

Virtual Reality in The Nursing Industry: A Malaysian Context

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Dear Editor,

Virtual reality (VR) was introduced in the 1960s for the gaming industry, aviation, the military, and teaching, particularly in Western countries like the United States of America (USA) (1). To date, the application of VR in nursing education or the nursing healthcare industry in Malaysia is still scarce. Early studies in Malaysia on the use of VR reported the development of driver instruction in 2005 and the reconstruction of the earliest mosque in Malaysia in 2004 to provide a safe driving experience and appreciate the historical structure without having to travel (2,3). On the other hand, VR in healthcare research or education has been introduced only recently to provide a safe experience prior to hands on the real client in a surgery (4).

Many issues arise in applying the VR technique, particularly in the proper partnership between the software company and the academic or healthcare industry for its proper utilization. In addition, the large budget implications of adopting VR technology may lead to drawbacks. A local researcher addressed this challenge and proposed to apply VR at Universiti Kebangsaan Malaysia to facilitate the medical students' clinical experience (5). The idea was rejected due to financial implications and accessibility issues. Ten years ago, the application of VR in the academic, research, and healthcare industries may have seemed impossible. However, through research grants, the initiative was finally a success, and the researcher and her team managed to develop several modules that applied VR (5).

On the other hand, a meta-analysis by a group of nursing researchers in Nanjing has proven that VR is better than other educational approaches in improving knowledge but is at par with other educational approaches in improving skill, satisfaction, confidence, and performance time (6). Furthermore, it provides a more realistic experience for the learner compared to traditional teaching methods (1). Thus, it is worthwhile to further explore the use of VR in the nursing industries (education, research, and healthcare) in Malaysia.

At the moment, a researcher with the assistance of a final year research project student and content experts from the Kulliyyah of Nursing has initiated a collaborative effort with Majlis Kanser Nasional (MAKNA) to adopt VR in a breast cancer awareness program in 2023 (7). During this event, a face-to-face lecture on breast cancer and a demonstration on breast self-examination (BSE) were combined with the utilization of VR in explaining the stages of breast cancer. Our experience shows that the participants were excited and immersed in the learning experience, which was similarly reported in several previous studies (1, 8, 12). The use of VR will enhance the practice of BSE since many women do not know how to utilize it (9).

The Malaysia Higher Education 4.0 Industrial Revolution recommended the utilization of VR in the nursing industry (10,11). Nevertheless, VR technology is not without its disadvantages. A local researcher highlighted

that their participants which was the students from tertiary institution perceived VR is suitable for technical and physical kind of teaching session but not that involved complex calculation or laboratory work (10). Furthermore, users may experience cyber-sickness symptoms such as nausea, eye strain, fatigue, headache, dizziness, and vertigo while using the VR, apart from unrealistic audio-visual features (12). Thus, there is still room for improvement in VR technology to provide a better experience, either in the academic, research, or healthcare industries.

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