International Journal of Learning, Teaching and Educational Research
Vol. 24, No. 10, pp. 892-910, October 2025
https://doi.org/10.26803/ijlter.24.10.42
Received Jul 16, 2025; Revised Sept 18, 2025; Accepted Oct 8, 2025

Digital Divide and Social Justice in South African Rural Schools

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Abstract. This study explored the intersectionality of social justice and the digital divide in South African rural schools, focusing on how inequalities in access to digital platforms and skills exacerbate educational disparities. Employing a document analysis methodology, the study drew on previous research, policy documents, and official reports to enhance understanding of ICT implementation in rural schools. The analysis examined the consequences of the digital divide in these contexts and its broader implications for social justice. This study offers a novel approach by combining the digital divide and social justice in the context of South African rural schools. Van Dijk's digital divide theory, encompassing motivational access, material access, skills access, and usage access, served as the theoretical lens. Findings revealed that the digital divide in South African schools is deeply entrenched in infrastructural and socio-economic inequalities and a policy-practice gap. Rural schools, which predominantly serve black learners, are disproportionately affected by inadequate infrastructure, limited digital resources, and widespread digital illiteracy among both learners and educators. Compounding factors such as poverty, low economic activity, and unequal school funding further widen the digital gap. The study concludes that the digital divide constitutes a form of structural violence, and policymakers must take a more active role in ensuring equitable distribution of digital resources and implementing targeted interventions to support marginalised rural communities. Such actions are essential for advancing the broader social justice agenda in South Africa's education system.

Keywords: Social justice; digital divide; rural schools; marginalisation; Information Communication Technology

1. Introduction

Technological advancements worldwide have prompted many countries to integrate Information and Communication Technology (ICT) into education to enhance teaching and learning. In South Africa, the White Paper 7 on e-Education (DoE, 2004) marked a significant policy shift to bridge the digital divide by

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promoting ICT access in public schools, particularly those previously disadvantaged and continuing to grapple with apartheid-era legacies. The White Paper envisioned ICT as a tool for equitable learning and professional development opportunities. In light of this policy position, little is known about the progress made to avail ICT in rural schools and its ramifications on bridging the digital divide, particularly on the lives of learners and teachers in rural schools who are intended to benefit from this policy position.

This leaves a critical gap in our understanding of what has been done to redress the digital divide between rural and urban schools in South Africa. This study addresses that gap by evaluating how far the Department of Basic Education (DBE) has traversed with ICT integration in rural schools and whether this policy position has ameliorated or reinforced the digital divide between urban and rural schools. By exploring the progress made in integrating ICT in rural schools, the study informs policy on what ought to be done should we desire to bridge the digital divide between rural and urban schools in South Africa.

The study contributes to the broader discourse on social justice in education and aligns with Sustainable Development Goal 4 (SDG 4), which advocates for inclusive and equitable quality education. Bridging the digital divide in rural schools is positioned as a critical step towards achieving educational justice in post-apartheid South Africa. However, we acknowledge that much has been written about ICT's potential to transform educational practices and improve teacher and learner outcomes (Guvhu et al., 2021; Tadesse et al., 2024).

To adequately place this paper into context, we begin with a brief discussion of the schooling system in South Africa, then proceed to the discussion on the nexus between rurality and the digital divide as well as social justice in education, followed by the application of Van Dijk's Resources and Appropriation as a theoretical lens for this study, and then move on to discuss the methods used to generate data and present findings and discussions. In the discussion, we argue that a policy-practice gap renders White Paper 7 a cosmetic policy that has sustained and reinforced the digital divide between rural and urban schools in South Africa.

In light of the provided introduction, this paper is guided by this research question: What, then, did the policymakers in South African Basic Education do to implement White Paper 6 on e-Education to provide ICT in rural schools to redress past injustices in educational provision?

2. Literature Review

In the next part, we reviewed the literature, starting with an overview of the South African school system and moving on to the relationship between rurality and the digital divide, social justice education, and Global South parallels. This approach enabled us to contextualise the digital divide in South African rural schools while simultaneously identifying key results, patterns, and potential methods to improve policy and practice.

2.1 A Brief South African Schooling System

In 1994, South Africa transitioned from apartheid to democracy. The democratic government inherited a deeply fragmented and unequal education system characterised by racial and spatial inequalities (Arendse, 2019). Several educational policies were introduced to redress the imbalances of the past. One is the Amended National Norms and Standards for School Funding (ANNSSF) (RSA, 2006) as a policy instrument to redress historical imbalances in school funding.

The ANNSSF classifies all public schools into five quintiles based on the socio-economic conditions of the communities they serve (ANNSSF, 2006). This classification considers indicators such as poverty levels, unemployment rates, adult literacy, and local economic activity (van Dyk & White, 2019). Quintiles one to three represent the poorest schools, predominantly located in rural areas and attended mainly by Black/African learners, while quintiles four and five comprise affluent, fee-paying schools typically found in urban areas and often supplemented by substantial private or donor funding (Maistry & Africa, 2020).

The quintile system aims to promote equity by allocating greater public funding to under-resourced schools in disadvantaged communities. The ANNSSF (DoE, 2008) further stipulates that allocated funds must improve school infrastructure, procure teaching and learn resources, and enhance curriculum delivery. Implementation and oversight of these norms are entrusted to provincial education departments, which are required to monitor financial management and the impact of funding on educational outcomes. In addition, the policy encourages openness and responsibility at the school level by allowing School Governing Bodies (SGBs) to make decisions about how to use resources based on the needs of their schools. As such, the ANNSSF is a pivotal mechanism for promoting social justice, ensuring all learners have access to quality basic education regardless of their socio-economic background.

2.2 The Nexus Between Rurality and the Digital Divide in Rural Schools

Rurality remains a contested and context-specific concept, with no universally accepted definition (Nelson et al., 2021). Its meaning is often shaped by regional and cultural particularities (Myende & Maifala, 2020). In South Africa, rurality is widely conceptualised as a multidimensional construct. According to the Rural Education Draft Policy (2017), rural areas are characterised by traditional farming communities, low population density, limited economic activity, and inadequate infrastructure.

These areas typically fall under the traditional governance of Amakhosi (chiefs), which further distinguishes them from urban counterparts (Mkhize & Davids, 2023). In this context, rurality is not only defined by geographical or economic indicators but is also viewed as a distinct cultural way of life. This includes strong ties to land, with livelihoods often sustained through subsistence farming and livestock rearing (Hlalele, 2014; 2012).

Additionally, demographic variables such as income levels, population growth rates, spatial remoteness, and forms of governance are central to how rurality is

understood within South Africa (Mubangizi, 2023). Approximately 33.7% of the South African population resides in rural areas, many living below the poverty line and having limited access to quality education, healthcare, and essential social services (DALRRD, 2023). The digital divide in these rural contexts transcends mere technological limitations and is increasingly understood as a socio-spatial phenomenon shaped by the lived realities of rural communities (Aruleba & Jere, 2022).

The intersection between rurality and the digital divide has far-reaching implications for social justice and equity, particularly in education. In response to these challenges, the South African government introduced the South Africa Connect (SAC) policy in 2013 (DoC, 2013). This policy prioritises broadband access in rural and under-resourced areas, promoting inclusive economic development and ensuring universal access to affordable, reliable, and secure ICT infrastructure.

SAC is aligned with the broader objectives of the National Development Plan (NDP) 2030, which envisions eradicating poverty and reducing inequality. Despite the progressive intentions embedded in national policy frameworks, numerous studies highlight persistent challenges in integrating ICT into rural schools. These challenges are not solely technical but involve infrastructural, pedagogical, and systemic constraints (Chomunorwa et al., 2023; Isaacs, 2020; Mkuzo & Govender, 2025; Mnisi et al., 2024). This suggests that policy ambitions alone are insufficient without addressing rural schools' deep-rooted structural barriers in accessing and utilising digital technologies effectively.

2.3 Social Justice in Education

Social justice has become a watchword in contemporary education due to its recognition as the central concept in educational policies. It serves as a foundation for policy formulation and implementation, leading to a just and equitable society (Barnett & Teise, 2024; Mifsud, 2024). South Africa's educational acts, legislation, and policies aspire to accomplish social justice in educational settings, given the past discriminatory practices by the apartheid government and its legacy that continues to hover across all aspects of society, and education being one of them (Gebremedhin & Joshi, 2016). It is crucial for policymakers to take social justice into account when contemplating the nature of education and schools as vehicles for education (Mifsud, 2024).

However, social justice has been much of a scholarly discourse culminating in plural conceptions of social justice with no single understanding of what constitutes a socially just school and, ultimately, a socially just community (Mifsud, 2024; Tjabane & Pillay, 2011). For this reason, scholars across diverse disciplines acknowledge the multidisciplinary nature of social justice and the elusiveness of the singular conceptualisation of social justice (Berkovich, 2014; MacDonald, 2020; Mifsud, 2024; Teise & Gaillard, 2019; Wang, 2015). This study adopted Gewirtz's (1998) conceptualisation of social justice, which seeks to eliminate structural barriers against marginalised groups.

Such an understanding of social justice attempts to question and disturb the power and privileges enjoyed by schools in urban areas at the expense of schools in rural areas. Typically, such a characterisation applies to the South African basic educational context, pervaded by inequalities in the post-apartheid-era. Young (1990) outlines marginalisation, oppression, powerlessness, exploitation, cultural imperialism and violence as structural barriers that should be tackled to realise social justice. In considering eradicating these structural barriers, Gewirtz (1998) propounds a two-dimensional approach encapsulating distributive and relational justice. The distributional dimension of social justice recognises the inequalities in providing educational resources and calls for an even redistribution of teaching and learning materials in different schools, regardless of their geographical location.

The relational dimension questions the societal power and hierarchy that breeds injustices (Gewirtz, 1998). These two dimensions challenge social justice scholars to rethink how institutional power influences various oppressive systems in society that shape the distribution of educational resources and how systematic exploitation and oppression have impacted how marginalised rural schools experience and access educational resources, particularly ICT. It is as Connell (2012, p. 681) avers that,

> *''Inequalities produced by school systems are known. Education is dangerous because schools do not just reproduce culture; they shape the new society that is coming into existence all around us. Social justice in education, therefore, not only concerns equality in the distribution of educational resources. Social justice concerns the nature of the service itself and its consequences for society through time.'''*

In this quote, Connell (2012) attempts to expose how inequalities are reproduced, embedded in school systems, and translated into broader society. Learners from marginalised rural schools are anticipated to compete against learners from affluent schools. Competing for life opportunities such as admissions to universities, sports and recreational opportunities and employment with a complete disregard for unique existential constraints faced by these learners in their rural schools, spanning from poverty, rurality, the digital divide and other socio-economic challenges faced by these societies.

This practice reaffirms Connell's earlier point about an unjust education system that systematically recycles societal inequalities. Thus, in light of this discussion, it is conspicuous that the distributional dimension of social justice cannot be compartmentalised and attributed to the schooling milieu. The geographical position of the school is not the problem; however, structural disparities that policymakers overlook through a focus on and deliberate policy implementation to provide the ICT infrastructure in rural schools.

2.4 Global South Comparisons and the Digital Divide

The challenges experienced by rural South African schools mirror broader patterns of digital inequality across the Global South. In India, the digital divide is also shaped by disparities in infrastructure, socio-economic status, and geography (Kumar et al, 2024). While government initiatives such as PM e-Vidya,

DIKSHA, and SWAYAM have expanded digital access and represent innovative attempts to revolutionise education through ICT, participation remains uneven (Gupta & Saranya, 2024). The digital divide can be attributed to unequal access to electricity, devices, and stable internet, disproportionately affecting rural and low-income learners (Singh, 2024). Tewathia et al. (2020) found that less educated, lower-income, and lower-caste communities are further marginalised, as they lack both ICT assets and the skills to use them effectively. In Kenya, the digital divide is driven by inadequate infrastructure, high access costs, limited digital literacy, and cultural barriers (Chisika & Yeom, 2024). Okello (2024) argues that progressive policies, such as lowering taxes and tariffs on ICT tools, are essential to bridge the digital divide.

In Nigeria, the digital divide remains a significant barrier to equity that restricts the potential of technology to enhance learning and socio-economic mobility (Oni et al., 2025). These cases demonstrate that the digital divide in the Global South is marked by common challenges: infrastructural deficits, socio-economic inequalities, and uneven policy implementation. This comparison demonstrates that South Africa's rural digital divide is not only a worldwide trend but also a result of deep-seated internal inequities in resource distribution and policy implementation.

3. Theoretical Perspective

We employed Van Dijk's (2013; 2005) Resources and Appropriation Theory in this paper. It is a theoretical framework used to explain and analyse how ICT tools are distributed, accessed, and used and how this contributes to the ongoing inequalities in society. This theory offers perspectives into comprehending the complexities of the digital divide in rural South African schools. It goes beyond physical technologies like tablets, computers and smartphones. To encapsulate internet connectivity, software and digital skills development. Van Dijk's (2013; 2005) Resources and Appropriation Theory is well suited to this study as it frames the digital divide in South African rural schools as more than unequal access, encompassing disparities in skills, motivation, and institutional support.

This perspective provides a critical lens for analysing how such constraints limit the appropriation of ICT, reinforce educational inequalities, and pose challenges to social justice. Thus, within rural schools in South Africa, the provisioning of ICT tools is insufficient. Stable electricity and teaching professional development programmes on digital skills should support it. Van Deursen and van Dijk (2019) and Van Dijk (2013) identify two categories that help us understand the extent of the digital divide in rural schools. Personal categorical and positional categories are inequalities (Van Deursen & van Dijk, 2019). The personal category revolves around an individual person's identity, gender, age, personality, race, and health status.

The positional category inequalities examine an individual's socio-economic status, involving employment status, their level of education, the type of household, interpreted as a family structure, and lastly, an individual's country, whether a developed or developing nation (Van Deursen & van Dijk, 2019). These

categories apply to the South African basic educational context, given that rural schools predominantly accommodate black learners and have relatively ageing teachers in terms of the personal category.

Regarding the positional category, rural schools are situated in areas with low economic activity, and most of the population is not economically active. This sustains the persisting educational inequalities in ICT provisioning in South African rural schools (Clercq, 2020). Van Dijk (2005, p. 7) warns that:

> ''*Categorical inequalities in society create an uneven distribution of resources, which, along with the characteristics of digital technologies, results in unequal access. This unequal access limits participation in society and, in turn, reinforces existing social inequalities and life opportunities.* ''

The framework recognises and critiques the vicious cycle of injustices in educational provisions that continue to breed societal inequalities. Thus, the framework fits perfectly into the study because it offered a lens to evaluate the progress made to bridge the digital divide in rural schools of South Africa and to advance social justice in post-apartheid South Africa.

4. Methodology

This section details the methodological approach adopted for data collection, delineated into four components: data sources, search strategy, inclusion criteria, and thematic analysis.

4.1 Data Sources

This study adopted a document analysis approach, drawing on policy documents, journal articles, institutional reports, and books. Document analysis was instrumental as the data collected was unobtrusive and unaffected by researcher influence (Ernst, 2019). These sources enabled a detailed examination of initiatives to provide ICT infrastructure in South African rural schools. Multiple drafts of ICT-related policy documents were also retrieved and compared to track changes over time, particularly concerning the implementation of White Paper 7. Using non-responsive, written documents enhanced the trustworthiness and replicability of the study (Bowen, 2009; Cohen et al., 2018).

4.2 Search Strategy

Literature published from 2004 onwards was searched across electronic databases, including Scielo, Google Scholar, JSTOR, and Science Direct. The search used the phrase: "*Digital divide and social justice in South African rural schools.*" This initial search yielded 3,280 journal articles. Abstracts were screened for relevance, resulting in the retention of 25 articles for thematic analysis. The selected databases provided comprehensive coverage of peer-reviewed journals, policy documents, and research relevant to education, ICT, and social justice in South Africa.

4.3 Inclusion Criteria

This study included research into whether it was directly relevant to ICT access, digital inclusion, or technology integration in education, with particular emphasis

on social justice and the digital divide in rural schools. Only high-quality sources were considered, including peer-reviewed journal articles, reputable reports, and empirical studies that clearly outlined their methodology and presented verifiable results. Additionally, studies were required to be conducted in South Africa or rural Sub-Saharan African contexts with comparable socio-economic and infrastructural conditions, ensuring that findings were contextually applicable to the focus of this research.

4.4 Thematic Analysis

The data collected through document analysis were analysed using thematic analysis (Cohen et al., 2018), which was appropriate for this study as it allowed for a systematic exploration of multiple types of documents, including policy papers, journal articles, and institutional reports (Yin, 2018). This method identified recurring patterns and key themes specifically related to ICT provision, teacher readiness, student access, and social justice in rural South African schools.

By coding documents and grouping codes into overarching themes, the study revealed the extent to which ICT integration has progressed over time and highlighted persistent gaps in access and implementation. Thematic analysis was appropriate for this study because it provided a structure to organise and interpret in a way that directly addressed the study's focus on the digital divide and its ramifications for social justice in education (Bowen, 2009; Ernst, 2019).

5. Findings and Discussion

What did the policymakers in South African Basic Education do to implement White Paper 6 on e-Education to avail ICT in rural schools to redress past injustices in educational provision? The following section unpacks this question and presents themed findings.

Historically, rural communities were marginalised by the apartheid government, marked by fewer resources allocated to the public schools. (Muyambi, & Ahiaku, 2025). In the current democratic dispensation, there have been growing calls from civil society groups, local and international, advocating for the implementation of White Paper 6 in rural schools to fairly distribute resources to rural schools to redress the historical injustices (Amnesty International, 2020; Jansen-Thomas, 2023). Such a call is also supported by section 29 (1) (a) of the South African Constitution (1996), which makes a clear articulation on equitable access to basic education.

In addition, the preamble of the South African Schools Act (1996) accentuates the establishment of a uniform education system for the governance, funding, and management of schools, while also revising and repealing previous legislation. It highlights the need for equity in education and the fair distribution of resources. Such a policy position invokes some sense of optimism in the previously marginalised communities. Rural communities have insufficient ICT access, particularly in education, health, and agriculture (Aruleba & Jere, 2022). According to studies, impediments include inadequate teacher preparation, poor infrastructure, and misaligned technology (Sepadi et al., 2025).

However, much of this research treats the digital divide as a technical issue rather than one of equality and justice. Although the Technology Readiness Index (Mwapwele et al., 2019) sheds light on ICT adoption, it rarely addresses systemic disparities and policy contradictions in rural schools. Without a justice-centred lens, ICT integration risks deepening exclusion, undermining the transformative goals of White Paper 7 on e-Education. However, it remains to be affirmed in this study whether there is consistency in policy position and policy implementation to redress the legacy of apartheid in basic education regarding ICT provision in rural schools. In this paper, we have identified four themes inherently linked to Van Dijk's (2005) Resources and Appropriation Theory employed in this study, which proffer an understanding of the extent of the digital divide in rural South African schools.

5.1 Theme 1: Infrastructural Inequality - Material Access

White Paper 7's principal goal is to ensure that all learners in South Africa, regardless of geographical location, are equipped with ICT tools. However, studies depicted that the infrastructure in many of the rural South African schools is crumbling and dilapidated, marked by the absence of running water, computer labs, classrooms are in a terrible condition, no basic teaching and learning resources such as textbook (Aruleba, & Jere, 2022; Chisango & Marongwe, 2021; Nyathi, 2025; Onaolapo et al, 2023; Shabangu, 2021).

These findings have serious implications for social justice. They demonstrate a profound material access deficit, as Van Dijk (2005) outlined. Such a deprivation reproduces historical patterns of exclusion linked to geography and poverty. Thus, in the absence of the foundational infrastructure that serves as the basis for ICT material access, rural schools cannot benefit from White Paper 7; instead, the White Paper reinforces educational inequalities between affluent and rural schools.

> "*Because of the absence of proper physical infrastructure, we cannot afford to have fixed technology like data projectors in their classroom; these could be easily stolen, let alone the load shedding.*" *(Teacher interviewed by Flowers & Tanner, 2024; 335)*

This limitation accentuates the necessity of redistributive justice, which prioritises rural schools regarding national and provincial infrastructure budgets. Given that White Paper 7 is premised on access assumptions that do not apply to rural realities, White Paper 7 is rendered unattainable in the absence of adequate infrastructure within the rural context of South Africa (Mwansa et al, 2025). Policymakers frequently formulate unattainable policy objectives and broken promises because they fail to differentiate between urban and rural baseline conditions. In rural schools where basic infrastructure cannot support the implementation of White Paper 7, Ahiaku et al (2025) have observed that unreliable connectivity and maintenance problems can render these technologies purposeless even if they were available.

Elsewhere, rural schools may obtain donations of tablets, and sometimes computers (Mojapelo & Durodolu, 2022; Van Zyl, 2015); however, these resources depreciate and become outdated in the absence of dependable internet, technical

assistance, and funding for maintenance. As Van Dijk (2005) propounds, the quality and sustainability of material access are as crucial as the initial provision. Material access is closely linked to broader patterns of spatial inequality in South Africa. Rural schools are located in hard-to-reach areas with poor service delivery (Du Plessis & Mestry, 2019; Shongwe & Meyer, 2023). The digital divide thus represents systemic developmental backlogs that intersect with high levels of corruption, historical legacies of segregation, and underdevelopment. Addressing infrastructural inequalities in digital education must therefore be part of a broader policy objective for rural revitalisation and the realisation of social justice.

Out of the nine provinces, literature suggests that the Eastern Cape and Limpopo are the most affected provinces by the digital divide and encounter numerous ICT constraints when compared to other provinces (Aruleba & Jere, 2022). Mwansa et al (2025) confirm this, stating that a connectivity gap, geographic isolation, and cost are dominant indicators of the digital divide in the Eastern Cape. While in Limpopo, Matlala and Kheswa (2020) noted a lack of reliable power supply, connectivity issues, and slow internet speed in selected areas where they have internet.

5.2 Theme 2: Socio-Economic Exclusion and Learner Agency - Motivational and Usage Access

Numerous learners in rural schools encounter educational constraints beyond the classroom, stemming from low economic activities, high levels of unemployment, poverty-stricken societies' unreliable supply of electricity, the absence of internet, and zero to low parental literacy (Bila, 2021; Lombo & Subban, 2024). As a result, this may prevent learners in rural schools from accessing ICT resources, further decreasing their motivation to use these technologies. However, even when motivated, learners in rural schools are predominantly struggling to use digital tools in ways that enhance their educational objectives (Duma et al, 2021).

Thus, Van Dijk's Resources and Appropriation Theory attempt to draw our attention to how socio-economic conditions prevent access to digital platforms and their meaningful use in empowering learners in rural schools. For rural learners to adequately take advantage of the ICT tools, leading to their total development, they ought to understand the relevance of ICT in their daily lives and futures (Dube, 2020). This line of reasoning reinforces Van Dijk's contention that perceived utility and content familiarity influence meaningful usage of ICT.

Mukuna and Aloka (2020) discovered that in a class of forty-eight learners, only twenty-eight parents had smartphones, and the rest possessed cellphones for making and receiving phone calls. This is also affirmed by Bonyongwa and Van Der Merwe (2024), who noted that fewer learners in rural schools' own smartphones despite their access to these smartphones; they generally lack the skills to conduct online research and make use of online educational platforms but actively participate in social media. The content these learners consume often reflects urban-centric realities and languages; as such, learners in rural areas may find it challenging to relate to these materials, limiting their engagement and wearying their motivation to continue with digital learning (Molotsi, 2021).

Motivation erodes when learners encounter frustration and failure navigating digital tools (Novak et al, 2023). Leaving learners isolated in their digital journeys contributes to inequalities in learning outcomes. Thus, there is an urgent necessity to structure opportunities to build these competencies to bridge the digital divide and realise social justice (Chisango & Marongwe, 2021). Through a pedagogy that centres learner agency, builds confidence, and integrates digital learning with community, considering the local cultural contexts. However, a study by Maja (2023) found that learners and teachers in rural schools had a significant desire to adopt information and communication technology. Their motivation demonstrates that the digital divide is caused by institutional hurdles outside their control, rather than apathy.

5.3 Theme 3: Educator Capacity and Skills Access

While some rural schools may have fewer digital tools, such as computers, from donors, Rwodzi and De Jager (2021) posit that teachers' lack of digital pedagogical training predominantly constrains their meaningful use. Nyathi and Joseph (2024) reaffirmed that teachers in rural schools lack digital literacy competency, which can be attributed to the absence of resources and the limited training provided to teachers. This competency gap resonates with Van Dijk's Resources and Appropriation Theory, given that teachers who lack motivation in using ICT are unlikely to integrate it meaningfully into their pedagogical practices. The success of any digital learning method is thus heavily reliant on teachers' competency to use and teach with these technologies successfully.

Rural teachers often receive limited training in ICT integration, leaving learners without opportunities to develop critical digital competencies (Mustafa et al, 2024), and this potential reinforces the digital exclusion of rural schools. Given that professional development activities generally concentrate on technical knowledge rather than on how to use ICT to improve teaching and learning, leaving rural educators behind (Seegobin, 2024). Many teachers in rural schools reported not always attending these professional development workshops because they are only held in cities, which are far away (Govender, 2018). Rural schools may not have the funds to cover trip expenses (Maharaj & Chauke, 2025).

Furthermore, professional development workshops seldom address the socio-technical issues of rural schools. Van Dijk (2005) highlights that skills access must be relevant and context specific, given that professional development workshops overlook distinct local conditions and are thus less likely to produce the desired results, but to sustain the digital divide in education. The disparity in skill access contributes to a two-tiered education system in which technologically competent teachers in urban schools provide more enhanced learning experiences when compared to their rural counterparts (Mafikeng, 2024). Such inequalities will likely grow over time, as rural teachers are increasingly isolated from the national innovation initiatives.

Thus, bridging the skills gap requires professional development and the recognition of rural teachers as key players in defining South Africa's digital education future. Due to these existential challenges in rural schools, Singh (2022)

notes that young teachers are reluctant to teach in rural areas due to their existential challenges (Du Plessis & Mestry, 2019; Singh, 2022) despite the Funza Lushaka Bursary Scheme, which has attracted a sizable number of young South Africans to join the teaching profession and be placed in rural and farm schools for the same number of years as this bursary funded them. After satisfying their contractual obligation with the Bursary Scheme, they terminate their services and seek employment in urban areas.

Thus, younger teacher retention in rural schools is complex because of their geographical location (Masinire, 2015). Young teachers have reported issues of career stagnation, which translates into job dissatisfaction and dramatically contributes to high attrition rates for younger teachers (Du Toit & de Klerk, 2023). Subsequently, it leaves learners in these rural schools without teachers for an extended period due to a lengthy administrative process in filling vacant positions within the school.

5.4 Theme 4: Policy-Practice Gap - Cross-cutting Access Deficit

White Paper 7 outlines progressive digital education aspirations; however, its implementation has been fragmented, rendering it a cosmetic policy. This theme represents failures at all four of Van Dijk's (2005) access levels: material, skills, motivating, and usage. These failures result from a misalignment of national vision and local realities. Digital education initiatives frequently proceed without proper stakeholder engagement, compromising contextual relevance and sustainability. This is notable in the language used in policy documents, which tends to be universal, and it fails to recognise and reflect the complexity of the diverse South African basic educational context.

As a result, a uniform approach is often adopted, yet it fails to accommodate the diverse needs of schools, especially those in rural areas. Rural schools frequently get interventions for better-resourced areas, resulting in misalignment and low uptake. Mwapwele et al. (2019) have noted that attempts to use ICT in rural schools have failed. Such a failure can be attributed to the policymakers' inability to formulate educational policies that reflect local and contextual realities. The policy practice gap is further compounded by the absence of monitoring and evaluation instruments uniquely designed to capture the rural contexts. In addition, Mouton et al. (2013) note the disjoint between the national department of education, provincial departments, and district offices.

Provincial departments with limited resources struggle to satisfy national responsibilities, especially when funding is not distributed equitably (McLaren, 2017). This policy–practice gap sustains the digital divide and represents a failure of White Paper 7 to deliver ICT tools in rural schools. The rural community had high expectations from the democratic government to provide well-resourced schools through policy implementation (Lombo & Subban, 2024). Thus, the policy-practice gap undermines stakeholder confidence. Parents, principals, teachers, and learners are justifiably sceptical of new initiatives when previous efforts fail. This contributes to a lack of enthusiasm to participate in future initiatives. To be effective, digital inclusion strategies must be iterative, based on field realities, and include voices from the rural periphery.

6. Conclusion

This study highlights how socio-economic and infrastructural inequalities drive the digital divide in South African rural schools, framing it as a social justice issue. A lack of devices and gaps in skills, motivation, and supportive policies constrain access to digital technologies. These disparities reflect entrenched structural inequities, where historical patterns of marginalisation persist despite constitutional guarantees of the right to basic education under Section 29. Inadequate ICT infrastructure in rural schools constitutes a form of structural violence (Galtung, 1969), obstructing learners' access to essential educational resources and limiting their opportunities for social and economic mobility. The digital divide in rural schools reveals that technology gaps are not merely technical problems but manifestations of broader socio-economic inequalities.

Limited access to ICT restricts learners' capacity to acquire essential skills for the digital era, perpetuating disadvantage and reinforcing systemic inequities. Consequently, rural learners continue to face barriers that hinder academic achievement and long-term development, widening disparities between urban and rural communities. Addressing this divide requires a holistic, justice-oriented approach that combines targeted policy reforms, investment in ICT infrastructure, and sustained professional development for educators.

Policies should ensure equitable allocation of resources to rural schools, while teacher training and mentorship are critical for integrating digital tools effectively into pedagogy. By bridging infrastructure and skills gaps, such measures can transform rural education, improve learning outcomes, and expand opportunities for historically marginalised learners. These interventions are essential for improving educational access and quality and advancing broader social justice and inclusive development in South Africa. Globally, the study demonstrates that digital inequities reflect structural inequalities and calls on policymakers and educators to adopt comprehensive strategies to ensure marginalised communities are not left behind in the digital transformation of education.

7. Limitations and Future Research

Document analysis has been useful for mapping policies and highlighting structural dimensions of the digital divide and its ramifications for social justice in rural schools in South Africa. However, document analysis cannot capture the lived experiences of teachers, learners, and communities. This limitation reflects the scope of the method rather than a weakness of the study, given that this study aimed to analyse policy and literature. For future research, we will consider using empirical methods such as interviews, case studies, and observation to generate empirical data that expands our understanding of the rural digital divide in South Africa.

8. Conflict of Interest

The authors have no conflicts of interest to declare.

9. Ethical Approval

The ethical principles of the General/Human Research Ethics Committee (GHREC) of the University of the Free State (UFS) have been adhered to when conducting this study. The Ethical Clearance number: UFS-HSD2024/1415 was issued by UFS's GHREC as an approval to conduct this study.

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