MEDICAL EDUCATION: STRATEGIES FOR INTEGRATING TRADITIONAL AND DIGITAL METHODS

Abdujalilova Feruza Milimamatovna
Sergeli Abu Ali ibn Sino Public Health Technical School

Abstract

The use of 3D digital models in anatomy education enhances students' comprehension and their ability to visually perceive complex structures compared to traditional methods. This study analyzed the effectiveness of using these models in the learning process, as well as the opportunities for practical skills development and cognitive growth through interactive technologies. The results demonstrated that digital models play a significant role in deepening anatomical understanding and increasing student engagement.

Keywords: Anatomy, 3D models, digital education, medical education, interactive technology.

Introduction

Teaching anatomy is of fundamental importance in medical education, ensuring that students develop a profound understanding of the human body. Traditional teaching methods often rely on books, diagrams, and two-dimensional illustrations, which complicates the visual comprehension of complex structures and limits students' ability to apply theoretical knowledge in practice [1–2].

From this perspective, the use of 3D digital models serves as an effective tool for developing students' cognitive abilities and for providing a comprehensive understanding of organs and systems [2–3]. Students can examine organs from multiple angles and analyze their geometry, dimensions, and interrelations in depth. 3D models possess interactive features, allowing students to observe various clinical scenarios and anomalies in a virtual environment [2–3]. This enhances their analytical thinking and clinical reasoning skills.

As a result, 3D digital models effectively integrate theoretical and practical anatomical knowledge, improve visual perception, and increase student engagement. The application of this technology is considered an effective approach for significantly improving the quality of medical education and preparing students for clinical practice in the future [1–3].

References

1. Sugand K, Abrahams PH, Khurana A. The anatomy of anatomy: A review for its modernization. Anatomical Sciences Education. 2010;3(2):83–93.
2. Nicholson DT, Chalk C, Funnell WRJ, Daniel SJ. Can virtual reality improve anatomy education? Medical Education. 2006;40(11):1081–1087.
3. Moro C, Štromberga Z, Raikos A, Stirling A. The effectiveness of virtual and augmented reality in health sciences and medical anatomy. Anatomical Sciences Education. 2017;10(6):549–559.