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# Analysis of Key Design Criteria in The Application of Virtual Reality Technology Towards Social Interaction for The Elderly in China

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## Abstract

Virtual Reality (VR) technology holds significant potential for enhancing social interaction among the elderly. It can effectively improve their quality of life and reduce feelings of loneliness. Through VR environments, elderly individuals can participate in various social activities and rehabilitation training, which not only enhances their well-being but also positively impacts their physical and mental health. However, many older adults continue to experience reduced social engagement due to physical limitations and environmental constraints. Research on the specific applications and effects of VR technology on elderly social interaction particularly in China remains limited. This study aims to identify key design criteria for VR-based social interaction platforms utilising Human-Computer Interaction (HCI) tailored for elderly users. Data were collected from 82 participants aged 55–80 in Hefei and Nanjing of China, through an online questionnaire. The study explores user experiences and preferences, as well as strategies for optimising VR platforms for elderly social

engagement. Findings indicate that effective VR platforms must incorporate optimised design elements, content features, and service components to promote usability and sustained engagement. The results offer valuable insights for VR platform designers, developers, operators, and end users, guiding the initial planning and ongoing improvement of such platforms. Additionally, the study highlights the influence of operational strategies on long-term platform success. © Authors, 2026 and 2026 by the authors.

## Author keywords

Ageing Technology; Digital Media; Human-Computer Interaction; Social Interaction Platform; Virtual Reality

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