

# Implementing Immersive Technology as Creative Tools for Educational Design Programs

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## Abstract

The world is experiencing a momentous surge in advanced immersive technology that has generally been excluded from classrooms due to a variety of reasons, including the exorbitant costs associated with it. With developers flooding the market offering competing peripherals, prices are dropping significantly making the technology accessible to educational institutions. My research investigates how schools can begin to use extended reality technology as a creative tool in educational design programs and how it offers students critical design methods and enhanced research processes. For this research I conducted a literature review and designed and carried out a case study with high school design students at a private school in Mexico City. The study was designed to measure students' engagement and experience developing virtual environments while evaluating the pedagogical approach used to design instruction. It is worth noting that the case study was realized while in remote learning during the pandemic in the spring 2021 so this could be considered a limiting factor in the study's results. After completing their projects, students were surveyed and results suggest that students engaged in their learning while using immersive technology as a creative tool. They felt confident that they retained the content learned and that they would apply the methods used across other contexts, in and out of the classroom. Design programs that implement extended reality can empower students to not only imagine and speculate design solutions, but to actually experience them as virtual prototypes. This can support the discovery of innovative approaches to problem resolution, research, and building new knowledge, fostering long-lasting critical thinking skills.

**Key Words:** critical design; design education; educational technology; extended reality; pedagogy