



Strategies for Bridging Digital Inclusion in Rural South Africa: A Systematic Review

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Abstract

Digital inclusion in rural South Africa remains a significant challenge, exacerbated by geographical barriers and limited access to technology infrastructure. A comprehensive search strategy was employed across various databases including PubMed, Web of Science, and Google Scholar. Studies published between and were included based on predefined inclusion criteria related to digital access, rural populations, and innovative or successful strategies for bridging the gap. The review identified a consistent theme of technology adoption barriers such as cost, lack of skills training, and inadequate infrastructure. However, there was evidence suggesting that community-led initiatives significantly improved digital literacy and usage among rural residents. While traditional top-down approaches are effective, the integration of grassroots efforts is crucial for sustainable digital inclusion in rural South Africa. Policy makers should invest in capacity building programmes targeting both local communities and service providers. Additionally, fostering collaborative partnerships between government entities, non-profit organizations, and private sector can enhance digital infrastructure development in rural areas. Model estimation used $\hat{\theta} = \text{argmin} \{ \theta \} \text{sumiell} (y_i, f\theta(\xi)) + \lambda \text{Vert}\theta \text{rVert}^2$, with performance evaluated using out-of-sample error.

Keywords: Digital Inclusion, Rural Development, Geographic Information Systems (GIS), Access Technologies, Empirical Studies, Policy Analysis, Community Engagement

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