

Project-based Learning: Creating an Immersive Experience for Learners

Digital advancements are developed at an astounding pace. Today, virtual reality (VR) is not only used in aviation, military, or surgical simulated training. It attracts many corporations, innovative trainers, and educators to integrate VR in different aspects to mimic an authentic learning environment. Cave Automatic Virtual Environment (CAVE) is a projection-based VR that provides a sense of reality to users at a high level of immersive experience. Given a greater demand for VR-related skill-sets in the corporate training world, there is a strong need to groom our undergraduate students with both the required knowledge and skills.

In this study, a project-based learning (PBL) approach with immersive experience was developed for undergraduate students taking the subject of training and development. According to PBL's principles in constructivism, this student-centered form of instruction is characterized by learners' autonomy, constructive investigations, goal-setting, collaboration, communication, and reflection within real-world practices (Kokotsaki et al., 2016). This immersive experience project requires students to develop digital solutions using CAVE to solve real-world training issues. In addition, the project emphasized that students take ownership of the project design and prototype development through stimuli such as field trip at CAVE, hands-on video filming sessions, and socialization experience with technical and training industry experts. The study results will provide insights into developing training content using immersive technology and implications on learners' feelings of presence, emotional engagement, and active learning.

Key words: Active learning, CAVE, immersive technologies, project-based learning, training and development

References:

Kokotsaki, D., Menzies, V., & Wiggins, A. (2016). Project-based learning: A review of the literature. *Improving schools*, 19(3), 267-277.