Title	アートデザイン教育におけるインタラクティブメディアによるデザイン専攻学生の創造的思考力への支援についての研究
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Abstract

Mixed reality (MR) technology is an extension of virtual reality (VR) and augmented reality (AR) technology. Owing to its ability to foster learning, its research and application in education are considered technological breakthroughs. Some research has investigated student learning outcomes; however, little has compared MR environments with traditional teaching environments where creative activities are performed. The cultivation of creativity has long been valued in design education. This study used MR to build a virtual learning environment based on Microsoft HoloLens 2, creating an MR educational setting that promotes creativity by combining a physical and a virtual environment. Previous studies have employed virtual environments to advance creativity; however, the educational environments were presented in virtual ones supported by VR technology—a completely unreal milieu. The MR creative environment (MRCE) developed in this study overlays a virtual one with a physical setting and focuses on enhancing usability, flexibility, and creativity. Data on the traditional creative environment and the MRCE were collected separately through a between-group comparison and showed the MRCE to be more helpful in supporting the creative process and improving creative outcomes. This research proposes an application of MR technology to boost the quality of educational settings and offers a new medium for teaching creativity. The study also explores the advantages of MR educational environments in supporting creativity, expanding the environmental dimension in education, and valuing the promotion of the learner's capabilities, as well as the application potential and future development of MR technology in the education field and beyond.