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Enhancing Simulation in Social Work Education Using Artificial Intelligence: "Social Work Virtual"

Teaching Note

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Abstract

Simulation-based learning has long played a pivotal role in social work education. While human-based simulations are most common, computer-based simulations have emerged as a promising alternative. The rise of advanced tools like ChatGPT raises new questions about the potential of artificial intelligence (AI) to enhance simulation-based learning in social work education. In this article, we describe "Social Work Virtual", an innovative 8-week simulation learning program specifically tailored to develop digital social work competencies under the guidance of experienced clinicians. Drawing insights from the broader literature on AI-driven simulation learning, we consider the potential enhancements AI can bring to simulations like Social Work Virtual. We conclude by considering how social work educators can use AI in future simulations to integrate digital competencies within their professional programs.

Keywords: *Social work; Social work education; Digital social work; Virtual social work; Simulation-based learning, Artificial intelligence*

Introduction

Simulation-based learning (SBL) is an innovative and well-documented experiential learning method for teaching social work practice in the classroom (Bogo et al., 2014). With trained actors, educators, or students acting as clients, simulation aims to replicate critical components of realistic practice scenarios (Craig et al., 2017). There is a robust evidence base for the use of simulation-based learning among health professions such as medicine and nursing, and a growing evidence base in social work (Kourgiantakis et al., 2020). In social work, simulation-based learning offers students a secure platform to integrate theoretical knowledge with practical experience and provides opportunities for reflection on critical incidents (Craig et al., 2017). While simulation learning has traditionally occurred in face-to-face scenarios, social work educators have recently begun to explore the potential of virtual simulation (Asakura et al., 2020). This interest in virtual methods is timely and urgently needed in the wake of Covid-19, when social workers are increasingly required to deliver care to clients using digital technologies (Donnelly et al., 2021). However, there remains a significant gap in social work education and training concerning the use of digital technologies in the provision of care (Rinkel et al., 2022; Tickner, 2023).

Emerging research highlights the potential for using virtual simulation in social work education. Chatbots, virtual client avatars, and virtual worlds have all been posited as useful, cost-effective tools for teaching basic practice skills (Tandy et al., 2017; Washburn & Zhou, 2018). These tools allow social work students to experiment with different approaches and repeat simulations as often as they like to evaluate the outcome of different techniques (Washburn & Zhou, 2018). Yet, the development and programming of these tools can be resource intensive. Moreover, Asakura et al. (2020) noted that many virtual tools rely on dynamic decision trees, limiting students to selecting from a predetermined set of responses. They (2020) suggest that artificial intelligence (AI), such as natural language processing models (NLP) like ChatGPT, have immense potential for simulation-based learning in social work due to the "theoretically infinite" number of input and output options, which would more closely align with "the realities of human-to-human engagement" (p. 503). As AI becomes increasingly embedded into our daily routines, it is essential for social work educators to interrogate its application in shaping new pedagogical approaches. This engagement is critical not only to support cutting edge social work education, but also to identify and address emerging challenges and encourage the promotion of equity in social justice in AI systems (Asakura et al., 2020).

In this article, we introduce Social Work Virtual (SWV), an innovative 8-week simulation learning experience designed to develop digital social work competencies (defined as the basic knowledge, skills, abilities, and other characteristics that enable people to engage with digital tools in the workplace, Oberländer et al., 2020). Drawing insights from the broader literature on AI-driven simulation learning, we explore the potential benefits of integrating AI into simulations like SWV. We conclude by considering strategies for social work educators to incorporate AI in future simulations to integrate digital competencies within professional programs.

Social Work Virtual

Originating from the University of Newcastle Social Work Program, SWV emerged as an adaptation of the traditional "The Social Work Big Day In" face-to-face simulation (Agllias et al., 2020). SWV functions as a simulation learning tool, developed to equip social work students with essential skills for field education amid the challenges posed by the Covid-19 pandemic. This approach was implemented within a second-year social work theory and practice course (SWRK, 2001), which concentrated on mental health and child protection practice (Heinsch et al., 2023). As a form of simulation learning, SWV operates as a virtual landscape where students are immersed in simulated 'agencies', mirroring real-world counterparts such as community services, mental health services, schools acting as community centres, and family support services. These agencies operate within a university web-based learning platform and are each assigned a virtual space for students to interact and share information. Students are required to conduct preliminary research on their designated agency, including relevant policies and legislation. Following this groundwork, each agency is presented with a mock case scenario that becomes the focus for the duration of the simulation.

Over an 8-week period, students engage in collaborative case work, participating in meetings, exchanging information, and conducting "client" interviews using online and telehealth technologies, with actors portraying clients. To prepare for these activities, students complete weekly online learning modules that offer crucial insights into the case and relevant domains of social work knowledge. These modules aid in the acquisition of skills and knowledge while offering opportunities for students to receive feedback and guidance from the teaching team. Students also benefit from regular meetings with a practice mentor—a practising social worker who assists them in navigating the complexities of the case scenario. The course assignments are intricately tied to the case scenario, requiring students to execute a clinical handover, conduct a psychosocial assessment, and document their practice in case notes accompanied by critical reflections.

Introduced in 2021, SWV engaged 99 students and 10 practice mentors. Quality of Learning Experience (QLE) scores, part of the university's standard anonymous quality assurance process, revealed an 11.9% rise in student satisfaction across all areas, increasing from 4.2/5 in 2020 to 4.7/5 in 2021. Qualitative feedback from QLE demonstrated the significance of SWV as a simulation learning tool, allowing students to cultivate practical digital health skills and "feel well-prepared for social work placement and practice." However, feedback from students and practice mentors also highlighted several areas for improvement. Firstly, due to time and resource constraints, students had limited opportunities to practise interpersonal skills with actors, especially those necessary for managing complex issues like suicidal ideation and grief and loss. Secondly, the safe, low-risk environment created by the simulation resulted in a *sanitised* experience, reducing exposure to *real time* social work practice, which often involves performing under pressure, or making difficult decisions with limited time or information.

The Potential of AI

AI-based simulation has the potential to significantly enhance simulations like SWV. Firstly, AI presents the opportunity to expose students to difficult topics like grief and loss, racism, and suicidal ideation; topics students often avoid in traditional face-to-face simulations due to fears of "not doing it right" or "offending the client". AI offers a risk-free learning environment, where students can generate scenarios, initiate simulated conversations, and interact with a non-human client to try out different ways to engage in such conversations, without cost or burden to the client (Webb, 2023). However, AI-driven algorithms do not account for the impact of socio-cultural identity on interpersonal interactions (Asakura et al., 2020), and many contain gender, racial and other implicit biases that reinforce systemic discrimination (Caliskan et al., 2017). To temper this limitation, social work educators should consider working with students in a larger group, using the AI platform to foster a learning community and engage in collective processes of critical reflection, rather than using it as an individual-level activity right away.

A second benefit of AI chatbots like ChatGPT is that students can take the time they need to repeat interactions or assessments, considering multiple iterations of a question or statement before sending their most clearly articulated response to the AI platform. This 'slowing down' instructional design has been identified as a pedagogical benefit of AI simulation; the client waits with no awkwardness or pressure (Kleinsmith et al., 2015). While the low-risk nature of AI interactions makes them a useful learning tool, is also presents a limitation as it reduces exposure to the tension, drama, and consequences of real-time practice (Asakura et al., 2020). One option for social work educators seeking to integrate AI into future simulations, such as SWV, is to give students the opportunity to interact with AI under the supervision of a social work practice mentor. This approach maximises the mentor's expertise and creates an additional element of accountability for students, encouraging them to *practise*, not just *reflect*, in the presence of experienced social workers.

Conclusion

Simulation is an innovative and well documented experiential learning method, with a growing evidence base in social work. While human-based simulations are most common in social work, computer-based simulations have emerged as a promising addition and alternative. In this article, we described SWV, an innovative 8-week simulation learning program specifically tailored to develop digital social work competencies under the guidance of experienced clinicians. Virtual simulations like SWV offer social work students the opportunity for professional skill development in a low-risk environment. The emergence of AI has the potential to further enhance virtual simulations by providing an opportunity for slowing down and repeating interactions or assessments without causing burden or distress to clients. However, the challenges associated with AI-based simulation require careful consideration, notably the potential for reduced exposure to real-time practice and a risk of perpetuating cultural and gender bias. To navigate these complexities, it is recommended that students are supported in their engagement with simulations through community learning approaches, collective critical reflection, and professional supervision from practice mentors.

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