

A Qualitative Exploration of Clinical Students' and Lecturers Experiences with Virtual Reality in Training and Assessment at a Nigerian University

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Abstract

Background: Virtual reality (VR) technology is increasingly used in medical education as a novel tool for teaching, learning, and assessment.

Objective: This study explored students' perceptions of the usefulness of VR in improving their clinical abilities, knowledge retention, engagement, and overall learning experience.

Methods: A qualitative research study was conducted among twenty-four clinical students and eight clinical lecturers. A developed Virtual reality model to TRain and Assess Clinical Students (VTRACS) was used to train and assess clinical students on clinical scenarios. Data were collected through focus group discussions and in-depth interviews. The focus group discussions and in-depth interviews were audio-recorded, transcribed verbatim, and analyzed using NVivo 11.

Results: Many of the participants had no prior experience of virtual reality (VR) in teaching- learning activities, but judging

from their engagement with VTRACS, defined virtual reality as an alternative learning method (alternative to the traditional physical method). Major themes emerging from the study were Excitement, Simplicity, Uniformity, and Proficiency enhancement. The clinical students expressed a feeling of unlimited learning access with the use of VTRACS in training which would positively impact their confidence and reduce clinical errors. They were however, concerned about the affective aspect of the domain of learning with the use of VTRACS.

Conclusions: Conclusion: The use of virtual reality (VR) in the teaching and assessment of clinical students at a Nigerian university is perceived to increase skill acquisition, unlimited access to training and enhance proficiency. While VR is considered to be engaging and beneficial to medical education, there is a need for its effective incorporation into clinical courses and to ensure consistent access to the technology by students.

Conclusion: The use of virtual reality (VR) in the teaching and assessment of clinical students at a Nigerian university is perceived to increase skill acquisition, unlimited access to training and enhance proficiency. While VR is considered to be engaging and beneficial to medical education, there is a need for its effective incorporation into clinical courses and to ensure consistent access to the technology by students.

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**The Editor,
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Dear Sir/Ma

**RE: Manuscript title- A Qualitative Exploration of Clinical Students' and Lecturers
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On behalf of my other co-authors, I certify that we have all participated sufficiently in the intellectual content, conception and design of this work or the analysis and interpretation of the data, as well as the writing of the manuscript, to take public responsibility for it and have agreed to have our names listed as contributors. We believe the manuscript represents valid work. Neither this manuscript nor one with substantially similar content under our authorship has been published or is being considered for publication elsewhere, except as described in the covering letter. We certify that all the data collected during the study is presented in this manuscript and no data from the study has been or will be published separately. We attest that, if requested by the editors, we will provide the data/information or will cooperate fully in obtaining and providing the data/information on which the manuscript is based, for examination by the editors or their assignees. There are no financial interests, direct or indirect, that exist for individual contributors in connection with the content of this

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All authors under-listed who have made substantial contributions to the work reported in the manuscript and approved the the submission for publication.

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