

IN PRACTICE

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SIMFONIK: AN ARTS-LED IMMERSIVE AUDIO XR SIMULATION TO FOSTER EMPATHY AND COMMUNICATION SKILLS IN HEALTHCARE TRAINING BASED ON LIVED EXPERIENCE OF PATIENTS**Jorge Lopes Ramos¹**; ¹*University Of Greenwich, London, United Kingdom***Correspondence:** j.ramos@gre.ac.uk

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Introduction: Empathy and effective communication are critical to safe, patient-centered healthcare, yet these ‘softer’ skills are often underdeveloped in traditional training when compared to ‘harder’ skills [1, 2]. Simulation tools exploring immersive and XR technologies can often prioritise clinical tasks over emotional engagement. Emerging from an arts-led collaboration between disabled-led arts organisation ZU-UK and researchers at the University of Greenwich, SIMFONIK is an app-based, audio-led XR simulation platform that uses storytelling, immersive audio, and scaffolded role-play to enhance healthcare students’ empathy [3], communication resilience, and emotional awareness. Drawing from techniques in serious games, LARP, and immersive theatre, SIMFONIK places students directly into the patient’s perspective through progressive and accessible instruction-led experiences.

Methods: A beta version of the SIMFONIK app has been piloted with undergraduate nursing cohorts at the University of Greenwich, and healthcare simulation staff across five UK universities. Using bone-conduction

headphones, participants experienced the scenarios in pairs - receiving real-time role-play instructions within a range of patient scenarios. Instructions gradually shifted from directive to autonomous, encouraging independent empathic decision-making. Sessions were framed by clear pre-briefs and structured debriefs. Pre/post surveys assessed self-rated empathy and communication confidence.

Results: Preliminary findings suggest positive impact. Across pilot sites, 81% of participants reported increased empathy and communication confidence. Average self-rated empathy scores improved by approximately one point on a seven-point scale post-session. Learners described the experience as understanding “what (empathy) really means,” “intense, making you actually think and feel,” and feeling “more equipped to implement it in practice,” highlighting the emotional realism generated by the audio storytelling and real-time role-play. Educators noted potential for greater engagement, deeper reflection around ‘hard-to-teach skills’, and improved emotional vocabulary. SIMFONIK’s technical setup proved low-cost, scalable, and adaptable to different classroom environments without the need for VR or specialist rooms.

Discussion: Early evidence indicates that SIMFONIK effectively supports empathy and communication development in healthcare education. By combining scaffolded instructions with immersive storytelling, the platform enables students to explore patient emotions safely and build emotional resilience. SIMFONIK’s accessibility, emotional impact, and adaptability make it a strong candidate for integration into healthcare curricula seeking to develop compassionate, patient-centered practitioners. Further evaluation will focus on longitudinal impacts and expansion to broader healthcare disciplines.

Ethics Statement: As the submitting author, I can confirm that all relevant ethical standards of research and dissemination

have been met. Additionally, I can confirm that the necessary ethical approval has been obtained, where applicable.

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Conflict of Interest: As a result of recent support from the AHRC/ESRC ARC Accelerate Catalyst Programme, SIMFONIK is currently being established as a spinout company.

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