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The Best of Both Worlds: Incorporating Virtual-Reality-Enriched Tasks (VRETs) into the Gross Anatomy Classroom

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Abstract:

As the world enters the digital era, innovative technologies such as virtual reality (VR), augmented reality (AR) and artificial intelligence (AI) become available for anatomy educators to utilize for revolutionizing the gross anatomy education. In the School of Biomedical Sciences, LKS Faculty of Medicine, HKU, our team of anatomy educators embarks on an endeavor of integrating the VR technology into cadaveric-based anatomy education, with the aim of transforming anatomy classroom into an active and student-centred learning environment that creates deeper understanding of the subject matter.

We believe that the use of VR or other technologies should not merely create another digital atlas for students as an additional resource. Rather we should create novel pedagogy to integrate VR in the classroom for enhancing active learning. We adopt task-oriented practical approach, with the aim to introduce VR into large classes of over 250 students and integrate it seamlessly into dissection classes.

In the current study, three VR-enriched tasks (VRETs) were created by two anatomy teachers. Two other anatomy teachers, who did not involve in task writing, were invited to review and verify the task practicality and content difficulty. Two VRETs sessions were held with a total number of 48 second-year MBBS students at HKU. A 7-point Likert scale questionnaire adopted from technology enabled active learning (TEAL) inventory was distributed at the end of each session, for studying our students' perception and satisfaction of a learning activity assisted with VR. The result showed that VRETs were well-received by participants, but there was a moderate learning curve for them to overcome, especially for the novice users, before they could fully enjoy the experience.

In this session, with an exciting VR demonstration, we will be sharing with you the experience of the application of VR technology in the anatomy classroom, from both the students' and teachers' prospectives.