

**Project Title:** The role of Practise-Based Virtual Reality Learning (PBVRL) in Nursing education in Ireland

**Supervisors:** Dr. Nigel McKelvey, Ms. Elaine Walsh, Dr Mark Porter, Dr Louise McBride, Ms Lydia Fowley, Ms Pamela Gallagher

**Keywords:** AR/VR, Augmented Reality. Virtual Reality, education, medical, computing, gamification

**Project Summary:** Practise-Based Learning (PBL) has become a cornerstone of clinical training and, though effective, is resource intensive. With increasing pressures, including the current climate of Covid-19, providing practice-based learning in nursing education has become restricted (Pottle, 2019, Haerling, 2018, Kirkham, 2021, Clark, 2021).

However new Immersive Learning Tools which include Augmented Reality (AR) and Virtual Reality (VR) – can transform how we deliver educational experiences. Immersive Learning tools offer benefits for learners and educators, delivering cost-effective, remote, repeatable, standardised training on demand (Haerling, 2018, Pottle, 2019, Foronda, 2020, Logeswaran, 2021).

A large body of evidence demonstrates how VR and the immersion it offers delivers effective Practise-Based Virtual Reality Learning (Fealy, 2019; Pottle, 2019; Sultan, 2019; Fairen, 2020; Jeon, 2021, Jallad, 2021, Logeswaran, 2021). For example, medical students demonstrate significantly higher knowledge gain when using an immersive environment rather than screen-based learning (Pottle, 2019). Jallad et al (2021), reported that the use of VR simulation in a nursing education strategy, improved knowledge acquisition, increased self-confidence, self-efficacy, satisfaction levels, and decreased anxiety levels among nursing students.

This is a pilot project design to investigate and evaluate the role of Practise-Based Virtual Reality Learning (PBVRL) in Nursing education setting in Ireland. The pilot will take place in LYITs Nursing department, it will implement Oxford Medical Simulation (OMS) a fully immersive VR learning platform, this platform will be evaluated for VR to Physical simulation learning transfer in relation to students skill-based competencies training in nursing education.

A VR to Physical simulation learning transfer study will be conducted using Kirkpatrick's training evaluation model, this will be implemented via pre and post feedback surveys and will be assessed in conjunction with personalised feedback and performance metrics provided by the OMS.

**Candidate Qualifications/Requirements:** A Level 8 Honours Degree (or equivalent) in a Computing-related discipline. Experience of working in a medical and/or educational setting would be advantageous.