Traditional Teaching and Learning Methodologies: Innovations Needed

Sir,

The study of Medicine and Dentistry has been challenging from the very beginning.[1] Over the years, as advancements were made in these fields, either in discovering new diseases or their cure, the methods and patterns of learning for future clinicians also kept getting updated and revised. The educators and facilitators in this particular domain thus need to be vigilant and enthusiastic in adapting fresh and different innovations adding up to the ongoing teaching style so that the students can stay focused, connected, and more attentive towards gaining knowledge.[2]

It has been observed that the most highly used teaching and learning style in Pakistan is the traditional teaching and learning methodology, which comprises the teacher or lecturer as the main figure passing knowledge and lessons through lectures or presentations and students have no active role in engaging with the topic except for listening to it attentively, which, at some point of time can become tedious for them, thus losing interest ultimately.[3]

Effective student performance is greatly dependent upon the role that academic environments play in healthcare professional education, a belief that prevails around the world. The production and efficacy of dental education are threatened by several issues, thus dental organisations must develop efficient systems to include contemporary worldwide trends in dental education to support the academic environment.[4]

In the 21st century, when everything has gone into its advanced mode, we cannot ignore the prospects of medical science taking a swift turn and coping with the latest technology. Information and communication technology advancements will have a significant impact on the nature of medicine in the future, and it appears that the current classroom model will not be able to adequately prepare students for this future. Computer-assisted instruction, simulated patients, augmented reality, real clinical experiments, and virtual reality for competency evaluation are some of the new developments in teaching and assessment techniques.[5]

A key component of the landscape of transformational technologies is artificial intelligence (AI), which has a profound effect on the way individuals interact with information, make decisions, and move through the complex environment that exists. With technology advancing at an ever-increasing rate, AI is becoming more and more integrated into almost every aspect of our lives.[6]

First of all, the creation of large language models (LLMs) such as Google Bard and Chat Generative Pre-Trained Transformer (ChatGPT), is one of the most recent advances in AI. These models have shown promise in various educational and evaluation contexts, capable of producing responses that closely mimic human language. The integration of these models into medical education is becoming a more talked-about and interesting issue.[7]

A person's learning style is defined by their preferences for learning as well as how they interact with knowledge. It has been suggested that understanding these variations in learning styles enables educators to modify their approaches to better suit the preferences of their pupils, thereby improving the efficacy and efficiency of instruction. Knowing one's preferred learning style can help learners make decisions that will enhance their learning results and raise their level of satisfaction with the educational experience.[8]

Traditionally, the main teaching method in medical education has been traditional didactic lecture-based learning (LBL). Fundamentally, LBL is a teacher-centred method that depends on the educator passively imparting knowledge to the student. This kind of instruction rewards the memorisation of data without requiring students to comprehend the material, and it frequently employs assessment techniques that encourage surface learning. The new teaching methods are applied on a day-to-day basis throughout the world's renowned medical and dental schools. This has not only helped lecturers in developing the concepts but also spiked students' interest and understanding levels. Measurable variations have been reported in the ways that students like to absorb, process, and remember new information.[9]

We propose that teachers and faculty members should consider new innovative ideas, such as encouraging students to clarify their concepts rather than focusing on rote learning. This could involve turning simple presentation-based lectures into case and problem-based learning, and utilising the era of 3-dimension (3D) technology and videography to help students grasp the concepts more effectively.

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