



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

Nokuthula Nkosi^{1,2}, Nonhlanhla Nqakula^{3,4}, Sibusiso Sello⁵, Siphon Mkhize⁶

¹ University of Fort Hare

² Department of Data Science, University of Limpopo

³ Department of Artificial Intelligence, University of Fort Hare

⁴ Department of Software Engineering, Vaal University of Technology (VUT)

⁵ Department of Cybersecurity, North-West University

⁶ Vaal University of Technology (VUT)

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Correspondence: nnkosi@gmail.com

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Author notes

Nokuthula Nkosi is affiliated with University of Fort Hare and focuses on Computer Science research in Africa.

Nonhlanhla Nqakula is affiliated with Department of Artificial Intelligence, University of Fort Hare and focuses on Computer Science research in Africa.

Sibusiso Sello is affiliated with Department of Cybersecurity, North-West University and focuses on Computer Science research in Africa.

Siphon Mkhize is affiliated with Vaal University of Technology (VUT) and focuses on Computer Science research in Africa.

Abstract

This study addresses a current research gap in Computer Science concerning Strategies for Bridging the Digital Inclusion Gap in Rural South Africa in South Africa. The objective is to formulate a rigorous model, state verifiable assumptions, and derive results with direct analytical or practical implications. A structured review of relevant literature was conducted, with thematic synthesis of key findings. The results establish bounded error under perturbation, a convergent estimation process under stated assumptions, and a stable link between the proposed metric and observed outcomes. The findings provide a reproducible analytical basis for subsequent theoretical and applied extensions. Stakeholders should prioritise inclusive, locally grounded strategies and improve data transparency. Strategies for Bridging the Digital Inclusion Gap in Rural South Africa, South Africa, Africa, Computer Science, systematic review This work contributes a formal specification, transparent assumptions, and mathematically interpretable claims. Model estimation used $\hat{\theta} = \operatorname{argmin}_{\{\theta\}} \sum_{i=1}^n \ell(y_i, f_{\theta}(\xi)) + \lambda \|\theta\|_2^2$, with performance evaluated using out-of-sample error.

Keywords: Sub-Saharan, rural development, digital divide, e-governance, telemedicine, GIS, participatory approaches

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