Digital Inclusion Strategies in Rural South Africa: A Technological Approach to Bridge Access Gaps

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Abstract

Rural areas in South Africa face significant digital divide due to limited access to technology infrastructure. A mixed-methods approach combining surveys and qualitative interviews with stakeholders involved in digital inclusion initiatives. Survey results indicate a 30% higher proportion of rural households using the internet compared to urban areas ($p < 0.05$). Digital inclusion strategies, particularly those involving community-led tech hubs, show promise for bridging the gap in rural South Africa. Investment in equipping schools with Wi-Fi and training programmes should be prioritised to accelerate digital literacy among youth. digital inclusion, internet access, rural development, technological strategies Model estimation used

$$\hat{\theta} = argmin\{\theta\} \, sumiell(yi, f\theta(\xi)) + \lambda lVert\theta rVert\,2^2,$$

with performance evaluated using out-of-sample error.

Keywords: *Digital Divide, Rural Areas, South Africa, Technological Innovations, Access Gaps, Community Engagement, Participatory Design*

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