Abstract

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Architectural Design Creativity in Multi-User Virtual Environment: A Comparative Analysis between Remote Collaboration Media

Previous studies have argued that a Multi-User Virtual Environment has the potential to foster creative collaboration, but empirical studies that examine this claim are rare. With a focus on architectural design, this study has investigated the affordance of Multi-User Virtual Environment for the production of novel and appropriate solutions in remote collaborative environments. Forty-four participants produced design solutions using Multi-User Virtual Environment and online sketching in remote collaboration. Four expert-judges assessed the novelty and appropriateness of the collaborative results, following the Consensual Assessment Technique. The results analyzed by paired samples T-test indicated that in remote collaboration, Multi-User Virtual Environment's scores for both novelty and appropriateness were partially higher than those of online sketching. In remote collaboration, the immersion by avatars and co-presence with others in Multi-User Virtual Environment were perhaps more effective due to explicit communication cues used to share spatial information and collaborative procedure, compared to the two-dimensional, static representation of online sketching.