Immersed in Design: Using an Immersive Teaching Space to Visualize Design Solutions

Authors : Lisa Chandler, Alistair Ward

Abstract : A significant component of design pedagogy is the need to foster design thinking in various contexts and to support students in understanding links between educational exercises and their potential application in professional design practice. It is also important that educators provide opportunities for students to engage with new technologies and encourage them to imagine applying their design skills for a range of outcomes. Problem solving is central to design so it is also essential that students understand that there can be multiple solutions to a design brief, and are supported in undertaking creative experimentation to generate imaginative outcomes. This paper presents a case study examining some innovative approaches to addressing these elements of design pedagogy. It investigates the effectiveness of the Immerse Lab, a three wall projection room at the University of the Sunshine Coast, Australia, as a learning context for design practice, for generating ideas and for supporting learning involving the comparative display of design outcomes. The project required first year design students to create a simple graphic design derived from an ordinary object and to incorporate specific design criteria. Utilizing custom-designed software, the students' solutions were projected together onto the Immerse walls to create a large-scale, immersive grid of images, which was used to compare and contrast various responses to the same problem. The software also enabled individual student designs to be transformed, multiplied and enlarged in multiple ways and prompted discussions around the applicability of the designs in real world contexts. Teams of students interacted with their projected designs, brainstorming imaginative applications for their outcomes. Analysis of 77 anonymous student surveys revealed that the majority of students found: learning in the Immerse Lab to be beneficial; comparative review more effective than in standard tutorial rooms; that the activity generated new ideas; it encouraged students to think differently about their designs; it inspired students to develop their existing designs or create new ones. The project demonstrates that curricula involving immersive spaces can be effective in supporting engaging and relevant design pedagogy and might be utilized in other disciplinary areas.

Keywords : design pedagogy, immersive education, technology-enhanced learning, visualization