Teaching Note—Using Technology to Enhance Experiential Learning Through Simulated Role Plays

Hanni B. Flaherty

Published online: 05 May 2022.

Submit your article to this journal ⤤

View related articles ⤤

View Crossmark data ⤤

Routledge
Taylor & Francis Group

Check for updates

Teaching Note—Using Technology to Enhance Experiential Learning Through Simulated Role Plays

Hanni B. Flaherty

ABSTRACT

Practitioners are required to have both practice knowledge of theoretical approaches and professional competence and skills. For student social workers, acquiring the former has been traditionally associated with academic teaching. With practice placement learning, the latter has required unique consideration with the incorporation of the online learning platform, which has been escalated due to the COVID-19 pandemic. We suggest that there is a role for simulation-based education to link knowledge and skills, with technology offering improved facilities to provide opportunities to learn for practice. In this teaching note, we discuss how we integrated Eleos Health, a new technology, into the classroom that allowed students to apply and practice their newly learned skills through simulated role-plays under the professor's guided supervision.

Social work education is changing rapidly with the incorporation of online platforms, and COVID-19 has propelled this movement even further. As educators, we need to think of technology in terms of moving our class into the online realm either asynchronously or synchronously. Still, we must also consider how we can integrate new technologies to continue providing the high level of experiential learning we provide in the traditional classroom. Further, recent technological advancements offer unprecedented opportunities to make higher education more relevant, applied, and engaging for students (Popenici & Kerr, 2017; Skulmowski & Rey, 2020). As online platforms became more widely used and accepted, severe challenges around the delivery of experiential learning while using the online platform remain unanswered.

Additionally, despite the increased quantity of online training programs in social work, questions around the quality of teaching as well as the loss of collaborative learning and community are being raised (Renaud et al., 2021). This is especially true for courses where experiential learning is essential, like in social work education. In many of the helping professions, where development and reflection of applied skills are a pedogeological staple, the online platform could unintentionally undermine the effects of teaching. For instance, how can a fundamental skill like empathy be taught and reinforced in trainees without the ability to model this essential human interaction? One promising solution to this conundrum is to integrate artificial intelligence (AI). These technologies allow students to apply and practice their newly learned skills through simulated role plays under the professor's guided supervision. As such, they offer an opportunity to combine the benefits of remote learning, practicing skills essential for their profession, and receiving feedback on their level of expertise in their newly developed abilities.

CONTACT Hanni B. Flaherty ✉ Hanni.Flaherty@yu.edu 🏛 Wurzweiler School of Social Work, Yeshiva University, 2495 Amsterdam Avenue, New York, NY 10033

Experiential learning

It is understood that experience is often the best teacher. The experiential learning theory recognizes that this simple principle is the most powerful tool for advancing student learning and helping teachers engage them in the learning process (Dewey, 1938; Kolb, 1984; Kolb & Kolb, 2006). Dewey (1938) suggested the concept of "experiential continuum" (p. 27). As an experience that promotes education, an initial experience must be the basis for the experience, enabling one to develop subsequent knowledge. Kolb (1984) expands on this in his development of the experiential learning theory, where learning is defined as, "The process by which knowledge is created through the transformation of experience" (p. 38). According to this theory, learners actively participate in learning by experiencing rather than possibly receiving the knowledge transmitted by teachers. Active participation in learning, or learning by doing, should be included in all education, especially in the helping fields, such as social work, where the concepts are both abstract and concrete.

Technology-assisted simulation-based learning

Technological advancements in teaching and learning can enhance the learning process and foster learners' interest in participating in the learning materials in a new and more comprehensive way than in the traditional classroom setting. Previous studies have shown that technology helps students improve their learning (Halili, 2019; Halili & Hamidah, 2016; Halili & Suguneswary, 2016; Halili et al., 2018). As the field of social work integrates more online education, new technologies can help professors create learning environments that engage students and increase a sense of community and knowledge attainment and mastery of the skill.

Simulation-based learning scenarios reflect real-life professional experiences that social workers are likely to encounter (Badger & MacNeil, 2002; Craig et al., 2017). These simulations provide experiential learning opportunities to practice critical elements of clinical applications, such as engagement, relationship dynamics, and assessment. These simulation-based learning experiences also allow for firsthand learning to occur in a safe environment, permitting students to learn skills without direct contact with clients. This experience also reduces possible risk to clients as students practice their skills (Cant & Cooper, 2010; Chmil, 2016; Craig et al., 2017; Doel & Shardlow, 1996; Mooradian, 2008). Simulation-based learning is intended to increase knowledge attainment and clinical skills while preparing students for active clinical social work. Simulation-based scenarios allow controlled, systematic, and observable interactions, allowing the instructor and other students to provide feedback (Bogo et al., 2014; Doel & Shardlow, 1996). Simulation-based learning offers the bridge between classroom learning and more unpredictable field learning.

Simulation-based learning is a powerful tool for social work education. A variety of adult learning theories influence simulation-education, including experiential learning (D. Kolb, 1984), constructivist (Piaget, 1955), and social learning (Bandura, 1977). Simulation-based education creates a space for students to develop clinical skills before working directly with clients. It allows them to rehearse the learned skills in a safe and controlled space in the classroom before direct work with vulnerable clients (Cant & Cooper, 2010; Cooper et al., 2012; Craig et al., 2017). As these simulations imitate the real-world clinical environment in a low-risk context, they replicate clinical situations' critical components in a safe way for students to test their newly acquired clinical skills.

Furthermore, the professor and fellow students' evaluation of the simulations allows for increased knowledge attainment as the clinical scenarios can be assessed and dissected to understand them better. This experience prepares students to respond effectively when presented with similar incidents in practice (Bogo et al., 2014; Cant & Cooper, 2010). Additionally, simulations generate greater creativity and empathy; students learn and practice clinical skills by playing the role of both the provider and the clinician and build empathy for the clients and respect for the therapeutic relationship.

Teaching example: Integration of technology-assisted simulation

In response to COVID-19, Wurzweiler School of Social Work, Yeshiva University has begun to imagine ways to integrate innovative technologies into its online and hybrid curriculums to supplement students' experiential learning. Wurzweiler School of Social Work partnered with Eleos Health, which provides a platform for Care Intelligence for behavioral health, to launch an educational tool to help students develop practice skills, such as assessment, engagement, and intervention skills. Eleos's advanced AI-based Care Intelligence solution runs securely in the background of therapy sessions to analyze hundreds of data parameters within each session and provide real-time insights related to the delivery of evidence-based care. The platform captures key events occurring in the session and provides a summary of clients' progress and areas that merit greater clinical attention (see Figure 1). Eleos Health has pioneered the use of AI, patient-centric voice analysis, and contextual understanding to accelerate behavioral health outcomes. This technology seamlessly integrates evidence-based practices, measurement-based care, and teletherapy into clinical work. Powered by therapy-specific voice analysis, Eleos Health accurately identifies and targets the two most pertinent treatment effects: the therapeutic alliance and use of evidence-based treatment strategies, making it a powerful educational tool for social work education (Sadeh-Sharvit & Hollon, 2020). The platform can be geared to identify fidelity with specific treatment modules (e.g., cognitive behavioral therapy or motivational interviewing, both approaches highly pertinent to social work practice; see Figure 2 for a motivational interviewing example).

Students could engage in a technology-assisted simulated teletherapy role play scenario that was then evaluated in a technology-assisted process recording through this new technology. The student and professor could comment on the clinical dialog, furthering the student's experiential
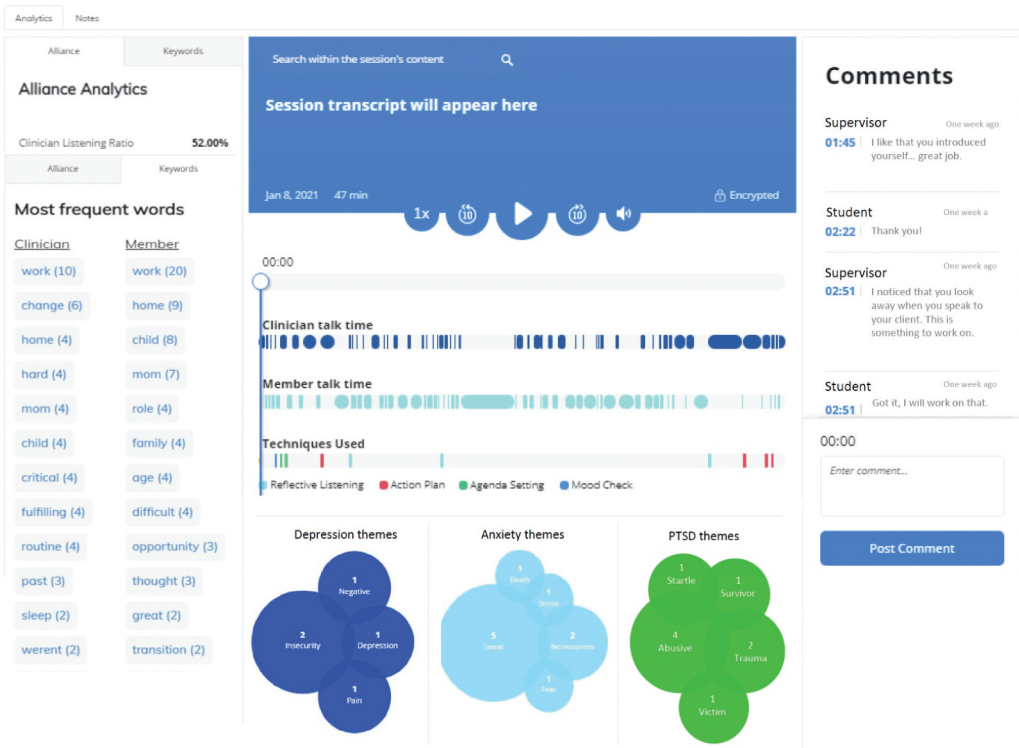

Figure 1. A screenshot of the Eleos health clinician/supervisor interface.

Fidelity Analytics

Clinician Listening Ratio   37.00%

Clinician talk time

Advanced Reflections / Open-
Ended Questions

1
● Below recommended range

Member talk time

Reflections / Open-Ended
Questions

3.6
● Within recommended range

Techniques Used

● Advanced Reflection   ● CAT Attempt   ● Follow Up   ● Reflection   ● CAT   ● DARN Question
● Scaling Q Attempt   ● ICAN Summary   ● OE Question   ● Advice W/ Permission   Agenda Setting
Follow-Up

Advanced Reflections / Reflections

38%
● Below recommended range

Figure 2. A screenshot of the Eleos health platform assessing provider's fidelity with the motivational interviewing model.

learning in an online platform. Students created the teletherapy role plays and then analyzed and evaluated their skills through the Eleos Care Intelligence solution. The student and professor were then able to review both video and voice recordings and gave valuable feedback on the student's mock session.

The assignment

In this Clinical Practice hybrid class, students were paired into two groups based on their time zone. Each student was assigned the prompt below and recorded a 30- to 45-minute role play as both the provider and the client. The role play was then uploaded into the Eleos Health system and returned with diagnostics within 48 hours.

Role play vignette

Alex is brought to a community outpatient mental health clinic due to their parents' observation that Alex is "not acting like a normal 13-year-old." Alex's parents report that Alex is failing school, has no peer group, and is often angry at home, "lashing out at Alex's younger brother and sister." They brought Alex to the clinic because they think Alex is suffering from the same mental illness Alex's mother has, and the last straw was that Alex was found with marijuana in the bedroom. The family reports that Alex's mother lived with debilitating symptoms of anxiety and intermittent depressive episodes and disclosed a long and detailed family history of substance abuse. When you talk to Alex, Alex reports, "My parents are exaggerating. I have friends. And my little brother and sister are annoying and are always bothering me and stealing my stuff. Besides, I prefer hanging out by myself."

Before Alex's first session, Alex completed the Patient Health Questionnaire (PHQ-9; a depression assessment; Kroenke et al., 2001) and the Generalized Anxiety Disorder questionnaire (GAD-7, which measures anxiety; Spitzer et al., 2006). The therapist reviewed Alex's scores, PHQ-9 = 18 and GAD-7 = 15, indicating that Alex's depression and anxiety were both in the clinically severe range.

Role play instructions

Use the above description as a basis for a 30- to 45-minute role play. Please incorporate the following components:

- How would you engage with the client and begin to form a therapeutic alliance?
- How would you interview the client about their symptoms given the baseline assessment?
- How would you assess for safety?

Accompanying paper assignment

The students received a comprehensive voice analysis from Eleos (see Figure 1) and were also asked to incorporate the session voice analysis to answer the following questions and submit one page with their answers. They were asked to use examples from the role play transcript and the metrics provided:

(1) What were the main topics mentioned by the therapist and the client?
(2) Which interventions has the therapist used in the session?
(3) How would you describe the synchronicity between the two participants?
(4) In retrospect, what would you change in the way you led the session?
(5) What were three key moments you would want to bring to your supervisor for review during the session? And why? (use the Eleos comment feature to communicate with your professor, and she will provide you with objective feedback)

Discussion

The students received the integration of the technology very well, reporting that it immensely supplemented learning in the classroom. Students reported that the opportunity to receive both automated feedback from the platform as well as nuanced and adapted feedback from their professor allowed them to safely practice the skills learned in class and critically reflect on their clinical work (see Figure 1). The digital stimulation allowed the students to apply empathy, assessment, diagnosis, and intervention skills. As these simulations were recorded, students could critically analyze their work and improve without risking a client's well-being.

Students not only gained mastery of new skills but also learning how to integrate them on a telemental health platform. Due to COVID-19, many mental health services are now being conducted digitally and have been met with a positive response. There will be a place for telemental health in the industry moving forward, and students must be educated on how to provide treatment on the digital platform. However, conducting therapy on the telehealth platform has never been a part of the Master of Social Work (MSW) curriculum. Using this technology, students learned the nuances of telemental health quickly and seamlessly. Students conducted these simulated role plays on a telemental health platform, which required them to engage clients, assess, diagnose, and provide intervention as if the session was digital. The professor was able to analyze the students critically and give feedback directly related to conducting therapy on a digital platform, such as the use of the camera (lighting, placement, etc.) and concerns around confidentiality (is the student in a confidential space, is there any unintended self-disclosure, etc.). This technology made it possible to teach this content practically instead of hypothetically, which increased students' attainment of this knowledge.

Another outcome of the technology-assisted simulated role plays was the increased empathy and understating of the client in treatment. While the students were in the role of client, they gained a new perspective of the therapeutic alliance. They reported a deeper understanding of a client's fears and concerns when coming to treatment in person or digitally following this role play experience. The

students stated that they are often so concerned about how they are doing in the therapist's role that they often lose sight of what it must feel like to be a client. The students felt that they now have a superior understanding of the therapeutic alliance from both the therapist's and clients' perspectives.

An unintended outcome of integrating the technology was the students' pride and ownership in their role plays. After the role plays were posted, the students had an opportunity to review each other's, and the critiques were primarily positive and helpful to their fellow students. With the students' permission, the clips from the role plays were then integrated into the class lectures and discussions moving forward. For example, if the class lecture focused on risk assessment, and Student C integrated a risk assessment in their role play, clips from that role play were shown as a case example for clarification. The students reported feeling proud of their work, and it added another level of experiential learning in the classroom. Research has shown that students who do not do well find sharing examples very stressful (Merz & Wolf, 2015; Preuß et al., 2010; Schoofs et al., 2008). As a safeguard against this, sharing the role plays was completely optional and only done with the student's explicit permission. This permission was granted in a private dialog with the professor. The professor can also prerecord the role plays to be used in the classroom as clinical examples. Again, this technology can be integrated into the ways discussed above in live or online classrooms.

This innovative method of digital learning through the use of AI is an advantageous experience for the teacher as well. The professor was also awarded the opportunity to watch the students in the role play, allowing for real-time evaluation and critique, a luxury not often offered in the traditional MSW curriculum. As a professor, I am only witnessing the student application of the material in class through indirect reports, such as process recordings, field advisor evaluations, self-report by the student, or the less common use of a two-way mirror. This technology allows the teacher to witness how the students integrate the material into practice and give adequate feedback. This technology significantly contributed to a deeper learning level for the students as it enhanced my ability to teach the material and assess their application of it.

Conclusion

Experiential learning has always been a hallmark for social work education. With the integration of new technologies, students continue to be sculpted into ethically sound and scientifically sophisticated, client-centered practitioners with a knowledge base grounded in skill and anchored in empathy, despite the limitations of COVID-19. This teaching note depicts an example of how one technology can be integrated into both the traditional classroom and online classrooms to supplement the material and help students facilitate deeper engagement in the learning process, paving the way for a greater capacity to learn. Eleos offered a unique opportunity to augment the learning from digital, simulated role plays; was reported on favorably by the students; and was easy to use for both students and faculty. As educators, we need to become comfortable with integrating technology and see it as a tool for enhancing students' education and not as a hurdle to overcome.

Disclosure statement

Notes on contributor

Dr. Hanni B. Flaherty is professor at Yeshiva University.

ORCID

Hanni B. Flaherty 🆔 http://orcid.org/0000-0003-0977-0549

References

Badger, L. W., & MacNeil, G. (2002). Standardized clients in the classroom: A novel instructional technique for social work educators. *Research on Social Work Practice*, *12*(3), 364–374. https://doi.org/10.1177/1049731502012003002

Bandura, A. (1977). *Social learning theory*. Prentice-Hall.

Bogo, M., Rawlings, M., Katz, E., & Logie, C. (2014). Using simulation in assessment and teaching: OSCE adapted for social work. In *Council on Social Work Education. 1701 duke street suite 200* (pp. 22314).

Cant, R. P., & Cooper, S. J. (2010). Simulation-based learning in nurse education: Systematic review. *Journal of Advanced Nursing*, *66*(1), 3–15. https://doi.org/10.1111/j.1365-2648.2009.05240.x

Chmil, J. V. (2016). Pre briefing in simulation-based learning experiences. *Nurse Educator*, *41*(2), 64–65. https://doi.org/10.1097/NNE.0000000000000217

Cooper, S., Cant, R., Porter, J., Bogossian, F., McKenna, L., Brady, S., & Fox-Young, S. (2012). Simulation based learning in midwifery education: A systematic review. *Women and Birth*, *25*(2), 64–78. https://doi.org/10.1016/j.wombi.2011.03.004

Craig, S. L., McInroy, L. B., Bogo, M., & Thompson, M. (2017). Enhancing competence in health social work education through simulation-based learning: Strategies from a case study of a family session. *Journal of Social Work Education*, *53*(Suppl. 1), S47–S58. https://doi.org/10.1080/10437797.2017.1288597

Dewey, J. (1938). *Experience and education*. Macmillan.

Doel, M., & Shardlow, S. (1996). Simulated and live practice teaching: The practice teacher's craft. *Social Work Education*, *15*(4), 16–32. https://doi.org/10.1080/02615479611220321

Halili, S. H. (2019). Technological advancements in education 4.0. *The Online Journal of Distance Education and E-Learning*, *7*(1), 63–69.

Halili, S. H., & Hamidah, S. (2016). Exploring the use of information and communications technology (ICT) in education for adolescents in urban poverty. *The Online Journal of Distance Education and e-Learning*, *4*(2), 31–34.

Halili, S. H., Nurul, H., & Rafiza, A. R. (2018). Traditional versus virtual learning: How engaged are the students in learning English literature. *Indonesian Journal of Applied Linguistics*, *8*(1), 79–90. https://doi.org/10.17509/ijal.v8i1.11467

Halili, S. H., & Suguneswary, R. (2016). Teachers' acceptance on using information communication and technology (ICT) in teaching Tamil language. *The Online Journal of New Horizons in Education*, *6*(2), 101–111.

Kolb, D. (1984). *Experiential learning as the science of learning and development*. Prentice-Hall.

Kolb, A. Y., & Kolb, D. A. (2006). Learning styles and learning spaces: A review of the multidisciplinary application of experiential learning theory in higher education. In *Learning styles and learning: A key to meeting the accountability demands in education* (pp. 45–91). Nova Science Publishers.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Merz, C. J., & Wolf, O. T. (2015). Examination of cortisol and state anxiety at an academic setting with and without oral presentation. *Stress*, *18*(1), 138–142. https://doi.org/10.3109/10253890.2014.989206

Mooradian, J. (2008). Using simulated sessions to enhance clinical social work education. *Journal of Social Work Education*, *44*(3), 21–36. https://doi.org/10.5175/JSWE.2008.200700026

Piaget, J. (1955). *The construction of reality in the child*. Routledge and Kegan Paul.

Popenici, S. A., & Kerr, S. (2017). Exploring the impact of artificial intelligence on teaching and learning in higher education. *Research and Practice in Technology Enhanced Learning*, *12*(1), 22. https://doi.org/10.1186/s41039-017-0062-8

Preuß, D., Schoofs, D., Schlotz, W., & Wolf, O. T. (2010). The stressed student: Influence of written examinations and oral presentations on salivary cortisol concentrations in university students. *Stress*, *13*(3), 221–229. https://doi.org/10.3109/10253890903277579

Renaud, C. J., Xiong, Z., Chen, H. W., Yuen, L. L., Tan, L. T. P., Terry, S., & Dujeepa, D. (2021). Impact of COVID-19 on health profession education in Singapore: Adoption of innovative strategies and contingencies across the educational continuum. *Asia Pacific Scholar*, *6*(3), 14–23. https://doi.org/10.29060/TAPS.2021-6-3/RA2346

Sadeh-Sharvit, S., & Hollon, S. D. (2020). Leveraging the power of nondisruptive technologies to optimize mental health treatment: Case study. *JMIR Mental Health*, *7*(11), e20646. https://doi.org/10.2196/20646

Schoofs, D., Hartmann, R., & Wolf, O. T. (2008). Neuroendocrine stress responses to an oral academic examination: No strong influence of sex, repeated participation and personality traits. *Stress*, *11*(1), 52–61. https://doi.org/10.1080/10253890701453943

Skulmowski, A., & Rey, G. D. (2020). COVID-19 as an accelerator for digitalization at a German university: Establishing hybrid campuses in times of crisis. *Human Behavior and Emerging Technologies*, *2*(3), 212–216. https://doi.org/10.1002/hbe2.201

Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092