCO, 2023)..

For the Department of Education and Policymakers. The Department of Education must consider formulating clear policies and guidelines on how to incorporate AI technologies into Social Studies curricula. Policymakers need to consider allocating more resources toward developing teachers' competencies regarding integrating AI

in classrooms. They can conduct an evaluation process to monitor AI integration's effectiveness in achieving learning objectives.

For Curriculum Developers. The curriculum designers need to find ways of incorporating AI in a manner that promotes critical thinking, inquiry, and digital literacy skills among students. Competencies developed through the integration of AI technologies need to be based on their functions such as simulations, data analysis, and problem-solving processes.

For Future Researchers. Future researchers also focus on conducting studies in the form of experiments and observations that will investigate the influence of integrating AI in classroom education. Their findings may help improve student learning by addressing challenges such as limited access to technological tools, teacher readiness, and equity issues.

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