SARChI Chair SUSTAINABLE LOCAL (RURAL) LIVELIHOODS

Policy Brief

UNIVERSITY OF KWAZULU-NATAL INYUVESI YAKWAZULU-NATALI

MAY 2025 No. 10

ICT Integration in South African Rural Schools: Policy Strategies for Progress

Executive Summary

This policy brief synthesises findings from the evaluation of the implementation realities of the national Information and Communication Technologies (ICTs) policy objectives in rural KwaZulu-Natal in South Africa. While the country's progressive eLearning policies aim to equip all schools with ICTs, significant challenges hinder their effective integration and development of crucial 21st century skills. Inadequate teacher training, limited internet connectivity, and infrastructure deficits continue to widen the digital divide between urban and rural schools. Therefore, practical policy options such as equitable funding, comprehensive teacher training, and infrastructure development are proposed to transform ICT from a digital divide into a digital bridge in rural schools and to align with the country's constitutional mandate for equitable education and global learning goals.

Analysis of the Issue

The advent of the knowledge economy underscores the importance of ICT's proficiency in digitising learning. In response, South Africa has demonstrated constitutional commitment through formulated policies, such as the White Paper on e-Education (2004) and the ICT implementation Strategy (2013-2025), to integrate ICTs into its education system and redress educational disparities. However, effective implementation of these policies in rural settings remains a concern. There is a significant gap between the envisioned integration of ICTs and reality in South African rural schools. Rural regions, such as the UMzinyathi District in KwaZulu-Natal, continue to lag due to poverty and limited resources. These areas face systemic challenges, including inadequate infrastructure, with 55% of rural residents lacking reliable electricity and internet connectivity. Furthermore, the revised ICT implementation plan failed to achieve universal adoption, disproportionately benefiting urban smart schools from their rural counterparts. This results in a digital divide that limits the potential of ICTs to serve as a digital bridge for learners in these areas to develop essential digital literacy skills. These gaps undermine the country's goal of preparing learners for the 21st century knowledge economy. Therefore, understanding the factors contributing to this misalignment is crucial for developing effective interventions.

Key Insights

According to Amedzo and Dzansi (2014), the integration of ICT in rural schools has the transformative power to revolutionise education and enable rural learners to compete in a globalised knowledge economy. ICT integration fosters critical thinking, digital literacy, and problem-solving skills that are considered essential for economic participation. ICT can transform rural education into a hub of innovation that ensures that all learners contribute to and benefit from the digital economy.

Consequently, the Department of Basic Education implemented strategies such as Operation Phakisa and smart school initiatives to transform education through digital tools by 2013, which was later extended to 2025.

Figure 1: *An example of the use of ICT in rural school*
Source: *https://edutimesafrica.com/maximising-the-power-of-edtech-in-africa-transforming-education-through-technology/*

Evidence from this research revealed unevenness in the implementation of eLearning policies across South Africa's rural schools. Former Model-C and urban schools demonstrated advanced ICT integration owing to better resources and funding. In contrast, rural schools in the uMzinyathi District struggled with unreliable Internet connectivity, inadequate infrastructure, and a lack of required digital devices that perpetuate educational equalities.

Broader systemic changes were neglected when prioritising smart schools. Teachers in rural areas face substantial barriers, including training deficits and generational resistance to technology, as only 7% of them possess intermediate ICT skills. These findings underscore the gap between policy ambitions and real-world execution that continues to marginalise rural learners.

Lessons learnt

This research highlights that effective ICT integration requires more than just policy directives. It demands targeted investments in infrastructure, extensive teacher training, and equitable resource distribution. There is a need for context-sensitive approaches, as one-size-fits-all policies fail to address rural schools' unique challenges such as electricity shortages and connectivity gaps. In addition, it is essential to promote teacher buy-in through continuous professional development for sustainable adoption. The findings underline the utility of public-private partnerships to supplement government efforts and address some underscored challenges. Systemic reforms are necessary to avoid education systems in which rural students will remain ill-prepared for a potential digitalised future.

Policy imperatives:
The following policy implications and actionable recommendations bridge the gap in ICT access, skills, and infrastructure between urban and rural schools in South Africa.

Targeting infrastructure development: The government should prioritise infrastructure development in rural areas by ensuring that rural schools have reliable electricity and adequate Internet connectivity, which are fundamental requirements for digital learning. This may involve exploring alternative energy solutions and establishing public-private partnerships to supplement government resources.

Enhancing teachers' training and support: Comprehensive teacher training programs in rural schools that would combine ICT certification with incentives for professional development should be implemented across all career stages. This will facilitate teachers' ability to leverage ICT skills and technology for teaching and learning.

Scaling up the address of systemic inequities: Equitable allocation of resources, including funding, devices, and software in rural areas, could address existing disparities. These efforts should be complemented by curriculum reforms in rural schools to integrate digital literacy as a core competency, preparing students for economic participation and 21st century workforce demands.

Robust monitoring and stakeholder collaboration: Monitoring mechanisms will help assess the impact of ICT integration initiatives and identify areas for adjustments where appropriate. In addition, this will ensure accountability for resource distribution and training outcomes.

By aligning these strategic interventions with South Africa's constitutional mandate for equitable education, the digital divide can be transformed into a bridge of opportunities to empower rural learners to participate fully in the knowledge economy.

Reference

Amedzo, K., & Dzansi, D. Y. (2014). Integrating ICT into rural South African schools: Possible solutions for challenges. International Journal of Educational Sciences, 6(2), 341-348.

Cite this Policy Brief

Mkhonto, B. S., & Mubangizi, B. C. (2025). ICT Integration in South African Rural Schools: Policy Strategies for Progress. Policy Brief No. 10, Durban Research Chair in Sustainable Rural Livelihoods, University of KwaZulu-Natal.