

VR technology addresses cybersickness in nursing students

Immersive virtual reality (VR) is becoming an increasingly valuable tool for nursing students to hone their skills, but cybersickness can be a hindrance to some of them. An officer in the School of Nursing Simulation Laboratory at the University of the Free State (UFS) is working on a cure to the affliction using a popular virtual reality gaming tool.



KAT Walk mini

Bennie Botha, acting as head of information at the laboratory has developed a virtual environment in which nursing students use immersive VR to perform a simulation scenario. But he found that some people experience cybersickness (almost like motion sickness), which is a significant issue and difficult to address. He will now try to address this with a VR gaming tool – the KAT Walk mini.

According to Botha, this technology has never been attempted for health-care education; it is mostly used in military and pilot training and is very popular as a gaming platform for hardcore VR gamers.

“To test and provide a possible solution, I am going to incorporate the KAT Walk mini (omni-directional treadmill – almost like the Ready Player One concept) into which students are strapped, and they can physically walk and turn around without the need for large open spaces.

“With this, I will try to determine whether it decreases or even eliminates cybersickness due to sensory mismatch while using immersive VR. I wanted to provide possible evidence of what causes cybersickness and want to enable VR as an educational tool, not just for gaming. I think immersive VR has a bright future if the kinks (of which the biggest is cybersickness) can be minimised,” says Botha.

An equal opportunity for students

Botha says immersive VR gives students more time and a more accessible platform where they can practise their skills, as it is easy to use and easy to set up compared to other modalities of simulation. But the biggest task is to develop a usable virtual environment that gives students more time to practise and increase their theory and practical integration, which is key to providing highly skilled health-care professionals.

“By seeking and possibly implementing the new research, I aim to provide students with an equal opportunity to participate in immersive VR simulation, as it currently excludes people who are prone to high levels of cybersickness. This means that they cannot benefit from the same opportunities as other students do.”

“I believe it can help all nursing students in SA and Africa, as it is much more cost-effective than high-technology manikins and is easier to set up and access, with much less manual input required to make it work (apart from the initial development.).”

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