



Strategies for Bridging Digital Inclusion in Rural South Africa: A Comparative Study

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Abstract

Rural areas in South Africa face significant digital inclusion gaps due to limited access to technology infrastructure and services. The study employed a comparative analysis of case studies from three different regions within South Africa. Data was collected through surveys, interviews, and observations. A notable finding is that the implementation of low-cost mobile internet solutions in one region significantly reduced access barriers by 40% compared to traditional broadband approaches. The comparative study underscores the effectiveness of tailored strategies for digital inclusion, particularly those involving community-led initiatives and affordable technology solutions. Policy makers should prioritise funding for low-cost mobile internet infrastructure in underserved rural areas. Community leaders should be encouraged to develop local training programmes. digital inclusion, rural South Africa, technological adoption, community engagement, low-cost mobile internet Model estimation used $\hat{\theta} = \underset{\theta}{\operatorname{argmin}} \{ \sum_{i=1}^n (y_i - f(\theta; \xi))^2 + \lambda \|\theta\|_2^2 \}$, with performance evaluated using out-of-sample error.

Keywords: *Digital Divide, Geographic Information Systems, Participatory Action Research, Access Hubs, Community Empowerment Programmes*

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