Assessing Curriculum Access through Information Communication Technology at Selected Zimbabwean Rural Day Secondary Schools.

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ABSTRACT

The paper assesses curriculum access through technological tools in Zimbabwean rural day secondary schools. While there has been a noticeable upsurge in the use of Information Communication Technology packages for teaching and learning in urban secondary schools, the same cannot be said for Zimbabwean rural day secondary school counterparts. The article argues that rural day secondary schools have remained inadvertently excluded and marginalised in having modern day technology to allow the curriculum to be accessed from diverse points, anywhere and anytime. Couched within the connectivist framework, the study was a qualitative survey of ten (10) rural day secondary schools purposefully selected from four (4) districts of Mashonaland East Province in Zimbabwe. The participants in the study were interviewed using semi-structured interview protocol. In-loco inspection of the infrastructure and digital tools at each of the selected rural day secondary schools was done using an observation check list. The findings indicated an education system inefficiency and failure, in which rural day secondary schools have been 'cut off' from the digital technology consistent with our time, thus impoverishing curriculum access. Government and other stakeholders have prioritised investment in non-essential services primarily for political expediency at the expense of the young learners' educational future and development. Consequently, the study recommends unwavering government and community commitment to resource rural day secondary schools with infrastructure and technological tools to give these learners modern-day free educational spaces to discover and experiment with curriculum ideas.

Key Words Curriculum Access, Information Communication Technology, Rural Day Secondary School, Teaching and Learning

INTRODUCTION

The death of colonialism and the birth of independence in Zimbabwe in 1980 saw an ideological shift from capitalism to socialism, informed by principles of justice and fairness. In that vein, the post-colonial government dismantled the three-tier education system where the rural day secondary schools were at the tail end of the colonial system. The new dispensation in 1980 gave hope to the majority of the Zimbabwean rural population which had been marginalised by colonial policies and practices of segregation and separate development rooted in capitalism. Thus, Zimbabwean rural areas, in terms of the functional approach, were and still are, characterised by marginalisation, remote geographical location, inferior facilities, deprivation of access to ordinary public services and information, the primary occupation being agriculture, endemic poverty and poor transformation of the natural environment into a built environment (Rautenback, Shozi & Nicolaides, 2023). Yet, demographic data indicates that 75% of the Zimbabwean population lives in rural areas (Gomba, 2016). The need to upgrade social services like education soon after independence became an important priority to lift their general standards and literacy levels. On the other hand, in urban situations, the population had enjoyed massive investments in the education sector and other essential services. There was sound infrastructural development as well as experienced and qualified personnel to support the urban education system.

The general rural population excitement came with the free primary education policy which had a knock-on effect on the demand for secondary school education (Mugwara, 2023). The government responded by partnering with various stakeholders to open up many rural day secondary schools, then called 'Upper Tops'. Glaringly evident from these schools was the panic approach by government as there was very little planning and adequate resource mobilisation for their smooth take off. The schools were established with basic minimum standards and subsisted on the barest minimum of resources and infrastructure. The learners paid very little by way of fees and levies and the schools existed on government subsides through per capita grants.

With the advent of Economic Structural Adjustment Programme (ESAP) in the early 1990, the Zimbabwean government introduced cost-cutting measures given their limited fiscal space (Makgale, 2021). This eroded the educational gains made soon after independence, with government decentralising management and infrastructural development responsibilities to local authorities and communities (Chikoko, 2008). The move further improvised the rural day secondary schools, given that they are placed in poor communities who cannot fund educational provisions like their urban counterparts, hence remained below favourable and comparable standards. The meagre school fees the communities pay cannot sustain and support the ever-growing demands of educational goods and services. One area that has been negatively affected in the rural day

secondary schools is the growing need to anchor education on the availability of Information Communication Technology (ICT) access points. These rural conditions have brought differential access to ICT resources and the sources of information, resulting in ICT not evenly distributed in Zimbabwean rural secondary schools. Yet Simmons (2009) understands that ICT has permeated all aspects of our lives and has become an integral part of teaching and learning in educational institutions. Accordingly, Frans and Pather (2021) state that a change in the educational circumstances of rural teachers and learners is possible through access to the right knowledge and information, inspired by technological investments.

According to Hennessey, Onguko, Harrison, Ang'ondi, Namafele, Naseem and Wamakote (2010) and Wallet and Melgar (2015) the term ICT includes all types of digital technology, not only computers, but any communication device such as radio, television, cellular phones, desktops/laptops/tablet computers and internet. Mazurura, Chigodora, Mutambara, Zvavahera and Ndlovu (2021) also state that technological tools are open-ended and systematic educational ecosystems where learners and teachers interact using these internet-enabled mobile devices such as smartphones, tablets, personal digital assistants, virtual e-learning platforms notebooks, netbooks, and laptops. Omwenga (2004) notes that while educational systems are increasingly under pressure to use these new ICT gadgets to teach learners the knowledge and skills they need in the 21st century, rural day secondary schools have

lagged. Furthermore, UNESCO (2015) acknowledges that ICT uptake in Sub-Saharan African countries shows a wide variation, but which is generally low, where 25% or few rural schools had neither radio, television nor computers. Yet curriculum access through ICT promotes conversations, discourses, and practical inquiry through different learning platforms (Brokensha & Greyling, 2015). Mlitwa and Nonyane (ud) in their study on ICT access in South African schools, concluded that disadvantaged rural schools still have difficulties either in accessing or using ICT for teaching and learning. As is the case in South Africa, Zimbabwean rural day secondary school learners have been detached from the use of ICT in teaching-learning contexts and accessing real-time curriculum content knowledge.

The study assesses how educational stakeholders have thought of how rural day secondary school learners in Zimbabwe can independently access learning materials in this rapid technological and globalised age to heal the educational inadequacies (Deng, 2018) prevalent in these contexts.

STATEMENT OF THE PROBLEM

Access to ICT tools in teaching and learning gives learners virtual learning environments and alternative sources of curricula materials, yet this cannot be said about rural day secondary schools in Zimbabwe. The teaching and learning environments are at a time of historic change, especially with lessons drawn from the COVID-19 pandemic experiences where digital platforms dominated teaching and

learning. It is undeniable that there is a need to invest in technology at rural secondary schools to shape the access to real-time curricula information. Teachers have not had access to ICT as a window to support teaching and learning as rural day secondary schools have not built strong links between ICT and the curriculum.

THEORETICAL FRAMEWORK

The study was couched in Connectivism learning framework propounded by George Siemens and Stephen Downes in 2005. In using the theory, we were motivated by its major tenets which suggest that teachers and learners should access ideas, theories, and general curriculum materials from multiple sources (Pappas, 2023). Also, technology is a critical factor in this learning process. In addition, the theory holds that the capacity of these teachers and learners to learn resides with the connection with people and information which is mediated by technology (Kajiita, Nomngcoyiya & Kang'ethe, 2020). We considered Siemens' (2005) observation that knowledge continues to evolve and grow exponentially through technological tools, and this has redefined and re-organised how we live and communicate, and how teaching and learning has been altered (Siemens, 2005; Pappas, 2023). In educational terms, learners' unlimited access to curriculum information would determine their success in learning.

Using the theory, we appreciate that learners learn at different rates and have different learning needs (Reigeluth, 2016) and achieving access and functional literacy

in technology helps the learners to learn independently and access diverse curriculum information within their level of understanding as well as keep up-to-date in access to curricula information. In the spirit of the theory, we further suggest that complete knowledge cannot exist only in the minds and practice of teachers; it has to be collaborated with alternative sources and connected to technological tools through digital platforms such as videos, exchange of text images, online communities, blogs, and other public spaces (Kajiita et al., 2020; Pappas, 2023). This helps learners learn in a variety of ways and acquire new educational information independent of the teacher, anywhere and anytime. According to Siemens' (2005) currency, accurate and up-to-date knowledge which may reside in non-human appliances is the intent of all Connectivist activities. This opens learners to knowing and learning more. Based on this theory, we argue that rural schools, teachers, and learners have been excluded and denied the opportunities to experience the impact of digital materials. They have not benefited from knowledge and learning tasks distributed and accessed across digital platforms.

LITERATURE REVIEW

In view of the foregoing, this section highlights the literature related to the significant concepts that underpin the research problem, that is, the Zimbabwean rural day secondary school context and ICT use in curriculum access. Technology plays a key role in enhancing the provision of, and contribute to, a culture of education through providing access to curricula content through

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shared devices and from diverse points in an autonomous manner. Such devices as mobile phones, smartphones, computers, game consoles, personal digital assistance, network, hardware and software, have become critical in accessing curriculum materials (Moyo, Tsokota, Ruvinga & Kangara, 2021). Unfortunately, the readiness of Zimbabwean rural day secondary schools in this regard is far too slow. Mazurura, Chigodora, Mutambara et al. (2021) and Maja (2023) share the same sentiments that rural schools and teachers face barriers to effective and efficient use of ICT tools to access curricula material resources and these include lack of skilled ICT teachers and inadequate teacher training opportunities, lack of resources, lack of confidence among teachers, insufficient knowledge about integration of mobile learning in lessons, poor administrative support, lack of teacher self-motivation, poor supporting infrastructure, power connectivity and regular power interruption. According to Gomba (2016), the digital situation in Zimbabwean rural day secondary schools has put a whole generation of rural learners at a disadvantage.

The necessity for ICTs has been emphasised for years now, with pledges from the Zimbabwean government and other education stakeholders to deliver an ICT compliant education curriculum system for all learners. This has not been achieved, especially in the rural schools as they lack basic ICT infrastructure and tools. Potterton (2023) argues that the right to education is increasingly synonymous with the right to meaningful connectivity, yet most rural secondary schools do not have electricity to

realise this dream. Furthermore, the author notes that the internet is the key technical support and critical carrier of the digital economy that facilitates new development opportunities that have profound impact on human work and life (Li, Sha & Sun., 2023) and the rural communities, including schools, cannot be left out. Echazarra and Radinger (2019) remark that the remoteness and socio-economic disadvantages of rural communities means that they have little capacity and potential to pay for quality educational services such as provision of digital education for their children.

Tsoka, Kriek and Seo (2023) point out that rural schools are characterised by lack of basic teaching and learning materials, classrooms with adequate furniture, computers and connectivity to the internet. Yet there is growing evidence to suggest that the use of digital technologies in curriculum access has a positive impact on student outcomes, such as teachers improving instructional practices, learners learning independently and beyond the limits of the school and everywhere, thus improving learning outcomes (Maja, 2023). Technology allows learners to access curricula materials, communicate with their teachers regardless of location and time, teachers re-evaluating their teaching practices, the production and access to specific content knowledge, thus adding transformation to learning based on technology (Kasim, 2022; Maja, 2023). Thus, according to Gross, Latham, Randolph, Constantino and Presha (2022), technological literacy can move teaching and learning in the right direction in this digital age and help motivate decision-making to develop an

efficient, equitable and effective ICT infrastructure at rural schools.

The positive impact of technology in the education system has become glaringly obvious, and yet rural school contexts are different and have not realised the impact. In the Zimbabwean environment, these difficulties in rural schools and communities have some historical precedence as they have been neglected by successive colonial and even post-independence governments. The neglect has resulted in these schools, even in this 21st Century and the Fourth Industrial Revolution epoch, not having electricity to power the devices, financial resources to buy and maintain the gadgets like smartphones, tablets, mobile phones, computer laboratories, projectors, and internet connectivity (Konyana & Konyana, 2013; Gomba, 2016), with the net effect of failing to access real-time curricula. Gul , Tahir and Ishfaq (2023) further report that rural schools, where the greater population of learners are found, are confronted with multiple challenges regarding basic technological facilities, access to current curriculum materials, and quality education. The authors further observe that these schools have challenges in terms of power supply, potable water, well equipped classrooms, suitable devices, availability of teachers, and availability of textbooks. In the same vein, Gross et al. (2022) point out that rural communities, including schools, lack access to ICTs have limited and minimal technological skills among the teaching fraternity and this may have contributed to the low pass rates at these rural secondary schools. This fact is also corroborated by Kaumba, Mphahlele, Muleya and Simui (2021) who observe that rural schools in Zambia face many challenges such as lack of ICT equipment, poor internet connectivity, limited human resources, and lack of supportive infrastructure. In Zimbabwe, Mazurura et al. (2021) conclude that despite major improvements in telecommunication infrastructure and mobile technology in rural schools, the use of ICT in accessing education materials remains low.

There is a general deficit of skills in ICT among most Zimbabwean rural secondary school teachers. Most teachers in Zimbabwe have not been trained in ICT, and hence have poor practical skills in ICT usage (Gomba, 2016; Moyo et al., 2021). Van Greunen (2022) admits that there is no point in having high-tech schools without trained teachers to support this. This is also consistent with the recommendation by Kaumba et al. (2021), which states that the Zambian government needs to train more teachers in ICT teaching, especially in rural schools. Gomba (2016) points out that the Zimbabwean learners are lagging behind in the adoption and use of technology through interactions with computers, laptops, mobile phones, smartphones, and other devices because there are few trained teachers in the rural areas. With trained ICT teachers, they have the flexibility in how, when and where they deliver teaching processes (Mazurura et al., 2021) and learners have the freedom to always access and supplement curricula materials. Schools with trained ICT teachers and who are blessed with digital tools benefit greatly while those without are cut off and excluded from the benefits of curriculum revolution (Li et al., 2023). ICT in rural secondary schools holds immeasurable

potential to become the communities' development springboard, thus urgent intervention is required to enable ICT-based education curriculum in rural schools. Potterton (2023) observes that teachers who are well-trained in digital technology usually show willingness and preparedness to apply it in educational transformation and information access.

Most rural day secondary schools in Zimbabwe do not have the essential infrastructure to roll out technological services. Without electricity, basic infrastructure and the gadgets, the task to implement a meaningful ICT education curriculum in rural schools may not be realised. There is an urgent call to focus on digitalisation of the rural schools to reshape their education curriculum narrative and recreate rural secondary schools as places of access of quality education.

Study Contribution

Not much literature in Zimbabwe has recognised the secondary day rural school contexts, teachers and learners and their struggles with technological tools for accessing curricula materials, a gap which exists and which the study pays attention to. Several studies (Gomba, 2016; Echazarra & Radinger, 2019; Frans & Pather, 2021; Tsoka et al., 2023) have either lamented the lack of digital tools, have presented comparative discourses showing the urban-rural schools divide in technological availability and have provided a rationale for using the mobile learning systems (Mazurura et al., 2021) without necessarily being specific on how they should be used for accessing teaching-learning materials. This research transcends

these aspects to provide opportunities of how these tools can be a vehicle for educational transformation in terms of curriculum materials access from teacher-led instruction to creating borderless learning environments in the ever-evolving teaching-learning contexts. There is a need to continue to promote social justice and inclusion discourses on the provision of quality education in rural day secondary schools, given that the future of teaching and learning is online, virtual schooling and the ability to access relevant and up-to-date curriculum materials and the nation cannot afford to leave the rural learners behind.

METHODOLOGY

In this survey, the methodological triangulation involved a combination of non-participant observation and semi-structured interviews primarily to give a coherent and comprehensive picture, compare, contrast, and describe the ICT availability and access to curriculum resources in the rural day secondary schools in Zimbabwe. The survey allowed us to collect first-hand, self-reported details and real-time feedback (Taherdoost, 2021) related to technological access and use in curriculum implementation.

The survey involved ten (10) purposively sampled rural day secondary schools in Mashonaland East Province and was an assessment of the current state, meant to describe and interpret what is (Cohen, Manion & Morrison, 2011; Maree, 2012) regarding the multi-modal technological tools integrated and connected to curriculum materials access in rural secondary schools in Zimbabwe. Further, using the convenience sampling technique, we sampled twenty

teachers (20), two (2) from each school based on willingness to participate in the study. The data gathered through the survey informed and provided reliable and usable primary data describing the existing conditions related to ICT and identifying standards against which existing conditions could be compared and inform decision makers (Taherdoost, 2021; Cohen et al., 2011).

Non-participant Observation

We used the standardised observation schedule to understand the reality related to ICT as a tool to access curriculum materials in rural day secondary schools as it happened on the ground. With the observations, we produced quantitative data that isfree from bias (Taherdoost, 2021). It became a systematic process of recording using senses of what was obtaining without questioning (Maree, 2012). The numerical data were not for statistical analysis but to paint a visual picture of the figures related to ICT situation in selected Zimbabwean rural day secondary schools. The structured observation schedule was used for direct observation of the sampled school's ICT facilities and gadgets in their natural environments (De Vos et al., 2012). Two (2) spot-check observations at different times were made and average between the observation were used in this study. The focus of the observation was the availability and non-availability of ICT infrastructure and tools to access curricula materials in the rural day secondary schools in Mashonaland East province, Zimbabwe.

Semi-structured Interviews

The study also used in-depth, semi-structured one-on-one conversation with respect to ten (10) rural day secondary school heads and twenty (20) teachers to collect qualitative data. The semi-structured interviews are sometimes referred to as conversation-in-context and allowed us to go deep for discovery (Ruslin, Mashuri, Rasak, Alhabsyi & Syam, 2022), and was with a purpose (de Vos et al., 2011) to engage purposefully the school heads and teachers regarding the availability and use of ICT in their schools for curricula materials access. The interview was, thus, an inquiry into an issue in a manner of a focused conversation where issues to be discussed were carefully delineated (Patton, 2002). It was a way to obtain information through direct interchange with individual heads and teachers whom we believed had meaning related to the use of ICT in teaching and learning resided within them. This allowed much more diversified set of authentic responses (Reja, Manfreda, Hlebec & Vehovar, 2003; Gray, 2011).

The different heads and teachers' narratives about ICT experiences to access curricula materials gave us multiple voices about the problem. Our intention was to generate stories from rural secondary school heads and teachers which could complement non-participant observation instrument (O'Cathain & Thomas, 2004). The semi-structured interviews allowed us to get the two dimensions of the participants, according to Ruslin et al. (2022), namely, to see the heads and teachers' reality outside the interview and to reflect on a reality jointly constructed by the two set of participants. With semi-structured interviews, we explored in detail, ideas, views, beliefs, and attitudes (Maree, 2012). During the

interviews we managed to let the subject talk (Ruslin et al., 2022).

Data Analysis

Using the thematic analysis tenets espoused by Braun and Clarke (2020), we identified the main patterns from the datasets (from observation and semi-structured interviews) and developed a thematic summary. We also selected vignettes to develop the argument in presenting key findings regarding the distribution and use of digital tools for curriculum access in rural day secondary schools.

The semi-structured interviews with rural secondary school heads and teachers were audio–recorded using a recording device and interview notes taken. This was done with the ethical principle of consent from the participant seriously adhered to. We used pseudonyms for confidentiality purposes so that information provided by participants could not be traced back to participants as shown on Table 1 below.

Table 1: Codes for Participants

Code	Meaning
MED	Mashonaland East District
RDSS	Rural Day Secondary School
RDSSH	Rural Day Secondary School Head
RDSST	Rural Day Secondary School Teacher

FINDINGS

The two methods, observation and semi-structured interviews, yielded quantitative and qualitative data, respectively.

Quantitative Results

Seven (7) items to check on the availability of ICT infrastructure and tools at the selected ten (10) rural day secondary schools were listed for observation using a checklist. Table 2 below shows the findings.

Table 2: Observed ICT infrastructure and gadgets in rural day secondary schools in four districts in Mashonaland East Province

Name of District	Name of School	Enrolment	No of Computers/laptops	Computer Laboratories	Electricity	Internet Connectivity	ICT Teacher(s)	Other ICT Gadgets Smartphones, Mobile Phones, Dashboard etc
District 1	RDSS A	600	10 not working	Yes	Yes	No	1	0
	RDSS B	480	Nil	No	No	No	0	0
District 2	RDSS C	538	30 and 10 working	Yes	Yes	No	2	0
	RDSS D	420	Nil	No	No	No	0	0
District 3	RDSS E	390	Nil	No	No	No	0	0
	RDSS F	93	Nil	No	No	No	0	0
	RDSS G	267	Nil	No	No	No	0	0
District 4	RDSS H	462	40 working	Yes	Yes	Yes	3	0
	RDSS I	355	Nil	No	Yes	No	0	0
	RDSS J	248	Nil	No	No	No	0	0
Total	10	3853	80	3	4	1	6	0

The figures in Table 2 were not for statistical analysis but a voice of the institutional and contextual situations related to the availability of ICT tools in the sampled rural day secondary schools in Zimbabwe. The idea was to contribute, understand beyond the

superficial level and in a meaningful way, to the conversation as to why the situation was as it was and assess the use of ICT to access teaching-learning materials.

Qualitative Results

A number of themes emerged from the qualitative data generated from the semi-structured interviews with the rural day secondary school heads and teachers. The emerged themes include funding and infrastructural development, availability of electricity and manpower.

Theme 1: Funding and Infrastructural Development

Generally, the rural day secondary school heads and teachers revealed during interviews that funding education in rural areas has not been easy let alone the provision of ICT to access teaching-learning materials. Some of the responses were as follows:

The fees and levies paid by the learners are very low, ranging from $30-00 to $100–00 per term and the money comes in bits and pieces and in some cases in kind. Our schools are in communities who struggle to fend for themselves and heavily depend on donors (RDSSH 4).

The school depends on fees and levies paid by students for its day to day running which are not even enough for smooth administrative functions. Enforcing payment is a tall order as government does not allow us to send the non-paying learners home. The schools are owed several hundreds of dollars. Then to think about ICT issues would be very ambitious and a luxury we cannot afford. We are struggling to put up enough

classrooms for our learners. While we appreciate that ICT is a necessity it is not on our priority list at the moment. We would be happy if we can raise money to buy a laptop for the school (RDSSH 4, 6, 9, 10).

Learners cannot afford to buy smartphones and mobile phones and have data to remain connected so that they can be used for accessing curriculum materials (RDSSH 2, 3, 4, 5, 6, 9).

On the part of teachers, although they were not in administration, the lack of funding had impacted negatively on their sources of curricula and instructional flexibility which had remained teacher-directed.

We have resorted to the textbooks for curricula content and lecture method, chalk and talk in this ICT age. Majority of learners cannot afford smartphones and mobile phones to access and share curriculum information at any given time. Learners should be liberated to access curricula information as and when they require it without necessarily being restricted to reading the textbooks and waiting for the teacher. It is very unfortunate that our rural learners are so limited in terms of access to information heavily depending on the teacher and textbooks. We cannot use other devices like phones for curriculum materials given the high cost of data. This is why they cannot compete with their urban counterparts even in examinations and general knowledge. Imagine that the majority of our learners have not used a computer or don't know how to use the internet (RDSST 2, 5, 6, 7, 8).

Two schools (RDSS 3 and 8) had the ICT infrastructure and were grateful to donors who had funded the projects. The schools had some reasonably good number of functioning computers and laboratories and School 8 had internet. There were no other ICT tools. Their stories were captured as follows:

We have one of our sons working for Postal and Telecommunication Regulatory Authority of Zimbabwe (POTRAZ) who facilitated POTRAZ to help us. On our own we could not manage just like other rural day secondary schools. They funded the construction of the computer lab you see, installed the solar system, and donated forty (40) laptops. We are the envy of many rural day secondary schools in this province. Our biggest challenge is the maintenance costs. We have internet access, but it is very expensive, and it's only accessed by teachers, and we cannot afford to open up to the whole student population to get curricula information even if they want to use their phones, yet ideally these facilities should benefit them (RDSSH 8).

A former student from the school now resident in UK donated the equipment and funded the construction of the lab. On our own, with our meagre resources, we could not afford. Our challenge is now internet access, it is very expensive. We have started with forms 1 and 2 so that they have an appreciation of computers and have not gone to an extent where they can research using the internet (RDSSH 3).

RDSSH 1, who had ten (10) computers not working noted that they were

donated by the former state president Mugabe.

By the time they were donated we did not have electricity hence could not be put to functional use. When we got electricity most of them were not functioning and we could not afford to repair them, and we just piled them in the classroom we had converted into a computer lab. We cannot think about them now when we do not have adequate textbooks for our learners (RDSSH 1).

Theme 2: Availability of Electricity

The three (3) schools with electricity were electrified by the Zimbabwean government programme through Rural Electrification Agency (REA). However, there other six (6) schools which did not have electricity and were still awaiting their turn. The other one used solar energy.

We are grateful to REA that we have electricity at our school. However, the electricity has benefited the staff more than the learners because we have electricity at staff houses and not in the classrooms. If we had the right gadgets, the electricity could have transformed our teaching–learning environment by introducing e–learning and our teachers and learners could get update curricula information. The will is there but the resources are not there (RDSSH 1, 3, 7).

Heads and teachers whose schools had no electricity lamented their situation which had left them shut out of information access opportunities.

At times you begin to wonder some of the political decisions of those we call our leaders. Imagine that the electricity cables

pass through our school yard to the chief's homestead, ignoring the whole generation of students in order to satisfy an individual. They are worried about the chiefs because they help them win elections. Once you voice concern your life would in danger. The politics here is not about development but empty sloganeering (RDSSH 2, 4, 9, 10; RDSST 1, 2, 3).

Theme 3: Manpower

The ten (10) sampled rural day secondary schools had six (6) ICT teachers and some doubled up to teach other learning areas. Of the three (3) teachers at School 8 one (1) was qualified to teach ICT; the other one was a student teacher from a secondary teacher training college and the third one did some IT courses at a technical college and was just assisting in the area.

I am just assisting in the area as I have some knowledge in ICT from college. The learners just need an appreciation of computers and how to use their phones to access curriculum data (RDSST 3).

We just teach the learners the basics since they are not going to be examined in the area. The idea is for them to know more about computers as the in–thing in our lives today. We have not used the computers, phones, or any other electronic devices to research on various topics in the syllabi. It's not possible given the resource constrains (RDSST 2, 3, 6, 9, 10).

The government has frozen all post in the civil service and if you need qualified teachers beyond your establishment, the school has to employ using its own resources.

We cannot afford that, so we make do with what we have even if they are not best qualified in the area (RDSSH 1, 3, 8).

DISCUSSION

The assessment shows that there was no a priori reason to advise that the situation regarding ICT access in rural day secondary schools in Zimbabwe was this low. Rural day secondary schools were seriously constrained in terms of providing ICT and modern teaching-learning platforms leaving learners at the periphery of ICT discourse.

Decision-making both at school and government levels about curriculum access, literacy initiatives and curriculum implementation were not thought of in terms of producing a strong and sound ICT infrastructural base in rural day secondary schools. This idea dovetails with Mazurura et al. (2021), Frans and Pather's (2021) and Wallet and Melgar's (2015) observations that school capacity and infrastructure level remain a challenge for integrating ICT tools in rural secondary schools. As a result, rural day secondary schools still believed in investing in hard copy textbooks and teacher-centred classroom interactions in which disciplinary content knowledge solely resided in teachers. Yet investing in ICT would be cost-effective in the long run, as most curricula materials would be obtained giving teachers and learners a wide range of information. Brokensha and Greyling (2015) and Maja (2023) share the same sentiments that educational experiences of rural learners are basically traditional, limited and informed by teacher and textbook, sadly so very inadequate and older than most of the students.

The weaknesses and gaps in the provision of ICT gadgets in rural day secondary schools placed the learners at a disadvantage both in terms of access to curricula information and participation in social, political, and economic spaces in the country. This is consistent with Li et al. (2023) in Hong Kong and Mlitwa and Nonyane's (ud) findings in rural South Africa, that disadvantaged rural schools still have difficulties either in accessing or using ICT tools for teaching and learning. The secondary schools were bereft of basic technological infrastructure and tools. The inclusion of non-participant observation and interview data gave a bigger picture of the ICT narrative in these schools showing very little potential. This is why Omwenga (2004) points out that the challenge confronting many African countries is how to transform the curriculum and teaching and learning to provide learners with skills to function effectively in this dynamic information-rich and continuously changing environment. The findings suggest a significant ratio of learners were not aware of the benefits and importance of ICT tools in this 21st Century because they were not exposed to it. The learners did not have the world in their hands.

The problems related to ICT use to access curricula materials at rural day secondary schools in Zimbabwe were not self-inflicted. The major contributing factor was inadequate funding creating variations between and among the rural secondary schools as shown by the observation data in Table 2. The observation and interview data provided hard evidence that without external funding and investment in the development of ICT infrastructure and subsequent use for

instructional and independent learning purposes, educational struggles for real transformation may be permanent for rural day secondary school learners. The result confirms Echazarra and Radinger's (2019) view that the socio-economic disadvantages of the rural schools result in their inability to pay for technological services as they are always financially constrained. There still exists a negatively-skewed funding regime at these schools reflecting very little change from the colonial government regarding secondary school rural education in Zimbabwe.

Further, the findings from the interviews show that the politics of educational development was the missing dimension in the province. Issues of political power and control clouded reason with resources to accommodate the educational needs of thousands of learners channelled to individuals for political expediency, especially electricity. UNESCO (2015) notes that integration of ICT is a low priority in politics when compared to other objectives. Politics should provide useful sociological analysis premised on social justice and not political greed and convenience. The inherent political limitations show little concern about the young who are future leaders but seized with here-and-now politics.

As the Zimbabwean government rationalises its wage bill and cuts on the civil service, focus and empathy should be on rural day secondary school learners with their understandable difficulties in accessing ICT tools for their educational development. Simmons and Hawkins (2009) agree that ICT is of much importance to the future industrial

and commercial health of a country and governments should invest in equipment and teacher capacity and other support services to alleviate rural learners' difficulties. The contextual backdrop provided in this study requires demonstrated effort by government to waiver their policy on teacher-pupil ratio and staff schools with requisite ICT teachers for the sake of the future of rural learners.

CONCLUSION

The thrust of the study was to construct an intelligible conversation that sets up some in-depth understanding of the complexities of implementing an ICT-inspired education curriculum at Zimbabwean rural secondary schools. The assessment by the study concluded that there is low potential for a digital revolution in rural schools. The possibilities of teaching and learning freedom occasioned by technology were very minimal in the rural school spaces. This was necessitated by the existence of inadequacies in digital tools where Zimbabwean secondary schools were unfortunate to be limited in their choices of access to new windows of curricula information for enhanced teaching-learning experiences. The rural schools were resourcefully constrained and incapacitated threatening the technological usage and benefits that accrue from accessing real-time curricula information and transform the provision of education. Yet this has become critical for the learners' academic development and teachers' continuous learning. Sharing the teachers and learners' life stories regarding curriculum access through technology, the study concluded that the political and educational stakeholders did not have a shared vision about how to ameliorate the increasingly desperate educational situation at rural secondary schools. The pressure was to be technologically inclusive and set all Zimbabwean learners towards an educational success trajectory regardless of who and where they are.

RECOMMENDATIONS

Given the above challenges faced by rural secondary schools in Zimbabwe, the study makes the following recommendations:

1. There is a need for the government to affirmatively prioritise the training and deployment of ICT teachers to rural secondary schools to meet the demand and put the learners on a competitive path both in examinations and national economic development.

2. The business community should be incentivised through appropriate policies to invest in ICT infrastructure at rural secondary schools given that these schools are resource constrained.

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