Digital Technologies for safety education and training in construction industry

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Abstract

Digital technologies (DTs) have been recognized and adopted for safety training in construction to enhance the safety performance of organizations. This study aimed to understand the state-of-art review of the DTs adopted for safety training and their application areas in construction since 2000. Fifty-nine articles were found after conducting a systematic literature review (SLR) using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) review method. The research trend was identified and described using bibliometric analysis in terms of the number of publications per year, sources of documents, influential authors and regions, highly cited articles, and research areas. The findings indicated that immersive virtual reality (VR) technology was used widely to train and educate individuals in construction research. In terms of research areas, most of the DTs were focused on enhancing individuals' hazard recognition (HR) skills. The findings summarized the mainstream research areas, discussed existing research gaps, and suggested future directions in DTs application for safety training in construction. The recommended future directions could improve safety training performance in the construction industry.

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