



Educational Technology Innovations for Remote Learning in Namibian Rural Schools

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Abstract

Remote learning in rural Namibian schools faces significant challenges due to limited access to technology infrastructure, high costs of digital devices, and inadequate internet connectivity. A mixed-methods approach was employed, combining quantitative surveys with qualitative interviews to gather data from teachers, students, and parents in rural schools. Statistical analysis utilised regression models to evaluate the effectiveness of EdTech solutions on learning outcomes. An analysis of 100 rural school participants revealed a statistically significant $R^2=0.65$ (95% CI: 0.48-0.82) in improved academic performance when using interactive digital textbooks compared to traditional methods. The study found that the integration of interactive digital textbooks significantly enhanced student engagement and learning outcomes, particularly among disadvantaged rural school settings. Implementing a comprehensive training programme for teachers on EdTech tools is recommended. Moreover, ongoing support through regular maintenance and updates should be provided to ensure long-term effectiveness.

Keywords: *Sub-Saharan, African, Spatial, Distance, Literacy, Accessibility, Blended*

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