

The User Experience of Learning in Virtual Reality (19)

Innovation/Demonstration Station: Including interactive or computer-based teaching (Some past examples include board games, software, and virtual reality.)

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Background:

The following usability study proposes to understand individual learning through virtual reality (VR) technology. This pilot test will provide important information on how the VR program is experienced by users before it is rolled out on a larger scale. The VR simulations created by Michelle Aebersold et al titled "Under the Skin" teaches chemotherapy safety to nurses and pharmacists. We will have a group of nurses/pharmacists and students in those areas undergo the VR simulation training using the Oculus Quest VR headsets and then take a series of tests to measure knowledge, confidence, and cognitive load. We will also have a subset of participants narrate their experience out loud as they go through the simulations. This procedure is known as a 'think aloud' procedure and is commonly used in usability testing (Bastien, 2010). This will be recorded, transcribed, and coded for themes. The overall focus is on ease of use, knowledge gained, and overall experience.

Actions, Methods or Intervention:

Pilot study which included pre and post simulation knowledge tests, SUS, NASA TLX, and users narrated their experiences during the simulation.

Results:

The study is still ongoing with an end date of late March/early April. Our results thus far show users average score on the knowledge test pre-simulation was 42% and post simulation was 71% seeing scores increase by nearly 30% overall.

Lessons Learned:

Our results seem to suggest that Virtual Reality simulations could act as impactful modes of learning.

Future Application and Next Steps:

The overall goal is to be able to release the simulation for nurse and pharmacist training, the current next steps are to continue the pilot, record more data, and present findings to the health and research community.

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