

**VIRTUAL REALITY: A NEW HORIZON TO TEACH ANATOMY**Memoona Bibi<sup>1</sup>, Farrakh Tariq<sup>1</sup>

The study of anatomy has traditionally based on various methods like human cadaveric dissection and textbooks. In the current era there are many innovative ways to learn anatomy, as technology develops at an ever-rapid pace. There are different technologies, procedures, and strategies that are used in teaching anatomy, but virtual reality (VR) is gaining a lot of attention and acceptance.<sup>1</sup> Many descriptive models have been employed to facilitate the study of anatomy that concentrates on the intricate structure of the various systems of the human body. However, there are opportunity for advancement of new techniques that will strengthen the present system by improving the likeness to the human body.<sup>2</sup>

The creation of an immersive virtual reality environment involves the usage of software. Wearing a head-mounted display (HMD) puts the user inside a Virtual Reality (VR) experience, unlike traditional user interfaces, allowing them to interact with the environment and virtual characters in a way that seems authentic. More than any other technology that has ever existed, VR has a special ability to give people the impression that they are somewhere else. This enables students to gain knowledge from experience just like they would in the actual world. The power of VR is in its capacity to deliver experiences on demand.<sup>3</sup>

Since the traditional modalities only provide a limited spatial awareness derived from didactic lectures and constrained anatomic dissection, the traditional modalities employed in medical education are linked to a number of problems. Additionally, a spatial relationship understanding obtained via conventional modalities (textbooks and 2-Dimensional (2D) visuals) is unclear, difficult to understand, and lacking in sufficient depth to prove a particular teaching point. Additionally, the human cadaver, which is one of the teaching anatomy methods, has several drawbacks, such as rising expenses, dwindling availability, and declining quality. These problems are resolved by 3D modelling, which makes it possible to see the spatial relationships between buildings from different angles, is reusable, can be scaled, and allows for exploratory features that enhance understanding.<sup>4</sup>

Although teaching anatomy to students of medical and biomedical sciences is the most prevalent use of cadavers, there are significant financial, ethical, and administrative restrictions on their use. This indicates that over the past ten years, extensive study has been done on alternate approaches to teach spatial and theoretical concepts in anatomy. Few concepts, such as QR codes, online programmes, 3D visual anatomical atlases, or other teaching aids have however been adopted and have been conclusively shown to be useful for learning. But the first consumer-grade technology that can show pupils accurate 3D models and concepts in a way that can be guided by a teacher or supervisor is virtual reality. Therefore, there is a lot of interest in using this technology, and its potential to supplement current teaching in anatomical education is exciting to both students and curricula developers alike.

**References:**

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