ONLINE EDUCATION: TEACHING IN A TIME OF CHANGE

• Paper / Proposal Title:
Architectural aspects in immersive virtual environments – teaching online yet being in place

• Author(s) Name:
Hadas Sopher

• University or Company Affiliation:
CRENAU/AAU – UMR_CNRS 1563 – ENSA Nantes - France

Abstract

By providing users to experience a sense of presence in a virtual environment, immersive Virtual Reality (iVR) systems expand the possibilities for different human activities to take place, such as working, meeting, or learning, creating a substantial need to understand their role in architectural design. Due to the social distancing restrictions caused by the COVID-19 pandemic, this subject bares more attention, as some activities cannot take place in the physical realm, requiring architects to rethink the way an architectural artifact can support these activities.

This paper discusses a course offered for 2nd – 5th year architecture students at the School of Architecture, Ariel University, Israel, that addresses the role of iVR systems in the context of architectural design and human activities under and post COVID times. The course objectives were to analyze various iVR settings and design an architectural object (or multiple objects) while integrating iVR into the program. Students worked in groups using multiple online and iVR environments. In addition, a written summary describing the use of iVR in a specific field provided the means to expand the theoretical knowledge, gain academic writing skills and develop critical thinking. Sixty-four students participated
in the course, resulting in fourteen design projects. The paper describes the pedagogical methods and theoretical background that comprise the course. The projects' educational values are discussed in terms of integrating iVR and their support in current societal needs.

Considering the components of the learning environment in relation to desired pedagogical objectives is significant for shaping learning so that the educational setting benefits the learning objectives. This paper's contribution depicts the affordances of iVRs adequate for supporting design learning activity, making it possible to integrate iVRs to foster design-learning processes in a discerning fashion.

• Author(s) Biography (200 words each):

Hadas Sopher is a Postdoctoral scholar in the National Superior School of Architecture of Nantes, with research interests in the area of architecture education and immersive VR technology. Hadas holds a PhD (2020) from the Faculty of Architecture and Town Planning, at the Technion, Israel's Institute of Technology, with distinction.

In 2021, Hadas won the West Creative Industries grant program for postdocs to study the impact of immersive VR systems in collaborative design. Hadas is the winner of the Gutwirth and Jacobs excellence scholarships and the Schraggenhaim award for doctoral studies.

In her PhD research, Hadas explored the impact of an immersive VR environment on design learning processes. Hadas developed a method to assess learning environments by formulating a model of "Knowledge Construction Activities" (KCAs) that measures learning performance in different educational settings.

Hadas practiced architecture, working in architecture firms in Israel and France, specializing in urban design, conservation, healthcare facilities, and commercial design. Since 2011 Hadas serves as an educator in several architecture faculties, teaching Studio, digital design, and related theory. Hadas developed unique syllabi to teach/learn design using immersive VR settings. In these courses, the students gain hands-on experience in up-to-date VR systems and theory.