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Improvement of Students' Active Experience through the Provision of Foundational Architecture Pedagogy by Virtual Reality Tools

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Abstract : It has been seen in recent years that architects are using virtual modeling to help them visualize their projects. Research has indicated that virtual media, particularly virtual reality, enhances architects' comprehension of design and spatial perception. Creating a communal experience for active learning is an essential component of the design process in architecture pedagogy. It has been particularly challenging to replicate design principles as a critical teaching function, and this is a complex issue that demands comprehension. Nonetheless, the usage of simulation should be studied and limited as appropriate. In conjunction with extensive technology, 3D geometric illustration can bridge the gap between the real and virtual worlds. This research intends to deliver a pedagogical experience in the architecture basics course to improve the architectural design process utilizing virtual reality tools. This tool seeks to tackle current challenges in current ways of architectural illustration by offering building geometry illustration, building information (data from the building information model), and simulation results. These tools were tested over three days in a design workshop with 12 architectural students. This article provided an architectural VR-based course and explored its application in boosting students' active experiences. According to the research, this technology can improve students' cognitive skills from challenging simulations by boosting visual understanding.

Keywords : active experience, architecture pedagogy, virtual reality, spatial perception
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