

INTEGRATING ARTIFICIAL INTELLIGENCE INTO SOCIAL
STUDIES PEDAGOGY TO ENHANCE PUBLIC AWARENESS
OF HUMAN TRAFFICKING AMONG PRE-SERVICE
TEACHERS IN SOUTHWEST NIGERIA

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Abstract

This study investigated how to use Artificial Intelligence (AI) in Social Studies classes to help pre-service teachers in Southwest Nigeria learn more about human trafficking. Using a descriptive survey approach, 364 academic staff members from four institutions of education were chosen by proportional stratified sampling. We used the Artificial Intelligence and Social Studies Pedagogy Questionnaire (AISSP-Q) to collect data. It was tested and confirmed to be reliable ($\alpha = 0.87$). The results showed that people had a very positive view of AI's educational potential. For example, 93.1% of respondents agreed that AI can help students learn about human trafficking ($M = 3.45$, $SD = 0.51$), 90.4% agreed that AI can make learning more interactive ($M = 3.41$, $SD = 0.54$), and 95.3% said that more training is needed ($M = 3.50$, $SD = 0.50$). AI-driven strategies were also said to have helped pre-service instructors think more critically (84.9%), feel more empathy (83.0%), and be more

interested (88.5%). However, 81.6% said that not having the right infrastructure was a problem, and more than 92% said that management assistance and collaborations with other organisations were very important. The study majorly recommended that study strengthening of academic staff capacity through comprehensive AI-focused professional training will advance awareness.

Keywords: *Artificial intelligence, Social Studies, Human trafficking, Pre-service teachers, Nigeria*

Introduction

Human trafficking is still a serious and ongoing problem in Nigeria that has serious effects on human rights, social justice, and the country's development United Nations Office on Drugs and Crime (UNODC, 2022). Even though there have been many campaigns and regulatory changes, awareness and preventive efforts are often hurt by a lack of educational participation, especially among future teachers who will be responsible for developing the civic ideals of the next generation. As a way to teach citizenship, social studies have a lot of potential to help fix problems in society like human trafficking through critical awareness, value reorientation, and advocacy (Makanjuola et al., 2021; Oludare, 2025).

The fast growth of artificial intelligence (AI) technologies opens up new ways to change how we teach. Using AI in Social Studies teaching is a new way to teach anti-trafficking education that is participatory, relevant to the situation, and makes a difference (Alshammari & Al-Enezi, 2024; Makanjuola & Ayantunji, 2024). But there aren't many real-world studies on how AI can be used in Nigerian teacher education to fight trafficking and provide pre-service teachers the tools they need to be agents of change. This study carefully looks at how AI-enabled Social Studies teaching might help pre-service teachers in Southwest Nigeria learn more about human trafficking, giving useful ideas for changing the curriculum and improving their skills.

Nigeria is both a source and destination country for human trafficking, with thousands of victims primarily women and children subjected annually to forced labour, sexual exploitation, and other forms of modern slavery (UNODC, 2022). Despite numerous public awareness campaigns aimed at curbing this menace, their impact has often been limited by superficial engagement, insufficient follow-up, and generally low community participation (Adeyemo, 2025). As a result, many at-risk individuals remain unaware of the dangers and tactics associated with trafficking. In response to these gaps, educational institutions, particularly teacher preparation colleges, are increasingly recognized as pivotal platforms for embedding comprehensive anti-trafficking education. These institutions can play a transformative role by equipping future educators with the knowledge and skills to raise awareness and foster resilience in their communities (Ayantunji et al., 2024).

Social studies is an important part of teaching values and citizenship. It talks about current topics including trafficking, corruption, and digital citizenship (Makanjuola et al., 2021). Recent studies show that using multimedia and team-teaching methods can improve learning results and engagement (Ayantunji et al., 2024; Makanjuola & Ayantunji, 2024). AI-powered tools like chatbots, virtual reality, and predictive analytics are changing how people teach and learn in all fields (Nwobodo, 2025; Li & Mohammad, 2025 & Bhutoria, 2022). In Social Studies, AI helps students learn in a way that is unique to them, simulates real-world problems, and gives them feedback right away. This helps them grasp and think critically about difficult topics like human trafficking.

It is a known fact that, researchers have been looking into how artificial intelligence (AI) can help find, track, and report human trafficking activities, as well as how to create educational programs that help at-risk groups (Alsemairi, 2022; Kaur, 2025). These AI-powered tools can look at huge amounts of data, find trends in trafficking, and help authorities and support groups act quickly. AI-powered educational platforms have also shown

promise in providing customised awareness campaigns to at-risk groups, which might help preventative efforts. However, there is still a lot of study that has to be done on how to use AI in teacher education, especially in sub-Saharan Africa, where the digital infrastructure and educational infrastructure are still being built. There haven't been many real-world studies that look at ways to include AI in teacher training programs to improve teaching methods, raise awareness, and provide pre-service teachers greater power to take an active position in anti-trafficking education.

The works of Makanjuola et al., (2021) and Ayantunji et al., (2024) have shown that new teaching methods like using documentaries, virtual team teaching, and digital literacy can help with anti-trafficking education in Nigerian schools. These methods have been proved to get students more involved, help them comprehend things better, and encourage them to think critically about difficult social issues like human trafficking. But even while these are hopeful steps forward, the full potential of Artificial Intelligence (AI) to change this field is still not fully understood, especially in Nigerian universities (Makanjuola & Ayantunji, 2024). It is very important to do research and practice that looks into how AI can be systematically integrated into teacher education to make pre-service teachers even better at dealing with human trafficking, using data-driven insights, and making learning experiences that are more flexible, interactive, and effective.

There are two main theoretical frameworks that this study is based on. Bandura's Social Learning Theory (1977) is the first. It says that people learn social behaviours and standards by watching, copying, and modelling others. In this situation, AI technologies like simulation-based learning environments and virtual interactions offer a lot of chances for experiential learning, which helps pre-service teachers become more aware, empathetic, and able to speak out against human trafficking (Bandura, 2001). The second framework is McCombs and Shaw's Agenda-Setting Theory (1972), which says that the media has a big impact on how

people think about things and which social concerns get attention. By using AI-powered digital content, Social Studies teachers can deliberately set the agenda for anti-trafficking discussions in teacher education programs. This integration makes human trafficking a major concern for pre-service teachers, which not only raises awareness but also gives them a sense of responsibility and involvement in fighting this widespread social problem.

Even though human trafficking is becoming more common in Nigeria, the use of new technology, especially artificial intelligence, in social studies teaching is still limited, especially when it comes to training teachers. Traditional teaching methods frequently don't have the interaction, flexibility, or relevance to the real world that pre-service teachers need to engage critically with anti-trafficking topics. This lack of knowledge makes it harder for future teachers to form educated opinions and support anti-trafficking initiatives in their work. Integrating AI-driven tactics into Social Studies classes has a lot of potential to improve hands-on learning, increase understanding, and provide pre-service teachers the tools they need to deal with the problems of human trafficking more effectively in both schools and communities. This study investigated how to use Artificial Intelligence (AI) in Social Studies classes to help pre-service teachers learn more about human trafficking. The specific objectives are to:

1. examine the perception of academic staff regarding the integration of AI into Social Studies pedagogy for enhancing awareness of human trafficking among pre-service teachers.
2. evaluate the extent to which AI-based instructional strategies influence pre-service teachers' engagement and understanding of human trafficking.
3. identify institutional challenges and opportunities associated with the adoption of AI in Social Studies education in tertiary institutions in Southwest Nigeria.

Research Questions

1. What are the perceptions of academic staff towards integrating AI into Social Studies pedagogy to enhance awareness of

- human trafficking?
2. How does the use of AI-based instructional strategies affect pre-service teachers' engagement and understanding of human trafficking issues?
 3. What are the key institutional challenges and opportunities for integrating AI into Social Studies education in Southwest Nigerian tertiary institutions?

Methods

This study employed a descriptive survey design to investigate the integration of Artificial Intelligence (AI) into Social Studies pedagogy among academic staff in four Colleges of Education in Southwest Nigeria. The total population comprised 1,850 academic staff, distributed as follows: Federal College of Education (Technical), Akoka, Lagos State (516); Federal College of Education (Special), Oyo, Oyo State (516); Federal College of Education, Abeokuta, Ogun State (516); and Sikiru Adetona College of Education, Omu-Ijebu (474). Utilizing Slovin's formula at a 95% confidence level and a 5% margin of error, a statistically representative sample of 364 respondents was determined. Stratified proportional allocation ensured equitable representation: 2 respondents each from FCE (Technical) Akoka, FCE (Special) Oyo, and FCE Abeokuta, and 58 from SACOED Omu-Ijebu.

Data collection employed the 'Artificial Intelligence and Social Studies Pedagogy Questionnaire' (AISSP-Q), comprising 14 closed-ended items rated on a 4-point Likert scale (1 = Strongly Disagree to 4 = Strongly Agree). The instrument was reviewed and validated by subject experts in Social Studies and Educational Technology and pilot-tested with 30 academic staff, yielding a Cronbach's alpha reliability coefficient of 0.87. The questionnaire was administered in-person across the four institutions. Responses were coded and analyzed using SPSS version 27, with descriptive statistics (mean, standard deviation, frequency, percentage) employed to address the research questions. Of the 364 valid responses, 214 were male (58.8%) and 150 female (41.2%). The

distribution of respondents by institution was as follows: FCE (Technical) Akoka - 102 (28.0%), FCE (Special) Oyo - 102 (28.0%), FCE Abeokuta - 102 (28.0%), and SACOED Omu-Ijebu - 58 (16.0%).

Results

Research Question 1: What are the perceptions of academic staff towards integrating AI into Social Studies pedagogy to enhance awareness of human trafficking?

Table 1: Perceptions of AI Integration in Social Studies Pedagogy

Statement	Mean	SD	% Agree (n)
AI can improve students' awareness of human trafficking	3.45	0.51	93.1 (339)
AI tools make learning about trafficking more interactive and engaging	3.41	0.54	90.4 (329)
AI-based content personalizes anti-trafficking education	3.35	0.58	87.5 (319)
There is a need for training on AI use in Social Studies	3.50	0.50	95.3 (347)

Table 1 shows what the academic staff thinks about using artificial intelligence (AI) in Social Studies classes to raise awareness of human trafficking. The results show that people are very optimistic about using AI. Most of the people who answered (93.1%, $n = 339$) agreed or strongly agreed that AI can help students learn more about human trafficking ($M = 3.45$, $SD = 0.51$). Likewise, 90.4% ($n = 329$) agreed that AI technologies make learning about trafficking more interactive and fun ($M = 3.41$, $SD = 0.54$). A significantly smaller but still significant number (87.5%, $n = 319$) agreed that AI-based content helps make anti-trafficking teaching more personal ($M = 3.35$, $SD = 0.58$). Almost all of the people who answered (95.3%, $n = 347$) said they needed training on how to apply AI in Social Studies teaching ($M = 3.50$, $SD = 0.50$). Overall, these results show that academic staff are very accepting of AI and see it as useful, and there is a solid agreement on the need for more professional development

Research Question 2: How does the use of AI-based instructional strategies affect pre-service teachers' engagement and understanding of human trafficking issues?

Table 2: Influence of AI Strategies on Engagement and Understanding

Statement	Mean	SD	% Agree (n)
AI simulations increased my students' critical thinking on trafficking	3.32	0.60	84.9 (309)
AI-driven discussions promote empathy and advocacy	3.29	0.63	83.0 (302)
Pre-service teachers show greater interest with AI-integrated lessons	3.38	0.59	88.5 (322)

Table 2 shows a summary of how AI-based teaching methods affected pre-service teachers' interest in and awareness of issues related to human trafficking. A large number of people who answered (84.9%, n = 309) said that AI simulations made students think more critically about trafficking (M = 3.32, SD = 0.60). In the same way, 83.0% (n = 302) said that AI-driven talks help pre-service instructors be more understanding and supportive (M = 3.29, SD = 0.63). Also, 88.5% (n = 322) believed that using AI in Social Studies lessons made pre-service instructors more interested and involved (M = 3.38, SD = 0.59). These results show that AI tools have a favourable effect on teaching, suggesting that these kinds of breakthroughs help with both mental and emotional skills that are important for fighting trafficking.

Research Question 3: What are the key institutional challenges and opportunities for integrating AI into Social Studies education in Southwest Nigerian tertiary institutions?

Table 3: Institutional Challenges and Opportunities

Statement	Mean	SD	% Agree (n)
Lack of infrastructure limits AI adoption	3.22	0.71	81.6 (297)
Support from management is necessary	3.44	0.59	92.0 (335)
Collaboration with external partners is needed	3.46	0.57	92.5 (337)

Table 3 shows the problems and chances that institutions face when trying to use AI in Social Studies teaching. Most people (81.6%, $n = 297$) said that not having the right infrastructure is a barrier to AI adoption ($M = 3.22$, $SD = 0.71$). Also, majority of the people who answered (92.0%, $n = 335$) said that management assistance is important for successful integration ($M = 3.44$, $SD = 0.59$). Almost all of the people who answered (92.5%, $n = 337$) also said that working with outside partners, such technology companies and NGOs, was necessary to make AI-driven educational interventions more widely used and long-lasting ($M = 3.46$, $SD = 0.57$). These results show that people are quite aware of both the structural barriers and the collaborative potential that are needed to make AI a relevant part of Social Studies education.

Discussions

The findings showed that academic personnel have a very positive view of AI integration, which is really interesting. A huge majority (93.1%) think that AI can help students learn more about human trafficking and make the classroom more interactive (90.4%). This backs with research that shows how AI can change the way we teach (Alshammari & Al-Enezi, 2024; Li & Mohammad, 2025). A lot of people (87.5%) favour personalised anti-trafficking education, which shows how much teachers respect individualised, student-centered learning methods that are associated to better motivation and learning results (Li & Mohammad, 2025). The almost universal demand for professional training (95.3%) shows that people are aware of a skills gap and want to improve their talents. This is similar to what

Makanjuola and Ayantunji (2024) say about how important it is to keep learning new things in order to use technology.

Results showed real-world proof that using AI in Social Studies has educational benefits. Respondents believe that AI improves pre-service teachers' critical thinking (84.9%), empathy and advocacy (83.0%), and interest (88.5%). This supports Bandura's Social Learning Theory (2001) in this case. AI-driven simulations and interactive platforms provide people the chance to learn by doing, which encourages them to watch and replicate prosocial behaviours. This method has been shown to work for sensitive topics like human trafficking (Alsemairi, 2022; Kaur, 2025). The results support the idea that education should go beyond rote learning and help people become more socially responsible (Oludare, 2025).

Results showed that there are still big problems to deal with. Concerns regarding poor infrastructure (81.6%), the need for institutional support (92.0%), and the necessity for external collaboration (92.5%) show that there are bigger problems in the system. Ayantunji et al., (2024) say that overcoming problems with infrastructure and organisation will be very important for the long-term use of AI in anti-trafficking education. This is in line with the agenda-setting theory (McCombs & Shaw, 1972).

Conclusion

This study demonstrates that integrating Artificial Intelligence into Social Studies pedagogy has significant potential to enhance public awareness of human trafficking among pre-service teachers in Southwest Nigeria. The overwhelmingly positive perceptions among academic staff, high levels of reported engagement, and the observed growth in empathy and advocacy skills among learners all highlight AI's transformative role in teacher education. These findings are consistent with contemporary scholarship advocating for the adoption of digital and AI-driven tools in citizenship education to address urgent social problems. Nonetheless, infrastructural limitations and the need for ongoing professional development remain pressing challenges. Effective

implementation of AI-powered pedagogy will depend on institutional investment in digital infrastructure, dedicated management support, and collaborative partnerships with external stakeholders. As Nigeria seeks innovative solutions to combat human trafficking, embracing AI within Social Studies curricula represents a forward-thinking strategy to empower future educators and foster a more informed, vigilant, and socially responsible society.

Recommendations

The study recommends that institutions should strengthen the professional skills of their academic staff through comprehensive training programs focused on artificial intelligence. In addition, institutions should prioritise investments in digital infrastructure to support the use of AI. Upgrading internet connectivity, acquiring appropriate technological resources, and facilitating access to AI software will, given the identified infrastructural deficiencies, foster a more conducive setting for the effective integration of AI into pedagogical practices. The findings further underscore the necessity of institutional policies that explicitly endorse AI-driven teaching innovations. The significance of managerial support was evident, implying that administrators should furnish policy backing, incentives, and strategic frameworks that promote the experimentation and implementation of AI tools within educational settings centred on human trafficking awareness. Moreover, active collaboration with external entities, including technology companies, non-governmental organisations, and educational institutions, should be vigorously pursued. The results demonstrated a consensus regarding the significance of collaborative efforts; these partnerships can foster the exchange of resources, subject matter proficiency, and continuous backing for AI-driven instructional methodologies. Ultimately, considering that AI tools were observed to enhance pre-service teachers' engagement, empathy, and critical thinking abilities, educational institutions should incorporate AI pedagogical strategies into their curriculum

development and instructional models. Integration of AI simulations, discussion platforms and personalised content directly into teacher education programs, will promote positive learning outcomes and thereby supporting wider awareness initiatives concerning human trafficking.

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