Chapter 20
AI in Social Work Education

Yue Fang, Cao Fang, and Ruopeng An

1 Introduction

Artificial intelligence (AI) is rapidly transforming higher education, and social work education is no exception. The integration of AI-driven educational technologies, such as large language models (LLMs), chatbots, and immersive virtual reality (VR) simulations, is transforming how students learn, practice, and prepare for professional roles in their fields. These tools are expanding pedagogical possibilities and offering new avenues for experiential learning that go beyond traditional methods.

Historically, social work education has relied on human-based role-play, in-person simulations, and direct field experiences to build practice skills and professional judgment. However, the proliferation of digital technologies is challenging and complementing these conventional approaches. This shift aligns with evolving expectations for technological competence and ethical digital practice as outlined by the National Association of Social Workers (NASW), Association of Social Work Boards (ASWB), Council on Social Work Education (CSWE), and Clinical Social Work Association (CSWA) in their *Standards for Technology in Social Work Practice* (NASW et al., 2017). These standards emphasize the responsible integration of technology to enhance education while upholding the profession's core values.

The COVID-19 pandemic accelerated this digital transformation. Restrictions on in-person field placements and classroom learning forced educators to innovate rapidly. In response, many turned to AI-powered platforms and VR simulations to

Y. Fang (✉) · R. An
Silver School of Social Work, New York University, New York, NY, USA
e-mail: yf2938@nyu.edu; ra4605@nyu.edu

C. Fang
School of Social Work, The University of Texas at Austin, Austin, TX, USA
e-mail: cao.fang@austin.utexas.edu

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create scalable, interactive, and safe environments for skill development. These tools have demonstrated strong potential to improve learning outcomes, foster reflective practice, and bridge the gap between theoretical knowledge and real-world application (Huttar & BrintzenhofeSzoc, 2020; Kourgiantakis & Lee, 2020; Mitchell et al., 2022).

The integration of AI into social work education brings both promise and complexity. On one hand, AI tools can personalize instruction, provide immediate feedback, and simulate complex social scenarios, supporting the development of essential competencies. On the other hand, scholars raise significant ethical, social, and cultural concerns, including issues of privacy, algorithmic bias, transparency, and the potential erosion of human-centered values in social work (Zawacki-Richter et al., 2019). As these technologies become more embedded in educational practice, educators, researchers, and policymakers must engage critically with their implications.

Evidence supporting the effectiveness of AI-enhanced simulations is growing. Recent systematic reviews and meta-analyses show that simulated learning can significantly improve social work student outcomes, particularly for advanced learners and in mental health contexts (S. Zhang & Stepteau-Watson, 2024). This underscores the importance of continued research and critical engagement to ensure AI technologies are deployed responsibly and effectively.

This chapter focuses on AI-driven educational technologies that leverage AI to deliver learning experiences or facilitate the practice of social work skills. This focus differs from AI literacy (covered in Chap. 23), which involves teaching students to comprehend AI concepts and consider their ethical and societal implications. While AI literacy emphasizes critical understanding, the pedagogical use of AI, such as through generative models, intelligent tutoring systems, and immersive simulations, represents a distinct and rapidly evolving dimension of educational practice (Zawacki-Richter et al., 2019).

This chapter provides a comprehensive overview of AI-driven tools used in social work education. It examines their pedagogical affordances, evaluates the current evidence base, explores ethical considerations, and identifies key research gaps. Ultimately, it proposes strategic directions for integrating these technologies into social work curricula that enhance learning while remaining faithful to the profession's core values.

2 Theoretical Foundations for AI-Enabled Learning

AI-enabled learning environments are transforming the education of social work and healthcare professionals. Rooted in longstanding pedagogical theories and simulation-based practices, these environments leverage AI to expand the scope and depth of experiential learning. The integration of AI technologies into education offers new opportunities for scenario realism, responsive feedback, and individualized learning while remaining grounded in proven educational models.

2.1 Simulation-Based Learning (SBL): Historical Use, Benefits, and AI Enhancement

Simulation-based learning (SBL) has played a central role in both healthcare and social work education for decades. Traditionally, SBL relied on live actors, paper-based scenarios, or video recordings to replicate complex client interactions and clinical environments. These tools foster critical competencies, including interviewing, assessment, ethical reasoning, and interprofessional collaboration (Craig et al., 2017; Dodds et al., 2018; Lee et al., 2020; Kourgiantakis et al., 2020; Kourgiantakis & Lee, 2022). More recently, digital and AI-driven simulations have emerged, allowing learners to practice and refine skills in controlled, repeatable, and scalable ways (Egonsdotter & Israelsson, 2024; Jefferies et al., 2024).

Meta-analyses confirm that SBL produces substantial positive effects on complex skill acquisition across various educational domains (Chernikova et al., 2020; S. Zhang & Stepteau-Watson, 2024). These benefits increase further when simulations incorporate technological scaffolding and feedback mechanisms. Comparative studies confirm that well-designed computer-based simulations can match or even surpass traditional actor-led methods in promoting reflective practice and procedural skills (Egonsdotter & Israelsson, 2024; Zhang & Stepteau-Watson, 2024).

AI enhances SBL in three core ways. First, it supports dynamic scenario generation, tailoring learning experiences to meet the individual needs and progress of each student. Second, AI enables real-time, automated feedback, which is critical for developing judgment and clinical reasoning (Guraya, 2024; Q. Wu et al., 2022). Third, AI tools integrated with VR/AR technologies enhance the immersive quality of simulations, thereby increasing learner engagement and the perceived realism of client interactions (Gordon et al., 2024; Share & Pender, 2024). These developments are particularly impactful in interprofessional education, where AI systems can simulate collaborative care planning and cross-disciplinary communication (Asakura et al., 2021).

2.2 Experiential and Constructivist Pedagogies: Kolb's Cycle and AI

The theoretical foundation for simulation and AI-enabled learning environments is strongly influenced by Kolb (1984)'s experiential learning cycle. This model emphasizes learning through doing, structured around four stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation. SBL aligns with this model, offering structured spaces for learners to engage in lifelike scenarios and reflect on their actions (Asakura et al., 2021; Sollars & Xenakis, 2021).

AI technologies enrich each phase of Kolb's cycle. They enable iterative practice through on-demand simulations, support reflection with data-driven feedback, and

guide abstraction through performance analytics and prompts. For example, an AI tutor might surface patterns in a student's responses, such as recurring gaps in empathy statements, and then recommend targeted practice. In this way, AI becomes a co-facilitator of learning, aligned with constructivist principles that prioritize learner agency, contextualized knowledge, and co-creation (Matlala, 2021; Egonsdotter & Bengtsson, 2023; Share & Pender, 2024).

Moreover, AI supports participatory pedagogies that are increasingly valued in social work education. These approaches position learners not only as recipients of knowledge but also as active contributors who shape their own learning paths. AI tools can accommodate this by adapting content in real time and offering diverse routes through simulations, thereby fostering autonomy and engagement (Asakura et al., 2021; Gordon et al., 2024).

2.3 Digital Competence and Human–Computer Interaction (HCI)

For AI-enhanced learning to be effective, both learners and educators must possess a baseline level of digital competence. This includes not only operational skills, such as navigating software or using feedback dashboards, but also critical awareness of how digital tools shape learning experiences (Egonsdotter & Israelsson, 2024). In social work education, which is traditionally not tech-centered, these competencies are emerging as essential for the ethical and effective use of AI.

Human–computer interaction (HCI) principles also play a vital role in AI integration. Systems that are unintuitive or poorly designed can increase cognitive load and reduce learner confidence. Research indicates that intuitive interfaces, clear visual feedback, and participatory design strategies enhance learner comfort and effectiveness (Gordon et al., 2024; Wu et al., 2022). When users are involved in shaping how AI tools work through feedback, co-design, or pilot testing, engagement and learning outcomes improve (Asakura et al., 2021).

AI in education must also respect the human-centered values of social work and healthcare professions. Tools should support, not replace, relational skills and ethical decision-making. Participatory design processes help ensure that AI systems align with these values by embedding equity, transparency, and inclusivity from the outset (Gordon et al., 2024; Zhang et al., 2023a).

2.4 Key Research Trends and Emerging Directions

Since 2017, scholarship on SBL and AI in social work and healthcare education has expanded rapidly. Early foundational work (Craig et al., 2017; Dodds et al., 2018) set the stage for broader inquiries into the impact and design of simulations. By

2020–2021, meta-analyses and reflective studies (Chernikova et al., 2020; Sollars & Xenakis, 2021) offered robust evidence of simulation effectiveness and pedagogical alignment. In recent years, research has focused on AI-driven innovation, such as real-time feedback systems (Q. Wu et al., 2022), big data analytics in simulation (Guraya, 2024), and cross-disciplinary simulations with participatory approaches (Gordon et al., 2024; Share & Pender, 2024).

This growth reflects increasing recognition that AI is not just a technological tool but a pedagogical force. It reshapes how knowledge is delivered, how learning is assessed, and how educators engage with students. The current trajectory suggests continued convergence between AI capability, simulation fidelity, and pedagogical intentionality.

3 General-Purpose AI Tools for Learning and Professional Support

This section reviews the major categories of general-purpose AI tools currently influencing higher education, particularly those that can be adapted for social work instruction and practice training. Rather than focusing on proprietary branding, the discussion highlights underlying functions: large language model (LLM) systems that generate knowledge, tools that organize information into pedagogical resources, conversational tutors that facilitate practice, and documentation or productivity assistants that reduce administrative burden. Together, these applications establish the technological foundation for specialized social work simulation platforms.

3.1 Foundational AI Models for Knowledge Access and Educational Support

The most visible entry point for AI in education has been the family of large language models (LLMs) such as ChatGPT, Gemini, and Claude. These systems generate human-like text, answer questions, and synthesize complex information through natural-language interaction. Their capacity to serve simultaneously as information retrievers, writing partners, and reflective interlocutors has quickly positioned them as multipurpose tools for students and educators.

In higher education, comparative classroom and laboratory studies demonstrate that distinct LLM architectures serve complementary pedagogical purposes. A review of early studies on ChatGPT's educational impact (Lo, 2023) identified two broad categories of pedagogical use: teaching preparation and student learning support. Instructors have used ChatGPT to outline syllabi, draft lectures, and design student assessment items; students use it to summarize information, answer questions, and assist with writing (Lo, 2023). Rane (2024) found that Gemini's

continuously updated knowledge and adaptive learning design outperform ChatGPT in generating factual, individualized exercises, while ChatGPT remains stronger in creative text generation and formative feedback. Kellaway (2025) utilized Claude 3.5 to support a 3-month English writing program for 45 learners. Claude supplied level-appropriate models and step-by-step scaffolds for short compositions. By the end, all learners met or exceeded the course's target benchmark (EIKEN Grade 4), and 94% reported higher confidence and a wider range of expression. For students, LLMs serve as virtual tutors, capable of clarifying complex concepts, posing practice questions, and generating feedback on drafts. When used intentionally, they can foster metacognition and iterative learning.

However, research also cautions that LLM-generated assessments may overlook targeted learning objectives or produce plausible but inaccurate information, underscoring the need for critical engagement rather than uncritical reliance (Lo, 2023; Rane, 2024). Nevertheless, recent global survey data suggest that educators increasingly perceive the main benefits of generative AI as personalized instruction, support for problem-solving, and enhanced learning engagement (Mohammadi et al., 2026). As these capabilities mature, LLMs provide the backbone for many emerging educational platforms, which are reviewed in the subsequent sections.

3.2 AI-Assisted Knowledge Organization and Content Synthesis

A second class of tools focuses on organizing existing materials to help teachers and students manage knowledge. Google's NotebookLM exemplifies this development by combining generative AI with retrieval-augmented generation (RAG) to summarize, synthesize, and question-answer from user-provided sources. Rather than drawing on the open web, NotebookLM grounds its responses in uploaded readings, syllabi, or reports, thereby improving factual accuracy and contextual relevance (Reyna, 2025).

Educators can upload course outlines, lesson plans, and reference texts; the system then produces draft study guides, questions, and aligned formative assessments (Tufino, 2025). NotebookLM's structured prompts make it especially useful for curriculum mapping and constructive alignment, allowing instructors to trace how learning outcomes connect to activities and assessments. In curriculum review processes, it can flag redundancies or gaps and visualize where graduate attributes, such as critical thinking and ethics, are addressed.

For students, it operates as a contextual tutor. By interacting with their own course materials, they receive explanations and clarifications that stay within the approved content domain. This is an advantage over open-ended chatbots. Pilot studies at several universities have shown that NotebookLM facilitates more responsive and inclusive classroom experiences by freeing faculty from repetitive explanations and enabling individualized guidance through document-grounded dialogue (FGCU Digital Learning Blog, 2024; Reyna, 2025).

3.3 Conversational Learning Partners and Cognitive Coaching Tools

The emergence of conversational AI chatbots has opened new possibilities for interactive, student-centered learning. Chatbots powered by large language models (LLMs), such as ChatGPT, Bing Copilot, and Perplexity, are increasingly used as pedagogical assistants. The Stanford Teaching Commons (2023) categorizes their educational roles into seven functional types: mentor (providing formative feedback), tutor (offering adaptive explanations), coach (enhancing self-regulation), teammate (collaborating in group projects), student (eliciting reciprocal teaching), simulator (role-playing complex social or ethical situations), and tool (supporting design and content creation). This spectrum of pedagogical roles illustrates how chatbots extend the learning environment from a one-way transmission model toward a dynamic space for reflective practice.

Emerging studies have shown that generative AI chatbots can strengthen student engagement and professional skill development when used under guided supervision. For instance, Song et al. (2025) observed that generative AI chatbots (built on GPT-4 architectures) encouraged collaborative problem-solving among university students by breaking down complex problems into manageable parts, fostering experimentation, and supporting collective reasoning. Students reported feeling more confident and creative when interacting with dialogic agents capable of empathy and contextual adaptation.

Although current evidence on AI chatbots primarily stems from clinical settings, these innovations hold clear pedagogical value for social work and behavioral health education. Studies on conversational systems, such as ChatGPT (Blease & Torous, 2023), and therapeutic chatbots, like Youper, Woebot, and Wysa (Farzan et al., 2025), demonstrate their ability to model empathetic, structured, and reflective dialogue. When thoughtfully adapted for instruction, such systems can function as low-risk practice spaces where students rehearse interviewing, self-reflection, and rapport-building before engaging with real clients, bridging the gap between theory and practice in professional training.

3.4 Intelligent Notetaking and Productivity Enhancers

AI-powered documentation tools are reshaping how educators and practitioners manage administrative and reflective writing tasks, which have long been recognized as significant sources of burden in social services and allied professions (Ausserhofer et al., 2023; Ferraioli, 2025; Tarshish, 2024). Automated notetakers and meeting assistants exemplify this shift from information retrieval to cognitive offloading. Tools such as Magic Notes, Otter, Fireflies, Zoom AI Companion, and Microsoft Copilot utilize speech recognition, natural-language processing, and summarization algorithms to convert spoken or written notes into structured, professional documentation that aligns with institutional standards.

One of the widely discussed examples is Magic Notes. Launched in 2024 and adopted across roughly one-third of England's social-care teams within a year, it enables practitioners to record client meetings with consent and automatically generate structured summaries that conform to council documentation templates (Will, 2025). During the pilot implementation, administrative workload reportedly decreased by 48%, allowing social workers to focus more on direct client contact. The system's language-translation and formatting features have proven especially valuable for workers whose first language is not English, supporting inclusion and accuracy.

Beyond Magic Notes, a growing ecosystem of AI notetaking and meeting-assistant tools, such as Otter, Fireflies, and Sembly, has entered classrooms and field education. These platforms utilize generative AI and natural-language processing to transcribe lectures or group supervision sessions, highlight key concepts, and generate automated summaries. For instructors, they provide searchable records of class discussions and can scaffold formative feedback by surfacing recurring themes or misconceptions. For students, they reduce cognitive load during complex learning tasks, enabling deeper engagement and critical analysis rather than mechanical transcription.

3.5 AI Documentation and Case-Management Solutions in Human Services

In human services, documentation is essential for accountability and care coordination but often consumes a disproportionate share of practitioners' time. New AI-powered documentation tools aim to streamline this process while maintaining ethical and reflective standards of practice. Social Work Magic, for instance, offers AI-assisted templates for progress notes, safety plans, and intervention tracking. It supports professional documentation drafting efficiently while reinforcing appropriate tone and structure. Beyond automation, its creators emphasize digital literacy and ethical integration, framing AI as a partner that enables social workers to dedicate more time to direct engagement rather than administrative repetition (Social Work AI Magic, 2025a, 2025b).

At the organizational level, Netsmart's Bells AI Suite demonstrates how enterprise systems are embedding generative AI within electronic health records. Its components, including Documentation Assistant, Virtual Scribe, and Quality Coach, combine ambient listening, real-time validation, and automated audits to produce compliant records and feedback loops. User data report up to 60% reductions in documentation time and improved adherence to care plans, highlighting the model of augmented intelligence, the technology designed to support, not supplant, professional judgment (Netsmart, 2024).

These documentation platforms signal a broader transformation of human-service workflows into "documentation intelligence" systems that connect

observation, analysis, and ethical decision-making. In social work education, such platforms provide authentic practice opportunities: students can critique AI-generated drafts, discuss confidentiality and consent, and explore how automation reshapes professional accountability.

4 Specialized AI Simulation Platforms for Social Work Education

While large language models and productivity assistants have become everyday learning companions, a parallel frontier is emerging in simulation-based education. These specialized platforms employ AI not only to deliver information but also to create experiences, allowing students to practice complex interpersonal, ethical, and analytical skills in controlled, feedback-rich environments. Across social work programs, educators are adapting AI simulations to extend field preparation, enhance reflective learning, and provide equitable access to realistic practice opportunities.

4.1 Platforms for Developing Core Clinical Interviewing Skills

Several AI-powered platforms focus specifically on building foundational and advanced interviewing competencies through conversational simulation and structured feedback.

4.1.1 Culturally Responsive Practice: Empathy Helper

Empathy Helper is a simulation platform built on large language models and agentic AI technologies. Rather than relying on fixed scripts or branching logic, it uses conversational AI to generate client avatars that respond in real time to what the learner says or types. These avatars can be configured with distinct psychosocial histories, cultural identities, and presenting problems, and their narratives can evolve dynamically across an encounter. The platform supports both one-on-one and one-to-many formats that simulate group counseling or psychoeducational sessions, and it is delivered via a web interface that promotes text-based chat or voice input without the need for specialized hardware or standardized patients.

Functionally, Empathy Helper is designed as a complete practice-and-feedback environment for core social work communication skills. Educators can select from or build multiple competency rubrics—such as those based on the Cultural Formulation Interview and other interviewing frameworks and micro-counselling models—and assign them to different training scenarios. Each interaction with an avatar is automatically logged and analyzed against the chosen rubric, producing

structured competency scores and detailed qualitative feedback on specific strengths and areas for improvement. A natural-language parser also tallies key behaviors (for example, open and closed questions, simple and complex reflections, and affirmations) and generates global indicators of empathy and acceptance. Learners can review this feedback after a session through an "Evaluate" mode, or they can activate an "Instruction" mode that provides real-time coaching and suggestions while they are still interacting with the virtual client or group.

A pilot study of Empathy Helper was conducted with graduate social work trainees at the Brown School of Washington University in St. Louis (Lindsay et al., n.d.). Over several weeks, participants completed brief online modules. Then they engaged in multiple simulated interviews with distinct client avatars, receiving automated rubric scores, behavioral tallies, and narrative guidance after each encounter. Findings from this pilot indicated that trainees reported greater confidence in their interviewing skills, demonstrated solid performance on rubric-based competency indicators, and frequently used evidence-informed communication behaviors during simulations. Implementation and usability ratings were likewise positive, with participants viewing the platform as acceptable, appropriate for social work training, feasible to integrate into their workload, and easy to use. Together, these results suggest that Empathy Helper offers a practical, scalable adjunct to traditional skills labs and supervision in social work education, and they motivate larger, controlled studies in more diverse instructional settings.

4.1.2 Figment Learning Labs Virtual Patients

Figment Learning Labs (Interprofessional Education Collaborative, 2025) has developed an AI-powered virtual patient platform that demonstrates cross-disciplinary applicability. Usability testing with 60 interprofessional students showed increased engagement, enhanced learning outcomes, and greater confidence in patient interviewing. The platform's generative AI engine creates responsive, life-like virtual clients capable of engaging in free-flowing conversations, with structured debriefing sessions enhancing reflective learning. This model illustrates how AI simulation can prepare students for the interprofessional collaboration increasingly required in integrated care settings.

4.1.3 GenAI QPR for Suicide Prevention

For specialized training contexts, the GenAI Question, Persuade, and Refer (QPR) Simulator targets suicide prevention gatekeeper training using GPT-4o technology (Levkovich et al., 2025). Eighty-nine mental health gatekeepers engaged in three-stage training: conversation with simulated at-risk individuals, automated rubric-based feedback on rapport and risk assessment, and self-efficacy reassessment. Self-efficacy scores increased from 4.96 to 5.88 (Cohen's d = 1.67), with

participants rating interactions as realistic and emotionally safe. While some expressed concerns about the loss of human nuance, the findings validate generative AI as an effective medium for experiential crisis-response training when accompanied by ethical oversight and debriefing.

4.2 Integrated Field Practice Simulations

Beyond discrete skill development, several platforms simulate comprehensive practice environments that mirror the complexity of actual field placements.

4.2.1 Comprehensive Training Modules: Virtual Social Work Trainer

At the University of Utah, researchers in the College of Social Work and Department of Population Health Sciences have created a suite of AI-enabled learning modules collectively known as the Virtual Social Work Trainer (VSWT) (University of Utah College of Social Work, n.d.). These modules offer structured simulations for essential competencies, including home environment assessment, safety planning, suicide risk evaluation, and motivational interviewing (Mortensen, 2024). The integrated Virtual Motivational Interviewing (VMI) chatbot employs generative AI to simulate diverse client responses and give real-time, theory-grounded feedback. Rather than relying on pre-programmed decision trees, VMI produces unique conversational exchanges informed by motivational-interviewing principles. Students receive immediate feedback on their reflective listening, open-ended questioning, and accuracy in empathy. The developers emphasize that the goal is to provide repeated, low-stakes opportunities for skill refinement.

4.2.2 Agency-Based Learning

Developed at the University of Newcastle (Australia), Social Work Virtual (SWV) is a web-based simulation program designed to build students' digital practice competencies through immersive, case-based learning. Developed during the COVID-19 pandemic, Social Work Virtual (SWV) was designed to replicate the immersive "Big Day In" experiential exercise, which is traditionally conducted in person (Agllias et al., 2021; Heinsch et al., 2023). This 8-week program assigns students to simulated agencies, including community services, mental health teams, school-based centers, and family support units, where they conduct policy research, attend meetings, and interview actors portraying clients via telehealth (Heinsch et al., 2023). These activities reflect the digital tools and processes increasingly used in practice during the pandemic and were designed to support students' readiness for field education as service systems rapidly shifted to online modalities.

To guide their progress, students complete weekly online learning modules that introduce new information related to the case scenario and support their preparation for team meetings and mentor-facilitated reflection (Heinsch et al., 2023, 2024). Evaluation findings indicate that SWV enhanced students' learning experiences, improving their preparedness for digital practice and social work placement (Heinsch et al., 2023). At the same time, both evaluation data and practice-mentor reflections highlight limitations common to virtual simulations, particularly the absence of real-time pressure, emotional intensity, and "in-the-moment" decision-making that characterize frontline practice (Heinsch et al., 2024). These constraints, noted more broadly in virtual simulation literature (Asakura & Bogo, 2021), point to opportunities for future enhancement. Integrating generative AI may help create more spontaneous, emotionally nuanced interactions, offering a richer approximation of real-world practice. As such, the SWV experience underscores both the promise and the current technical limits of virtual approaches to social work education.

4.2.3 Pre-field Preparation

The University of South Florida School of Social Work launched its Virtual Simulation Pilot Project in 2023 to enhance pre-field preparation and lifelong professional development (School of Social Work, 2024). Using an interactive web-based simulation platform, first-semester MSW students practiced with virtual clients exhibiting anxiety, depression, substance misuse, and family conflict. Focus-group data indicated that students valued the ability to rehearse difficult conversations multiple times in a "safe space." Instructors, meanwhile, highlighted the need for ongoing training and technical support to manage technology integration effectively. The project's next phase expands participation and assessment, reflecting the iterative nature of AI adoption in curricula. As USF's faculty notes, simulations complement real practice by providing structured opportunities to test knowledge, build confidence, and internalize professional competencies before field placement.

4.3 Immersive and Virtual Reality Applications

Virtual and immersive reality (VR/IVR) technologies are reshaping social work education by providing experiential, emotionally engaging learning environments that replicate real-world complexities while maintaining safety and control. Across universities, VR simulations now enable students to practice communication, assessment, and decision-making with lifelike clients, bridging the gap between classroom instruction and field practice. These tools leverage advances in AI to create responsive, interprofessional learning experiences that align with competency-based education standards.

4.3.1 Interprofessional VR for Behavioral Health Training

Virtual reality environments push experiential learning further by embedding students within embodied, sensory-rich practice spaces. At George Mason University, 28 MSW students participated in an interprofessional VR case where they engaged a substance-using adolescent in a hospital clinic (Cunningham, 2024). The simulation, developed in partnership with Certified Healthcare Simulation Educators and aligned with healthcare best-practice standards, was framed by pre- and post-simulation debriefs. Students reported gains in rapport-building, adaptability, and confidence in applying behavioral health interventions. Faculty emphasized VR's potential to strengthen resilience and reflective capacity in an increasingly demanding workforce. Building on that success, Mason's team developed a new VR case involving a substance-engaged family and envisions involving peer-recovery coaches in future training cycles (Matto et al., 2024).

4.3.2 Virtual Scenario Development

Georgia State University is exploring accessible approaches to creating virtual scenarios through 3D engine technology. Dr. Seelman and her colleagues are developing immersive virtual productions for social work education, using platforms such as Unreal Engine to create realistic scenarios that eliminate traditional filming requirements, thereby reducing the need for cameras, actors, sets, and production crews (Deupree, 2025). This approach enables individual faculty to create compelling case scenarios and historical narratives for their courses. Current projects include case scenarios addressing adolescent safety risks and a short film about Anna Julia Cooper, a historical advocate for Black youth education. The integration of AI-assisted character animation makes virtual production accessible to educators without technical coding expertise, offering new possibilities for emotionally engaging online students beyond text-based learning. This work illustrates how emerging 3D technologies can democratize immersive content creation in social work education (Deupree, 2025).

4.3.3 AI-Powered VR Simulation Platform

Emerging innovations are also integrating immersive VR with generative AI to create dynamic, responsive practice environments that move beyond pre-scripted scenarios. At New York University, Lanzieri et al. (2025) are developing an AI-powered VR simulation platform in which students interact with a virtual client avatar through real-time speech-to-text and text-to-speech systems. Built using a Retrieval-Augmented Generation (RAG) approach with OpenAI's GPT-4o-mini model, the platform combines a conversational "client" assistant that produces contextually relevant responses and an "evaluator" assistant that analyzes learner communication

and intervention skills. A human-in-the-loop architecture allows faculty to guide model outputs, refine client behaviors, and maintain fidelity to social work values and ethical standards (Lanzieri et al., 2025). Currently in development before student piloting, the platform demonstrates how AI-enhanced VR can increase realism by generating spontaneous, emotionally nuanced dialogues that more closely resemble complex practice encounters. This approach also offers scalable opportunities for individualized feedback and repeated practice, addressing longstanding limitations of VR simulations that rely on fixed branching scripts or static content (Lanzieri et al., 2025).

The NYU project illustrates a next-generation direction for immersive learning—one that pairs embodied VR environments with adaptive AI-driven interactions to create more flexible, authentic, and pedagogically rich simulations for social work education. As these platforms evolve, they may offer educators new tools for teaching engagement, assessment, and decision-making in ways that balance experiential realism with controlled, ethically grounded learning conditions.

4.4 AI Literacy and Critical Engagement

As AI systems increasingly influence social service delivery, cultivating critical AI literacy becomes an educational imperative. Share and Pender's (2024) simulation exercise engaged MSW students in role-playing as stakeholders during the deployment of an AI predictive-risk algorithm that identified at-risk families. The experiential exercise highlighted ethical dilemmas surrounding bias, accountability, and transparency while developing students' capacity to advocate for equitable AI implementation. Participants developed critical AI literacy and stakeholder empathy, demonstrating that simulation-based pedagogy can move beyond technical training toward ethical and policy reflexivity. This approach cultivates graduates who are capable of critiquing and shaping AI integration in practical settings.

5 Integrating AI Tools into Social Work Curricula

Recent literature highlights the transformative potential and accompanying challenges of integrating AI into social work education. Key developments center on curriculum design, competency frameworks, and faculty development. Across these areas, AI tools are increasingly used to enhance learning through simulation, feedback, and data-driven personalization, while raising important pedagogical and ethical questions.

5.1 Curriculum Design and Competency Frameworks

5.1.1 Competency-Based Education and AI-Driven Simulations

The shift toward competency-based education (CBE) in social work requires methods that promote practical skill development, ongoing assessment, and reflective learning. AI-enabled simulations are emerging as key tools in this transition. Simulations supported by AI or virtual reality provide environments for repeated practice and instant feedback, which are key pillars of CBE, without requiring real-world risk or client exposure. These tools allow students to engage in complex interpersonal scenarios, rehearse clinical skills, and receive detailed performance analytics (Huttar & BrintzenhofeSzoc, 2020; E. Baker & Jenney, 2023; Heinsch et al., 2023).

Virtual simulations enhance learner engagement and can lead to measurable improvements in confidence and competence. For example, Baker and Jenney (2023) found that social work students trained through virtual simulations demonstrated greater readiness to apply trauma-informed care principles. Similarly, Huttar and Brintzenhofeszoc's (2020) systematic review identified simulation as a scalable, effective method for teaching direct practice skills.

Generative AI tools, such as ChatGPT, can provide additional support in CBE frameworks by serving as conversational partners or reflective coaches. These tools can prompt learners to explore ethical dilemmas, assess case studies, or receive feedback on documentation—all tailored to individual learning progress. Chang et al. (2023) highlight that such AI-driven feedback aligns well with self-regulated learning models, supporting goal setting and personalization. Celik et al. (2024) and Singer et al. (2023) further emphasize the importance of aligning these tools with educational theory to avoid shallow engagement or over-reliance.

Still, rigorous longitudinal studies are needed to confirm the long-term effects of AI-based simulation on actual competency development. Craig et al. (2017) caution that while early data are promising, more work is required to ensure consistency, reliability, and generalizability across diverse learner populations.

5.1.2 Virtual Field Placements

The COVID-19 pandemic accelerated the adoption of remote and virtual field placements in the social work field. Once considered temporary adaptations, these models are now recognized as viable components of the practicum landscape (Mitchell et al., 2022). AI tools play a growing role in this space by augmenting placement experiences with pre-placement simulations, interactive decision-making exercises, and real-time documentation support.

Heinsch et al. (2023) found that students in virtual placements developed critical digital competencies, including telehealth communication, electronic record keeping, and cross-site collaboration. Supervisors reported that these experiences often matched or exceeded traditional placements in terms of preparedness and

professional identity formation. Mitchell et al. (2022) argue that virtual placements can promote equity by increasing access for students in rural areas or with caregiving responsibilities.

AI-enhanced virtual placements can also serve as a buffer or primer for more complex in-person engagements. When students engage in simulation before live client work, they are better equipped to handle ethical ambiguity, documentation pressures, and interprofessional communication.

5.1.3 Scaffolded Learning with AI Assistants

While generative AI tools hold promise, their educational value depends heavily on thoughtful integration. Chang et al. (2023) emphasize the importance of structured scaffolding to help students navigate and critique AI-generated responses. This involves teaching students how to craft effective prompts, interpret feedback critically, and cross-validate information.

Faculty must also address ethical limitations and potential biases in AI outputs. Singer et al. (2023) note that ChatGPT and similar tools reflect the data on which they are trained, which may embed systemic bias. Therefore, AI tools should be framed as learning aids rather than authorities. Garkisch and Goldkind (2024) emphasize the need for social work education to critically engage with AI technologies within an ethical and human-rights framework, highlighting the importance of interdisciplinary collaboration and ongoing reflection on digital ethics in practice.

Scaffolded use of AI in the classroom enables students to gain confidence in evaluating information quality, managing data privacy, and applying tools appropriately. Celik et al. (2024) emphasize that such practices promote not only digital literacy but broader twenty-first-century skills such as critical thinking, self-direction, and ethical reasoning.

5.2 Faculty Development and Training

5.2.1 Ongoing Training and Support

The successful integration of AI in social work curricula depends heavily on faculty readiness. Instructors require ongoing professional development to select suitable AI tools, design pedagogically sound prompts, interpret AI-driven feedback, and address student concerns. Without institutional support, even well-intentioned efforts risk producing inconsistent or superficial learning outcomes.

Qehaja (2025) emphasizes that AI integration in higher education is not a one-time event but a continuous process of strategic adaptation. Similarly, Hazzan-Bishara et al. (2025) highlight that both external determinants (such as institutional support and exposure to credible AI information) and internal determinants (including self-efficacy and intrinsic motivation) influence educators' willingness to adopt AI. Training must therefore include hands-on opportunities for faculty to

experiment with AI tools, enabling them to build confidence and pedagogical competence. Cordero et al. (2024) further advocate for interdisciplinary collaboration, engaging experts in media design and computer science to co-develop educationally meaningful and contextually appropriate AI use cases.

5.2.2 Ethical and Practical Considerations

The integration of AI into social work education raises pressing ethical and practical issues. At the institutional level, clear policies are needed to address data security, academic integrity, and equitable access to technology. At the classroom level, instructors must ensure that AI tools do not reinforce biases or marginalize already vulnerable learners. Zhang and Tang (2025) emphasize the need for robust evaluative frameworks to track how AI tools affect different student groups across disciplines. Similarly, Ruiz-Rojas et al. (2024) advocate for transparency in the use of AI-generated content, particularly when it replaces or supplements faculty input.

Faculty co-design and communities of practice are key mechanisms to ensure ethical oversight. Cordero et al. (2024) and Hodgson et al. (2023) recommend that social work programs create interdisciplinary ethics committees to monitor AI use, share best practices, and develop responsive guidelines as technology evolves.

Ultimately, ethical integration is not just about risk mitigation; it's also about modeling professional values. Faculty who critically engage with AI demonstrate to students what responsible, reflective digital practice looks like in action.

6 Ethical, Legal, and Equity Considerations

The integration of AI into social work education requires careful consideration of its ethical, legal, and equity implications. While AI offers new pathways for learning and assessment, it also raises concerns about bias, privacy, consent, and the erosion of human judgment. Moreover, unequal access to technology and unclear regulatory standards risk deepening existing disparities. Addressing these challenges requires a proactive, value-driven approach that aligns AI adoption with social work's commitments to justice, integrity, and inclusivity. The following sections examine key domains shaping this ethical landscape: bias and fairness, privacy and data security, human–AI collaboration, accessibility, and regulatory oversight.

6.1 Bias and Fairness

AI models are only as unbiased as the data and design choices behind them. Numerous studies highlight that AI systems can encode and perpetuate sociocultural biases, especially when training data reflect existing inequalities or lack representation of marginalized groups. In social work, this is particularly

concerning, as AI-driven tools may not account for cultural identity, intersectionality, or the lived experiences of diverse populations, potentially reinforcing systemic discrimination (R. S. Baker & Hawn, 2022; Varona & Suárez, 2022; Klimova et al., 2023; Roshanaei, 2024; Saeidnia et al., 2024; Palmquist et al., 2025). For example, Baker and Hawn (2022) document how algorithmic bias in education disproportionately affects students by race, gender, nationality, and disability, while Roshanaei (2024) emphasizes the need for continuous monitoring and bias mitigation to ensure equitable access to higher education.

Mitigating these risks requires deliberate strategies, including the use of diverse and representative datasets, regular bias audits, and the involvement of stakeholders from affected communities in AI design and evaluation. The literature also calls for frameworks that move beyond technical fairness to address equity and justice, ensuring that AI systems not only avoid discrimination but also actively promote inclusion (McDonald & Pan, 2020; Tilmes, 2022; Roshanaei, 2024). Palmquist et al. (2025) and McDonald and Pan (2020) argue for integrating intersectional and identity-based ethics into curricula, equipping students to recognize and challenge bias in AI systems.

6.2 Privacy, Consent, and Data Security

AI tools in social work education often collect sensitive personal data, raising significant concerns about confidentiality, informed consent, and data security. Existing studies stress that students and clients must be fully informed about what data is collected, how it will be used, and the limitations of AI systems before engaging with simulations or digital platforms (Al-Zahrani, 2024; Fedele et al., 2024; Franco D'Souza et al., 2024; Klimova et al., 2023; Saeidnia et al., 2024). D'Souza et al. (2024) recommend explicit, written consent and transparent communication about AI's role in educational processes.

Compliance with legal frameworks such as the Health Insurance Portability and Accountability Act (HIPAA) and the General Data Protection Regulation (GDPR) is essential, especially when AI tools are used for case simulations or assessments involving real or simulated client data. Fedele et al. (2024) highlight the importance of robust data protection measures, including secure storage, encryption, and clear data ownership policies. The risk of data breaches, hacking, or misuse is particularly acute for vulnerable populations, necessitating ongoing vigilance and ethical review (Al-Zahrani, 2024; Fedele et al., 2024; Saeidnia et al., 2024).

6.3 Human–AI Collaboration and Professional Judgment

While AI simulations offer risk-free practice environments, they cannot replicate the complexity, emotional nuance, or ethical ambiguity of real human interactions. Over-reliance on AI may diminish opportunities for developing empathy, critical

thinking, and professional judgment. Reimer (2024) and Hodgson et al. (2023) emphasize that AI should augment, rather than replace, human educators and mentors. Effective curricula integrate AI tools with live supervision, group debriefing, and community-based learning to ensure students develop both technical and relational skills (Bankins & Formosa, 2023; Hodgson et al., 2023; Reimer, 2024; Palmquist et al., 2025; Segal, 2025). Segal (2025) finds that while AI can support ethical decision-making, it cannot independently resolve complex dilemmas. Human oversight remains essential for interpreting AI outputs, contextualizing recommendations, and upholding professional values (Bankins & Formosa, 2023; Palmquist et al., 2025; Segal, 2025).

6.4 Accessibility and the Digital Divide

Equitable access to AI-enhanced education is a persistent challenge. Implementing AI tools requires reliable hardware, Internet connectivity, and technical support, which may be lacking in rural or low-income settings (Abulibdeh et al., 2024; Al-Zahrani, 2024; Palmquist et al., 2025). Al-Zahrani (2024) and Abulibdeh et al. (2024) warn that the digital divide can exacerbate existing educational inequalities, limiting the benefits of AI to privileged groups.

To promote equity, programs should provide necessary devices, offer asynchronous and low-bandwidth options, and design interfaces accessible to students with disabilities. Tilmes (2022) critiques current fairness initiatives for often overlooking the needs of students with disabilities and advocates for a disability justice approach that centers on accessibility and inclusion.

6.5 Regulatory and Accreditation Considerations

Regulatory frameworks and accreditation standards often lag behind technological advances. Fedele et al. (2024) note that many professional standards remain silent on AI, creating uncertainty for educators and institutions. However, accreditation bodies are beginning to recognize AI-assisted training, with some offering continuing education credits for AI-powered simulations. Studies recommend updating standards to address the ethical, legal, and pedagogical implications of AI, ensuring that tools comply with data protection laws and professional guidelines. Ongoing collaboration among educators, regulators, and technology developers is essential to align AI integration with the core values of social work, including integrity, justice, and cultural responsiveness (Klimova et al., 2023; Fedele et al., 2024; Franco D'Souza et al., 2024; Saeidnia et al., 2024).

Overall, integrating AI tools into social work curricula demands a proactive, ethically grounded approach. Addressing bias, ensuring privacy and consent,

maintaining a human-centered pedagogy, promoting accessibility, and updating regulatory frameworks are essential for responsible and equitable adoption of AI. Ongoing stakeholder engagement, critical digital literacy, and continuous evaluation will enable social work education to harness the benefits of AI while upholding its foundational values.

7 Future Directions and Research Agenda

As AI becomes increasingly embedded in social work education, future research in AI-enhanced social work education must strike a balance between innovation and ethical and pedagogical depth. Key priorities include advancing emotional intelligence in AI, enhancing interoperability across platforms, evaluating long-term learning outcomes, integrating critical AI literacy into curricula, and promoting ethical co-design with service users. Together, these directions aim to ensure that AI integration strengthens empathy, equity, and professional integrity in social work education.

7.1 Advancing Emotional Intelligence in AI

Current AI tools in education, including those for social work, often lack genuine affective and cultural sensitivity. The literature highlights the need to integrate sentiment analysis, affective computing, and culturally contextualized datasets to create more nuanced and empathetic client avatars and simulations. AI-driven emotional assessment is advancing through machine learning, facial recognition, and multimodal emotion recognition, fostering empathy and social cooperation in learning environments. However, challenges remain regarding accuracy, privacy, and cross-cultural validity. Future research should refine AI models for emotion recognition and ensure ethical, culturally sensitive implementation (Vistorte et al., 2024; Henriksen et al., 2025; Palmquist et al., 2025). Integrating social-emotional competencies (SEC) with AI literacy enhances educational outcomes by promoting personalized learning, collaboration, and ethical awareness. Embedding SEC into AI curricula prepares students and educators to navigate both technological and emotional challenges, supporting the development of holistic skills (Henriksen et al., 2025; Palmquist et al., 2025). Teacher education frameworks now emphasize operationalizing cultural sensitivity within AI systems, recognizing the limitations of current technologies in accounting for diverse social and emotional norms (Henriksen et al., 2025).

7.2 Interoperability and Integration

The literature underscores the potential of combining VR, AI chatbots, and documentation assistants into cohesive learning platforms. Studies demonstrate that AI-driven instructor assistants in VR environments can increase student engagement and reduce cognitive load, though improvements in learning outcomes are sometimes modest (Tracy & Spantidi, 2025; Yousif et al., 2025). Systematic reviews of AI chatbots in education reveal benefits for both students and educators, including personalized support, skill development, and time-saving assistance. However, successful integration requires addressing reliability, accuracy, and ethical concerns (Essel et al., 2022; Labadze et al., 2023; Roca et al., 2024). Research suggests that further exploration is needed to understand how these tools interact and impact learning outcomes, particularly in social work education. The integration of AI, AR, and VR has been demonstrated to enhance educational processes across various disciplines, including social work, and supports the achievement of the Sustainable Development Goals (Yousif et al., 2025). Future studies should investigate the design and efficacy of unified platforms that streamline training and assessment.

7.3 Longitudinal Outcomes and Efficacy

Most current studies report immediate improvements in student confidence, self-efficacy, and academic performance following AI-enabled training. For example, the use of chatbots and AI platforms has led to higher academic achievement and increased student satisfaction. However, there is a notable gap in longitudinal research evaluating whether these gains translate into sustained competency, improved client outcomes, or reduced turnover in professional practice (Essel et al., 2022; Palmquist et al., 2025; Yousif et al., 2025). Meta-analyses in related fields suggest that AI interventions can have lasting positive impacts, especially when personalized and adaptive tools are used (X.-Y. Wu, 2024). Future research should prioritize long-term studies that assess the durability of AI-enabled training effects in social work, including impacts on professional practice and client well-being.

7.4 Critical AI Literacy Within AI-Enabled Courses

Embedding critical AI literacy into social work curricula is essential for fostering reflective practitioners. The literature emphasizes the importance of teaching not only technical AI skills but also the ethical, societal, and career implications. Students and educators must be aware of AI's limitations, biases, and social impacts. Professional development programs should include training on AI technology, ethical considerations, and social-emotional learning to equip educators with the

necessary skills (Labadze et al., 2023; Mouta et al., 2024; Palmquist et al., 2025). Studies show that integrating ethics and career futures into AI education is effective and age-appropriate, enabling students to recognize and address bias, consider societal impacts, and apply AI knowledge to help their communities (H. Zhang et al., 2023b). Scenario-based toolkits and participatory learning approaches can further enhance critical AI literacy and agency among students and educators (Mouta et al., 2024).

7.5 Ethical AI Co-design with Service Users

Participatory, stakeholder-centered design is increasingly recognized as vital to ensuring that AI simulations align with social work values and promote equity. Involving service users, clients, and communities in the co-design of AI tools, such as avatar personas, feedback rubrics, and scenario narratives, can help surface values, address biases, and ensure cultural relevance (H. Zhang et al., 2023b; Mouta et al., 2024; Lindgren et al., 2025). Participatory design processes have been demonstrated to incorporate empathy, social norms, and ethical considerations into AI systems, thereby supporting value-based and equitable outcomes (H. Zhang et al., 2023b; Lindgren et al., 2025). Ethical toolkits and scenario-based resources are being developed to guide educators and developers in implementing AI responsibly, with an emphasis on transparency, stakeholder involvement, and the mitigation of disparities in access and outcomes (Mouta et al., 2024). Future research should further investigate co-design methodologies and their impact on the effectiveness and equity of AI-enabled social work education.

8 Conclusion

AI-driven educational technologies are revolutionizing the way future social workers learn, practice, and reflect. From generative language models that create case vignettes and streamline documentation to simulation platforms such as Empathy Helper, Virtual Social Work Trainer, and Social Work Virtual, these tools provide scalable, immersive, and evidence-informed learning experiences. Virtual reality and AI-powered virtual patients deepen empathy and relational understanding, while agentic AI platforms enable structured micro-skills practice with personalized feedback. Yet realizing AI's full potential requires ethical integration, inclusive design, and sustained mentorship to ensure technology complements the humanistic essence of social work. Moving forward, continued research, participatory co-design, and responsive policy development will be critical to building an equitable, reflective, and ethically grounded future for AI in social work education.

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