Integration of Building Information Modeling (BIM) and Virtual Reality (VR) technologies for construction engineering education in

Hong Kong: towards a discovery-enriched curriculum

Principal Investigator: Dr. Jung In KIM

Abstract No.: 6000703

Abstract

Engaging students in observing construction processes enhances students' knowledge and promotes their motivation for construction engineering education. However, it is hard to realistically present the entire construction process within the classroom because of construction projects' characteristics and students' safety issues. Thus, traditional education methods limit students from effectively acquiring course-related knowledge by accessing actual construction processes, which also promotes the active discovery of the knowledge. To overcome this challenge, this project proposes an innovative teaching method by integrating Building Information Modeling (BIM) and Virtual Reality (VR) technologies, with an emphasis on enhancing students' engagement in the construction-related courses. Using the CA3703 (Construction Methods and Equipment) course as a test bed, the project team will formalize the digital library integrating BIM and VR technologies for the iBIM Centre, launched by the Department of Architecture and Civil Engineering in September 2019, based on existing construction models. By assessing the effectiveness of the innovative method, the team will validate its contributions to the discovery-enriched curriculum (DEC) in construction engineering education.