



Virtual Reality in Education: An Assessment of Access and Impact for Children with Disabilities in South Africa

Sello Motlonyane^{1,2}, Nontoko Mngqibiso³, Tshabalala Hlongwane^{4,5}

¹ Department of Advanced Studies, University of the Witwatersrand

² Department of Advanced Studies, National Institute for Communicable Diseases (NICD)

³ National Institute for Communicable Diseases (NICD)

⁴ Rhodes University

⁵ Department of Research, National Institute for Communicable Diseases (NICD)

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Correspondence: smotlonyane@yahoo.com

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Author notes

Sello Motlonyane is affiliated with Department of Advanced Studies, University of the Witwatersrand and focuses on African Studies research in Africa.

Nontoko Mngqibiso is affiliated with National Institute for Communicable Diseases (NICD) and focuses on African Studies research in Africa.

Tshabalala Hlongwane is affiliated with Rhodes University and focuses on African Studies research in Africa.

Abstract

Virtual reality (VR) technology has gained traction in educational settings globally, offering immersive learning experiences. In South Africa, where disparities in educational access are prevalent, VR platforms present an innovative avenue to bridge these gaps, particularly for children with disabilities. The study employed a mixed-methods approach, including surveys, interviews, and observational studies. Data were collected from 10 schools across three provinces, analysing both quantitative data on student engagement and qualitative insights into teacher perceptions and student experiences. A key finding was that while VR technology is available in most schools, access varies significantly by region. For instance, only 40% of schools in rural areas had adequate VR equipment compared to 75% in urban settings. Despite challenges with resource distribution and technical infrastructure, VR education showed promise for enhancing engagement and inclusivity among children with disabilities. However, sustained efforts are needed to ensure equitable access across all regions. Policy makers should prioritise investment in digital infrastructure and training programmes to support the integration of VR into mainstream educational curricula. Schools require ongoing support to maintain and upgrade their VR equipment.

Keywords: *African geography, Virtual reality, Educational access, Disability studies, Immersive learning, Technology integration, Needs assessment*

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