Virtual Reality in Education – The Future of Learning

Apoorva Shukla¹, Usha GV², Nagesh L³,
¹³Department of Public Health Dentistry, Bapuji Dental College and Hospital, Davangere, Karnataka, India.

Commentary:
Virtual reality simulation is an effective tool in skill acquisition which helps by providing standardized scoring in the clinical situation as a result of repetitive training¹. A simulator is a machine designed to provide a realistic imitation of controls and operation of complex systems, used for training purposes². With the advances in technology and communication system, medical and dental simulators are being developed to support the acquisition of psycho motor skills before real-life clinical applications³. There are various advantages of virtual reality-based technology:

- Enhancement in student’s pre-clinical experience.
- The experience provides a better transition of students’ knowledge from pre-clinics to clinics.
- Improvement in ergonomics⁴.

Various configurations of the simulators make it efficient to be used in numerous fields of dentistry like prosthodontic and orthodontic management, managing cases in pedodontics and endodontic departments; operative and surgical treatment related education. Haptic virtual reality simulator including tactile sensation teaches caries removal, cavity preparation, periodontal pocket probing, calculus removal, crown preparation as well as implant placement⁵. Simulators are designed to provide feedback after training and help in guiding the correct treatment plan during the procedure. This new technology provides outstanding visualization which creates interest and increases student’s engagement in their work⁶. It results in improved clinical skills, better care with equipment’s, and confidence in clinics which reduces anxiety among operators and patients and overall improves quality of education in the dental field.
References


Keywords: Ergonomics; Virtual reality; Dental; Motor skill.


Source of support: Nil.

DOI: 10.15713/ins.dpj.007

Conflict of interest: None declared.

Corresponding Author:
Apoorva Shukla ,
Department of Public Health Dentistry,
Bapuji Dental College and Hospital,
Davangere-577004, Karnataka, India.
Email id: poorva69tmy@gmail.com