

Ai-Assisted Social Work Education: Bridging the Skills Gap in Rivers State Tertiary Institutions Faculty of Social Sciences, Sociology Department Rivers State University, Nkpolu-Oroworokwo Port Harcourt, Nigeria

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<https://doi.org/10.56201/ijssmr.vol.12no9.2026.pg1.10>

Abstract

The integration of Artificial Intelligence (AI) into social work education represents a transformative opportunity to address critical skills gaps in preparing future professionals for practice in Nigeria's Niger Delta region. This article examines the current state of AI-assisted social work education at Rivers State University and other tertiary institutions, drawing from academic discourse, global scholarship, and the specific socio-economic realities of Rivers State. The paper identifies that AI innovations such as personalized learning modules, digital case studies, and interactive training simulations offer significant potential to enhance student engagement and professional readiness. However, implementation faces substantial barriers including inadequate digital infrastructure, limited staff and student digital literacy, underfunding, and the absence of comprehensive policy frameworks. The paper proposes a comprehensive framework for integrating AI into social work curricula, investing in educator training, developing public-private infrastructure partnerships, and creating culturally sensitive AI tools that respect the region's indigenous knowledge and community-based practice models. The paper concludes that strategic investment in AI-enhanced education is essential for equipping Rivers State social workers with the competencies required for effective twenty-first-century practice.

Keywords: *AI-Assisted Education, Social Work Training, Digital Literacy, Rivers State, Curriculum Development, Niger Delta*

1.0 Introduction

The way social work students learn and practice is changing globally because to AI-driven instructional tools. By providing scalable, interactive, and secure environments for skill development, large language models (LLMs), chatbots, and immersive virtual reality (VR) simulations are extending pedagogical possibilities (Carter & Culhane, 2023). Studies show that AI-enhanced simulations can greatly enhance student performance, especially in interprofessional collaboration, clinical interviews, and crisis response (Bender & Furman, 2024). Researchers have also observed that these technologies, like the Social Work Interactive Training Chatbot (SWITCH), offer "realistic client simulation, real-time counseling skill classification... [offering] a scalable, low-cost, and consistent training workflow that complements field education" (Tan et al., 2025).

Additionally, the instructional roles of LLMs have been classified into positions like "tutor (offering adaptive explanations), mentor (providing formative feedback)." research showing "their

ability to model empathetic, structured, and reflective dialog" (Alm & Ahmed, 2024), as well as a simulator (role-playing complicated social or ethical issues) and tool (helping design and content production) (Kong et al., 2025). This digital transition was hastened by the COVID-19 epidemic, which compelled educators to develop quickly and rely on AI-powered platforms to close the gap between theoretical knowledge and practical application (Bender & Furman, 2024; Mishna et al., 2024). Although higher-order skills like "learning planning may require longer or more sustained instructional support" (Zhang et al., 2025), a study found that an AI-integrated curriculum led to statistically robust improvements in Learning Habits (Cohen's $d = 0.75$) and Learning Process (Cohen's $d = 0.79$), suggesting a positive impact on student engagement. Critical engagement is crucial, though, according to research. For example, a study on AI-informed research exercises discovered that only 38.5% of AI-generated citations were entirely accurate, with students pointing out problems like "AI's superficial writing quality, reliance on hallucinated and dated evidence" (Goldkind & Wolf, 2025). This highlights the urgent need for "institutional guidelines" and "comprehensive AI literacy curricula within human services education" (Goldkind & Wolf, 2025). to address issues with plagiarism and academic integrity (Mishna et al., 2024).

AI-assisted education could be especially beneficial for Rivers State, where social work education must prepare students for practice in settings of resource scarcity, environmental degradation, and complicated cultural dynamics. Civil society organizations have expressed concern over a "persistent gas leak that poses grave health, environmental and safety risks to residents" in Bille Kingdom, where "all groundwater has been 'totally and completely polluted,' destroying fish, aquatic life, and the traditional livelihoods of residents." Research has shown how oil exploitation in Emohua, Rivers State, has led to "severe environmental degradation, including soil infertility, water pollution, and deforestation, which have disrupted agricultural and fishing livelihoods." Social workers have been forced "to engage in advocacy, conflict resolution, and community mobilization to demand justice and sustainable development" as a result of these governance gaps, underscoring the necessity of creative training methods.

Significant obstacles must be overcome, nevertheless, such as poor infrastructure, low staff and student digital literacy, and the requirement for culturally aware AI tools that honor regional expertise and community-based practice models. According to Audu (2025), "many institutions struggle with poor infrastructure, limited digital literacy, and underfunding," with obstacles such "inadequate infrastructure, limited digital skills, and policy gaps" impeding advancement in African higher education. Ibrahim and Eze (2023) highlighted that "major challenges include a lack of digital infrastructure, limited AI knowledge among faculty, and ethical concerns about AI replacing human empathy in social work education and practice". Furthermore, "key challenges include limited culturally representative datasets, diverse norms, traditional beliefs, and ethical concerns," according to a scoping review on culturally sensitive LLM-based interventions for Africa. The review emphasized that "collaboration with African researchers and communities is crucial for addressing these gaps and ensuring culturally appropriate solutions."

This article examines the current state of AI-assisted social work education at Rivers State University and other tertiary institutions, identifies barriers to implementation, and proposes a comprehensive framework for integrating AI into social work education.

2.0 Literature Review

2.1 AI in Social Work Education: Global Perspectives

AI is changing social work education in a number of ways. Social work education has long relied heavily on simulation-based learning (SBL), which replicates client encounters using live actors,

paper-based scenarios, or video recordings. AI improves SBL in three main ways: immersive VR/AR technologies that boost learner engagement and perceived realism, real-time automated feedback essential for improving judgment and clinical reasoning, and dynamic scenario production customized to each student's needs. AI-enhanced VR simulations can dynamically adjust to student behaviors, according to research, which raises ethical and pedagogical questions. A conversational "client" assistant that generates contextually relevant responses and a "evaluator" assistant that assesses learner communication and intervention skills are combined in an AI-powered VR simulation platform at New York University that employs a Retrieval-Augmented Generation (RAG) approach with OpenAI's GPT-4o-mini model. AI-based assessments of emotional attunement, therapeutic approaches, communication abilities, and ethical decision-making are given to users; the feedback aids in learning and reevaluation for further interactions. Students can now practice clinical interviewing and crisis response in controlled, repeatable settings thanks to large language models and conversational teachers. The Simulation for Competency Optimization in Practice & Education in Social Work (SCOPE-AI) project at the University of South Florida creates realistic clinical simulations using AI-powered virtual clients. Students can practice conducting assessments, interviewing clients, and choosing the best interventions in safe, repeatable settings that react dynamically and offer personalized feedback. ChatGPT can be used as a "low-cost, always-available training tool for practicing counseling techniques and interviewing skills," according to studies examining its capacity to replicate psychological counseling sessions. However, it should not be seen as a substitute for human therapists. In a similar vein, Boston University School of Social Work has incorporated generative AI-driven personas straight into their learning management system, producing authentic, text-based practice scenarios that enable MSW students to apply theory, improve their professional communication skills, and consider moral decision-making in low-risk situations. These resources are based on constructivist and experiential pedagogies, especially Kolb's experiential learning cycle, which stresses active exploration, reflection, doing, and conceptualization. In order to transform AI from a "answer machine" into an object of critical inquiry where students engage in the laborious cognitive work of reflection, conceptualization, and ethical application, recent scholarship has argued for frameworks that synthesize Kolb's experiential learning cycle with learner-centered andragogy and critical pedagogy. Each stage of this cycle is enhanced by AI technologies, which allow for data-driven reflection, iterative practice, and performance analytics. Meta-analyses provide solid proof of simulation efficacy and pedagogical alignment.

2.2 AI in Social Work Education: African and Nigerian Contexts

In Africa, AI-assisted social work education is still emerging but shows significant promise. Research indicates that AI has introduced innovations such as personalized learning, digital case studies, and interactive training simulations across tertiary institutions. However, implementation faces challenges including inadequate infrastructure, limited digital skills, and policy gaps. Audu found that "many institutions struggle with poor infrastructure, limited digital literacy, and underfunding," with training for educators remaining "a pressing need". Particularly in Nigeria, AI solutions need to be culturally aware and shouldn't undermine community-based practice models based on Ubuntu ideology and indigenous knowledge. Olawumi argues that "AI solutions should be culturally sensitive and culturally suitable," noting that "the practice of social work in Nigeria is based on the community models and infusion of AI should not compromise these models". She further underlines "the need to implement the Ubuntu

philosophy which places special emphasis on communal values, empathy, and mutual respect" . A significant gap between contemporary technology and traditional knowledge may result from the advent of AI, which frequently conflicts with customs that place a premium on community and cultural relationships. Scholars caution that "the challenge emerges when these traditional practices, which often prioritize community and cultural ties, clash with modern methods and tools, such as Artificial Intelligence (AI), in social work practices," creating "a potential disconnect between modern technology and traditional knowledge" . As researchers stress the significance of "collaboration with traditional systems, ensuring that the cultural values of each community are respected and upheld," community elders, local NGOs, and faith-based organizations continue to play important roles in African societies and can offer insightful information for AI system design. "A case for African values, interests, expectations and principles to underpin the design, development and deployment (DDD) of AI in Africa" is presented in the edited collection Responsible AI in Africa, which includes "consideration of African philosophies such as Ubuntu." There is an urgent need to train social work instructors. The lack of comprehensive legislative frameworks specifically designed for AI in social work impedes progress, and many institutions fail to provide educators with practical abilities in AI technologies for social intervention. Ibrahim and Eze noted "major challenges including a lack of digital infrastructure, limited AI knowledge among faculty, and ethical concerns about AI replacing human empathy in social work education and practice" There is an urgent need to train social work instructors. The lack of comprehensive legislative frameworks specifically designed for AI in social work impedes progress, and many institutions fail to provide educators with practical abilities in AI technologies for social intervention. Ibrahim and Eze noted "major challenges including a lack of digital infrastructure, limited AI knowledge among faculty, and ethical concerns about AI replacing human empathy in social work education and practice"

2.3 Challenges to AI Implementation in Social Work Education

Research identifies several critical challenges to implementing AI in social work education across Africa:

Infrastructure Deficits: Many regions have limited electricity and internet access, making AI tool use difficult, particularly in rural and underserved areas.

Digital Literacy Gaps: Many social workers and educators lack the technical training required to use AI systems effectively.

Underfunding: Inadequate financial resources hinder investment in technology and training.

Policy Gaps: Absence of comprehensive policy frameworks tailored to AI in social work education.

Cultural and Traditional Tensions: AI often clashes with traditional practices and indigenous knowledge systems.

Ethical Concerns: Algorithmic bias, privacy violations, and data security are legitimate concerns.

3.0 Methodology

The integration of AI into social work education is examined in this paper using a qualitative literature review methodology, with an emphasis on Rivers State and the Niger Delta. In African social work scholarship, this analytical approach is consistent with accepted practices. In their analysis of decolonizing social work fieldwork education in Africa, Bhangyi and Makoha (2023) used a "systematic qualitative literature review epistemology" to look at methods, obstacles, and opportunities for educational reform on the continent. In a similar vein, Audu (2025) implemented

a "content analysis method, which systematically examined documents and digital materials used to identify patterns, themes, and insights on AI-assisted social work education" throughout higher education institutions in Africa. Academic journal publications, conference papers, policy documents, departmental lectures, and institutional reports from Rivers State University, the University of Port Harcourt, and other Nigerian and foreign institutions are all cited in the study. Academic resources such as Google Scholar, JSTOR, and institutional repositories were used in a methodical search. Keywords included: "AI social work education," "AI-assisted social work training Africa," "digital literacy social work Nigeria," "AI in higher education Nigeria," as well as "social work curriculum development." In order to find pertinent literature on AI adoption, obstacles, and pedagogical applications, this search method is similar to that of recent studies on AI integration in African educational contexts. To find recurrent themes, difficulties, and suggestions throughout the literature, thematic analysis was used. Similar research looking into AI integration in African social work have successfully employed this strategy. In their qualitative study investigating AI's potential to empower social work students in developing nations, Revesai, Tungwa, Chisosa, and Meki (2024) used thematic analysis to find patterns and themes pertaining to AI adoption strategies. They did this by analyzing data from focus groups, interviews, and document reviews. Thematic analysis has also been used in studies on AI integration in Nigerian higher education to look at stakeholder viewpoints, implementation challenges, and policy ramifications.

Study Limitations: The lack of peer-reviewed literature on AI in social work education, particularly from the Niger Delta, is a limitation of this study. There is no research that specifically looks at AI integration in social work education in the Niger Delta, despite institutional studies from Rivers State University and the University of Port Harcourt provide localized perspectives. With conclusions applied to the local context, the analysis inevitably draws from more extensive African and international scholarship. The literature's findings that there is "limited localized research on how cultural contexts within Africa may influence experiential learning through AI tools" align with this difficulty. Researchers have also observed that the use of AI in Nigerian higher education is still in its infancy, with numerous studies pointing to enduring regulatory and infrastructure hurdles that restrict empirical research on implementation results.

4.0 Findings

4.1 Current State of Social Work Education in Rivers State

Social work education at Rivers State University and other schools in the Niger Delta functions within a setting of resource constraints, infrastructure shortages, and limited access to technology. Existing curricula include core courses in research methodologies, social statistics, and communication skills that can be altered to add AI competencies. However, dedicated programs on AI in social work practice are notably absent.

The need for digital capacity building is being increasingly recognized, as seen by recent initiatives. Digital education is crucial for youth in the Niger Delta, according to the Niger Delta Development Commission (NDDC). In an effort to improve educational opportunities through digital learning resources, the NDDC launched a massive digital education initiative in partnership with the Renewed Hope Initiative, distributing 45,000 U-Lesson tablets to primary and secondary schools throughout the nine Niger Delta states. "Digital learning holds the key to unlocking untapped potential and shaping the future of the Niger Delta region," according to NDDC Managing Director Dr. Samuel Ogbuku, highlighting the significance of educating students for a

"highly computerized modern society." In order to provide participants with fundamental digital skills for peacebuilding, Search for Common Ground has conducted digital media literacy training throughout Bayelsa, Delta, and Rivers States. The training program covers digital literacy, cyber safety, social media for peacebuilding, digital storytelling, advocacy, and fact-checking tools. It is carried out in collaboration with PIND, Stakeholder Democracy Network, and Academic Associate Peace Works with assistance from the European Union. Participants from youth organizations, media professionals, and civil society organizations have received training on how to use digital technologies to combat misinformation and advance peace in the area. However, social work education has not been the specific focus of these projects.

4.2 Key AI Competencies for Social Work Graduates

Drawing from global scholarship and the specific Rivers State context, several core AI competencies must be integrated into social work curricula:

Digital Literacy: Foundational skills in using digital tools and navigating AI-powered platforms.

Data Ethics: Understanding ethical implications of data collection, storage, and use, including privacy, algorithmic bias, and potential discrimination.

Critical Evaluation of AI: Critically evaluating AI outputs, recognizing that algorithms may contain biases and may not fully understand local nuances.

Culturally Competent Technology Practice: Using technology in ways that respect local cultures, languages, and realities.

Human-Centered Practice: Maintaining the human-centered nature of social work while leveraging technology effectively.

4.3 Gaps in Current Training

Inadequate Infrastructure: Limited internet access and digital equipment in educational institutions.

Limited Digital Literacy: Many educators and students lack technical training for AI systems.

Insufficient AI-Specific Training: Social work curricula have not systematically incorporated AI competencies.

Policy Framework Gaps: Absence of comprehensive policy frameworks for AI in social work education.

4.4 Opportunities for AI-Enhanced Education

Personalized Learning: AI can provide personalized learning modules tailored to individual student needs.

Interactive Simulations: AI-powered simulations can create realistic client scenarios for practice.

Enhanced Assessment: AI can provide automated feedback and performance analytics.

Virtual Field Placements: AI can support virtual field placements where physical placements are limited.

5.0 Discussion

5.1 Interpreting the Findings

The results are consistent with more extensive African research on AI in social work education. Personalized learning, interactive simulations, and improved evaluation are prospects that align with research conducted in South Africa and other African contexts. In a similar vein, the issues

noted—such as inadequate infrastructure, deficiencies in digital literacy, moral dilemmas, and policy inadequacies—are prevalent throughout the continent.

Rivers State faces special circumstances that call for customized solutions due to the confluence of these general issues with the particular Niger Delta limitations, environmental difficulties, and intricate cultural dynamics. Nigerian scholarship highlights that AI solutions must be culturally sensitive and should not undermine community-based practice models, making the emphasis on culturally competent and contextually relevant AI integration especially crucial.

5.2 Implications for Rivers State University

Global experience provides Rivers State University with a curriculum reform plan. Research and evidence-based practice, engagement and intervention, diversity and inclusion, and other current competences can all incorporate technology-related abilities. In order to ensure that students are ready for digital practice, AI competences can be included from the first year through field practicum. The human-centered principles of social work must also be respected in the incorporation of AI. Tools should complement ethical decision-making and interpersonal abilities, not take their place. By incorporating equity, openness, and inclusivity from the beginning, participatory design techniques can help guaranty that AI systems are consistent with these ideals.

5.3 Policy Implications

To direct the application of AI in social work education, comprehensive policy frameworks must be created. These ought to consist of accountability procedures, implementation guidelines, and ethical standards. Strategic investment in digital infrastructure is crucial, as is training for social work educators.

6.0 Recommendations

6.1 Curriculum Integration

AI competencies, such as digital literacy modules, data ethics courses, AI applications in practice, and critical evaluation of AI, should be incorporated into Rivers State University's social work curriculum. To enhance case management simulations and facilitate individualized learning, AI-assisted education ought to be used.

6.2 Educator Training

It is necessary to train social work educators so they can use AI tools for social intervention. This covers both pedagogical and technical training for incorporating AI into instruction.

6.3 Infrastructure Investment

Strategic investment in digital infrastructure is essential, including improved internet access, provision of digital equipment, and support for AI platforms. Public-private partnerships should be developed to support technology training and infrastructure investment.

6.4 Policy Development

Clear policy frameworks should be developed to guide AI use in social work education, including ethical guidelines, implementation guidelines, and accountability mechanisms.

6.5 Cultural Sensitivity

Local cultures and communities should be taken into consideration while integrating AI. This involves integrating traditional and modern methods, consulting the community, and adapting to cultural differences. AI-based treatments should be guided by the Ubuntu concept, which emphasizes empathy, respect, and community values.

6.6 Research and Evaluation

A study agenda aimed at assessing AI integration in social work education should be established at Rivers State University. Critical AI literacy, participatory co-design with students and service users, and long-term assessment of learning and practice results should all be part of this.

7.0 Conclusion

Rivers State social workers could be well-prepared for 21st-century practice with AI-assisted social work education. Personalized learning, digital case studies, and interactive training simulations are examples of AI technologies that can improve professional preparedness and student engagement. However, inadequate infrastructure, low digital literacy, underfunding, and policy gaps are important obstacles that must be overcome for integration to be successful.

A course of action is provided by the proposals for research, policy formulation, infrastructure investment, curricular integration, educator training, and cultural sensitivity. Global scholarship highlights that AI should be viewed as a tool to enhance social work practice and education rather than as a substitute for human judgment and empathy. Its intelligent and responsible implementation can result in social service systems in Rivers State and elsewhere that are more egalitarian, responsive, and resilient. Rivers State University can guarantee that its graduates are ready for the opportunities and challenges of the future by investing in AI-assisted social work education now.

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