



# Virtual Reality Simulations in Primary Education for Special Needs Students: An Investigation in Cairo, Egypt 2009

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## Abstract

Virtual reality (VR) simulations have shown promise in enhancing educational experiences for students with special needs, particularly in primary education settings. The study employed a mixed-methods approach involving pre- and post-intervention assessments, focus group discussions, and observations. Data was collected from 120 students over one academic year. VR simulations were found to significantly enhance engagement ( $p < 0.05$ ) among special needs students compared to traditional teaching methods. The integration of VR into the curriculum appears promising for supporting educational attainment and social development in primary education settings for children with special needs. Further research should explore long-term impacts, cost-effectiveness, and scalability of VR simulations across different regions and populations. Virtual Reality, Special Needs Education, Primary School, Cairo

**Keywords:** *Cairo, Egypt, Special Needs Education, Mixed Methods, Virtual Reality, Simulation Technology, Neuropsychology, Cognitive Development*

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