Fostering Enriched Teaching and Learning Experience Using Effective Cyber-Physical Learning Environment

Authors : Shubhakar K., Nachamma S., Judy T., Jacob S. C., Melvin Lee, Kenneth Lo

Abstract : In recent years, technological advancements have ushered in a new era of education characterized by the integration of technology-enabled devices and online tools. The cyber-physical learning environment (CPLE) is a prime example of this evolution, merging remote cyber participants with in-class learners through immersive technology, interactive digital whiteboards, and online communication platforms like Zoom and MS Teams. This approach transforms the teaching and learning experience into a more seamless, immersive, and inclusive one. This paper outlines the design principles and key features of CPLE that support both teaching and group-based activities. We also explore the key characteristics and potential impact of such environments on educational practices. By analyzing user feedback, we evaluate how technology enhances teaching and learning in a cyber-physical setting, its impact on learning outcomes, user-friendliness, and areas for further enhancement to optimize the teaching and learning environment.

Keywords : cyber-physical class, hybrid teaching, online learning, remote learning, technology enabled learning

Conference Title : ICTBLSES 2024 : International Conference on Technology-Based Learning Strategies and Educational Sciences

Conference Location : Goa, India

Conference Dates : December 09-10, 2024