Analysing the Digital Divide in Zimbabwe: Exploring the Obstacles and Consequences for Access to Quality Education in Open and Distance e-Learning at Zimbabwe Open University

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Abstract: *This study examined the digital divide in Zimbabwe and its impact on accessing quality education through open and distance e-learning (ODeL). Utilising qualitative research methods and a structural inequality theoretical framework, it sought to develop a comprehensive understanding of the challenges Zimbabwean students face in accessing education via digital platforms. Semi-structured interviews with students and lecturers experienced in virtual learning provided insights into their personal experiences, perceptions, and the ramifications of the digital divide. Furthermore, focus group discussions allowed interactive conversations among students, unveiling common concerns and group dynamics related to accessing education in a digital environment. The qualitative data generated were analysed using thematic analysis, which facilitated the identification of key themes, patterns, and barriers that emerged. This analysis deepened the understanding of the various aspects of the digital divide and its implications for equitable access to quality education. The study contributes to the existing knowledge on the digital divide in Zimbabwe and offers practical implications for policymakers, educators, and stakeholders by highlighting the challenges students face in accessing quality education through digital platforms. Moreover, the findings present recommendations for bridging the digital divide to create an inclusive learning environment that ensures equitable access to quality education in Zimbabwean ODeL. Overall, the research aims to provide valuable insights to foster a more equitable educational landscape in an increasingly digital world.*

1. Introduction

Rapid advancement of information and communication technologies (ICTs) has transformed the global landscape, providing unprecedented opportunities for education and economic development. Technology has become integral to nearly every aspect of our lives. The COVID-19 pandemic that struck the world in 2019 intensified the necessity of incorporating technology into various processes, with education being no exception. Sharma, 2023, concurs saying, the pandemic changed the face of education irrevocably forcing schools to shut their doors resulting in an overnight shift towards remote learning. As a result, many were forced to abruptly migrate to online learning. While some regions and communities have embraced digital advancements, others continue to lag because of challenges being experienced in the adoption of technology. According to a UNESCO 2021 report, the number of households with Internet access is pegged at 16% in the developing countries versus 66% in developed countries. The Telecommunication Union (ITU) also purports that, only 26% of Africans had access to the internet in 2021 compared to a global average of 52%. These statistics point to an existing challenge in terms of access to

technology. This exclusion of other people in the digital space is the digital divide.

1.1 Factors that Influence the Digital Divide

There are several factors that exclude people, among which is the level of income. High-income individuals, particularly in developed countries, have better access to resources that develop necessary skills and exploit the full potential that ICTs have to offer, while the opposite is true for those in low-income, developing countries, where most remain disadvantaged. Barupal (2017) cites problems like low bandwidth, cost of technology, and slow uptake of technology as factors that contribute to the digital divide in developing nations. Policies in certain countries also play a role; for example, China can block access to numerous websites and online platforms through its Great Firewall, which serves as a control and censorship strategy on the internet. This censorship contributes to a knowledge gap between the Chinese population and the rest of the world, isolating them from alternative viewpoints.

Critics argue that this level of internet censorship restricts freedom of expression, hampers access to diverse information, and impedes open dialogue (Smith, 2020). Such practices create a knowledge gap and deter the development of a well-informed society (Jones, 2019). Even though gadgets and resources are available, the divide manifests itself differently, including skills or literacy divides, access quality, and infrastructure (Ngwenya, 2021). High-income individuals have better quality access and resources to exploit the full potential of ICTs, while those in poorer communities continue to trail behind poor infrastructure, obsolete machines, and low bandwidth that cannot sustain applications requiring robust bandwidth (Moyo, 2022). Virtual learning requires substantial support in terms of ICT infrastructure (Chirwa, 2023).

Zimbabwe's journey towards digital inclusion and educational development can be traced back to the early 1990s when the government recognized the significance of information and communication technologies (ICTs) in driving economic growth and social progress (Chikova, 2020). The government of Zimbabwe established the Posts and Telecommunications Corporation (PTC), which later became the Zimbabwe Telecommunications Corporation (ZTC) in 1990. The aim was to improve the country's telecommunications sector and increase connectivity. Unfortunately, despite these efforts, Zimbabwe continues to experience the technology divide. As opined by the International Telecommunications Union (ITU, 2021), a sizable portion of the population in Zimbabwe still lacks access to the internet due to low internet penetration compared to other countries.

1.2 Statement of the Problem

Many individuals are still being left out of the communication sphere, particularly in Open and Distance e-learning (ODeL), where information and Communication Technologies (ICTs) are essential for instruction. The lack of ICT integration in ODeL poses a significant obstacle to educational advancement. Despite the continuous technological progress, a significant portion of the population remains excluded from the digital real.

1.3 Purpose of the study

The study sought to analyse the digital divide in Zimbabwe highlighting obstacles that threaten quality education in ODeL.

1.4 Research Questions

The following research questions guided the study:

1. What are the key factors contributing to the digital divide in Zimbabwean ODeL institutions?
2. How does the digital divide impact students' access to educational resources, opportunities and support systems in ODeL?
3. What strategies can be implemented to bridge the digital divide in ODeL?

2. Literature Review

2.1 The Concept Digital Divide

The digital divide refers to the gap between individuals who have access to digital technologies and those who do not (UNESCO, 2019). Disparities in access to computers, smartphones, tablets, the internet, and other digital resources hinder students' equal opportunities to benefit from technology-enhanced education (Jaggars & Bailey, 2010). According to UNESCO (2019), a sizable portion of the population in Zimbabwe faces inequitable access to technology, thereby creating a pronounced digital divide. Jaggars and Bailey (2010) highlight that factors such as socio-economic status, geographical location, and infrastructure significantly contribute to this divide.

The digital divide presents significant challenges in educational contexts, especially in Open and Distance e-Learning (ODeL). As Warschauer (2003) notes, this divide can lead to disparities in educational access and quality among students, which is particularly pronounced in online learning environments. Furthermore, a study by Burch (2020) emphasizes that unequal access to technology reinforces existing inequalities, adversely

affecting learner engagement and opportunities for collaborative learning. Consequently, the inability of some students to access essential educational materials and participate fully in digital platforms can hinder effective technology integration in education, resulting in a fragmented and inequitable learning experience.

It is crucial to recognize that the concept of the digital divide extends beyond mere physical access; it also encompasses disparities in the ability to use and benefit fully from digital resources. Some individuals may have access to technology but lack the skills required to utilize these tools effectively, indicating the presence of both an "access divide" and a "use divide." There are individuals who may have the necessary access but still lack the digital skills essential for effective technology use. Additionally, this technological divide includes disparities in digital literacy, which further hampers individuals' ability to utilize and benefit from technology (Barupal, 2017). Consequently, these disparities exacerbate the gap between the information-rich and the information-poor. Overall, the digital divide has evolved from being merely about physical access to encompassing a range of factors that hinder effective access and usage of technology.

2.2 Developments in the adoption of technology in Zimbabwe

Significant efforts to ensure that no one is left behind in terms of information access is a key agenda under Zimbabwe's National Development Strategy 1 (NDS1). These efforts include initiatives such as the donation of computers to various educational institutions across both rural and urban areas. The Government of Zimbabwe, through its Ministry of Postal and Telecommunications, has also made strides in establishing Community Information Centres (CICs) in many rural parts of the country, a move aimed at bridging the digital divide between rural and urban communities (Tshuma, 2020).According to the Zimbabwe Ministry of Information, Communication Technology, Postal and Courier Services (2021), Community Information Centres (CICs) provide vital digital services in rural and marginalized communities. This initiative seeks to address the gap faced by communities that have historically been marginalised. To date, 146 Community Information Centres (CICs) have been established across Zimbabwe, with 114 currently operational. Notably, fourteen of these centres provide free training in computer skills (Tshuma, 2020). Despite these efforts, Zimbabwe continues to face persistent obstacles in ensuring equitable access to current information technologies, contributing to the ongoing digital divide crisis (Zhakata, 2022).

Efforts to promote universal access to information in Zimbabwe are ongoing. The Postal Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) is funding the relocation of collocated towers across the country to ensure that communities in remote rural areas have at least 2G connectivity, allowing them to participate in the digital economy (Zhakata, 2022). Despite these significant initiatives, internet penetration in Zimbabwe remains low. According to a 2023 digital report by Kemp, internet penetration is at 34.8%, meaning that 65.2% of the population in Zimbabwe is still offline. However, there is a high percentage of active cellular mobile connections, which stands at 85.4% (Kemp, 2023).

2.3 ICTs in OdeL

Information and communication technology (ICT) is a vital enabler of Open and Distance e-Learning (ODeL). The Zimbabwe Open University is one state-run institution that provides ODeL programmes. The Zimbabwe Open University has students across the globe, and ICTs serve as the essential tools and conduits for teaching and learning in this context.

The Zimbabwe Open University is striving to fulfil its mission of 'Empowering the world through ODL enabled by technology' by leveraging ICTs to bring education to the people. It is vital that ICTs are readily accessible. In alignment with the Vision 2030 Agenda and Sustainable Development Goal 9, countries are called upon to increase access to ICTs and work towards providing universal and affordable internet access in the least developed countries by 2030. Given its ubiquitous nature, technology can effectively reach all corners. If SDG9 is achieved, it can have a ripple effect on the attainment of other Global Agenda goals, as ICTs can drive development across all sectors. This is supported by Flor (2001), who asserts that ICTs facilitate economic growth and remain a permanent ingredient towards universal poverty alleviation. As purported by Janak (2013), technology has become the backbone of communication in distance teaching methodology, and the distance education system has embraced communication technology. Thus, the importance of technology in this context cannot be overstated.

In traditional classrooms, lessons take place in real-time, requiring everyone to be physically present at the same time and place which is not always possible with the nature of ODL students who are scattered all over. However, ICTs allow for asynchronous learning allowing students to learn at a distance at their own convenience. It is a very flexible and convenient way of learning given all the resources are in place. Interactive elements can be added to the online lectures allowing for real-time learning. For example, technology allows for pre-recorded video lectures which enable students to pause, rewind, or skip through content as they wish whereas with face-to-face students who miss will have missed for good.

Despite the challenges we face, it is undeniable that change has arrived, and we must become more versatile. As Abioye (2018) asserts, the active citizens of the future will need adaptability, as we cannot foresee which technologies will shape our future learning and work environments. He emphasizes that "barely a single facet of the education system will remain unchanged."

Siraj (2017) highlights that technology is driving rapid and significant changes across all aspects of life, resulting in today's children living vastly different lives from those of their parents. To adequately prepare individuals for the changes ahead, our education and training must align with the evolving demands of the workplace and society (Tucker, 2017; OECD, 2018).

The 2015 WEF report, "New Vision for Education: Fostering Social and Emotional Learning Through Technology," states that to thrive in the 21st century, students require more than just traditional academic skills. Therefore, integrating digital technology into learning is essential, and addressing the digital divide should be a priority.

As Abioye (2018) reiterates, we cannot predict which technologies will dominate our future environments. Moreover, Siraj (2017) notes the swift changes affecting daily life, reinforcing the need for education that prepares individuals for these transformations. Additionally, according to Flor (2001), information and communication technologies (ICTs) are vital for economic growth and play a key role in alleviating poverty. Prioritizing strategies to bridge the digital divide is essential.

2.4 Physical Access

Most research on the digital divide primarily focuses on physical access to devices, such as personal computers, laptops, and the internet. Many individuals still lack access to these essential technologies, and efforts must be made to bridge this gap. However, physical access is only one aspect of the digital divide.

As noted by Van Dijk (2005), once individuals have physical access, they need the skills to effectively use digital media. These skills are often referred to as digital or media literacy. It is crucial for users to fully harness the potential of these technologies. Many people, even in developed nations, remain unaware of the capabilities of technology. According to the Pew Research Center, many Americans lack familiarity with computers, with only 17% claiming to be "very familiar," while 34% say they are "not too familiar," and 48% are "not at all familiar." As technology evolves, it is essential for individuals to understand both its capabilities and the risks it poses. Being well-informed is vital, as knowledge is power.

Possessing skills is a necessary foundation, but applying those skills effectively is equally important. Unfortunately, measuring actual skill levels can be challenging, as most digital skills are acquired through practical experience rather than formal computer courses (Van Dijk & Van Deursen, 2014). Therefore, there is a pressing need for individuals to have access to both devices and the necessary skills.

Research on digital skills indicates significant performance disparities based on age and education level (Hargittai, 2002; Van Deursen, 2010). Individuals with higher education tend to perform better across all digital skills compared to those with lower education levels, highlighting the crucial role of education in national development.

It has been observed that individuals with higher education are significantly more likely to utilize advanced applications of digital media for professional and academic purposes. In contrast, those with lower education levels often engage with simpler applications, primarily for entertainment, commerce, and messaging (Bonfadelli, 2002; Cho et al., 2003; Van Deursen & Van Dijk, 2013; Van Dijk, 2005; Zillien & Hargittai, 2009).

2.5 Theoretical Framework

Structural Inequality Theory

The study draws upon the Structural Inequality Theory, which provides a useful lens in analysing the digital divide. The structural inequality theory is a sociological perspective that suggests that social inequalities are not just the result of individual choices but are deeply embedded in the social structures and institutions of society. As posited by (Lareau, 2015), the origin of this theory is attributed to several scholars, among them Karl Marx, Max Weber, W.E.B. Du Bois, and Pierre Bourdieu. Karl Marx, a German philosopher and economist, is often credited with laying the foundation of the structural inequality theory claiming that the capitalist system creates a class structure which perpetuates social inequality, (Marx, 1867). The theory emphasises the role of power, privilege, and social hierarchies in creating and maintaining social inequalities, (Lareau, 2015). Guided by this theory, the digital divide is a result of structural inequalities that exist in society, amongst them privilege, income inequality, limited infrastructure and skill as well as geographic disparities that exist in societies. For example, many people live in the rural areas where there is no access to these technologies, hence these people are closed out. Most mobile network providers are concentrated in urban areas, which leads to a significant network divide. A report by Digital Zimbabwe (2023) indicates that 67.5% of the population resides in rural areas, while only 32.5% live in urban centers, highlighting a critical issue. The structural theory can

provide insight into the underlying sources of some of the challenges faced by these communities.

Key concepts related to structural inequality theory encompass social stratification and institutional discrimination, which are influenced by factors such as income, education, race, geography, and occupation (Smith, 2021). For instance, individuals who are employed typically have greater access to a variety of services compared to those who are unemployed (Johnson & Lee, 2020). In Zimbabwe, the unemployment rate stands at 8.76%, highlighting a significant issue within the labour market (Doe et al., 2022). Therefore, structural inequality theory serves as an effective framework for analyzing the digital divide, which is exacerbated by the existing unequal structures within society (Brown, 2021).

Debates persist regarding the potential closure of the digital divide, with some experts predicting a scenario of permanent stratification. In this scenario, specific social categories are likely to maintain an advantage in accessing more advanced and costly digital media, while others may fall increasingly behind (Norris, 2001). This situation is particularly concerning for the African continent, which faces significant challenges in digital technology adoption. Research conducted within various African Open and Distance e-Learning (ODeL) contexts reveals consistent findings, indicating that access to reliable and affordable internet remains a significant obstacle for the majority, especially in rural areas where infrastructural development is lacking.

Kariuki and McCormick (2017) identified that the digital divide in ODeL across Africa acts as a major barrier to access and participation, particularly affecting students from low-income backgrounds. Similarly, Mtebe and Raisamo (2014) found that in Tanzania, the digital divide in Open and Distance Learning (ODL) was significantly influenced by factors such as income, educational attainment, and geographic location. Furthermore, Adera Jowi (2018) highlighted that in Kenya, the digital divide in ODL was affected by access to digital devices, internet connectivity, and digital literacy skills.

3. Methodology

The study sought to examine the digital divide in Zimbabwe and its impact on access to quality education in (ODeL). Through a qualitative research approach informed by a descriptive case study design, the study sought to develop a comprehensive understanding of the challenges that Zimbabwean students face in accessing quality education via digital platforms. A descriptive case study design was adopted for its ability to offer a comprehensive analysis of the problem within the specific setting. The design allowed researchers to gather in depth data thereby providing understanding of the problem. To capture diverse perspectives and gather

insightful data, in-depth interviews were conducted with both students and lecturers with virtual learning experience. Purposive sampling was employed to select a sample of 40 students and 10 experienced lecturers. Interviews were conducted until the point of saturation was reached, ensuring that enough information and insights were gathered from the participants. The interview technique allowed participants to share their personal experiences, perceptions, and challenges related to the digital divide and its impact on accessing quality education. Furthermore three (3) focus group discussions of 8 participants from across faculties were conducted with students via existing WhatsApp chat groups that capture students from all walks of life. Document analysis was employed to help understand the nature of the ODeL student. Understanding their bio data, location, intakes and level of education helped the researchers to get a clear picture of the kind of ODeL student. Focus group discussions provided a platform for interactive conversations, and exploring collective experiences and viewpoints concerning the digital divide. The discussions unveiled group dynamics and common concerns in relation to accessing quality education within a digital environment which range from internet accessibility, unavailability of resources and limited digital skill. The generated qualitative data from interviews and focus group discussions were analysed using thematic analysis. The approach facilitated the identification of key themes, patterns, and barriers that emerged from the data. By uncovering these themes, the study aimed at deepening the understanding of the different aspects of the digital divide and its impact on equal access to quality education.

4. Results and Discussion

Analysis of the interviews and focus group discussions revealed the following findings:

The largest proportion of participants fell within the 35-45 years age category, followed by the 25-35 years category. In contrast, the number of participants below 25 years was somewhat smaller suggesting that (ODL) attracts more of mature students as opposed to the younger generation with digital literacy. The young people born in the digital age are digital literate as compared to their parents who constitute the greater part of the enrolment at ZOU. This group therefore requires skills development in technology. As postulated by Van Deursen & Van Dijk, (2013), age is a contributor digital related skills where younger people perform better than older people. Thus, factors like age, education level, gender have an impact of usage.

The following were identified as obstacles restricting students from benefiting from digital technology thereby amplifying the digital gap.

1. Limited to no internet connectivity.

2. Affordability of ICT gadgets and cost of data bundles.
3. Inadequate infrastructure, e.g. electricity, telecommunications.
4. Limited digital skills.

One participant from the rural area expressed the challenges faced due to the total migration of university processes from manual to online, noting, "T*he road has not been easy for us; especially with this total migration...where I come from, there is no electricity, not even roads, what more internet?"* This sentiment aligns with research indicating that geographical barriers and a lack of infrastructure significantly hinder access to information and communication technologies (ICTs) in rural areas (Munyoro, 2021). Furthermore, a study by Mupfungadze (2022) highlights that many students in Zimbabwean rural areas struggle with the transition to online learning due to inadequate internet access and electricity supply.

Another respondent mentioned, "*Most students, particularly those in the rural areas, find this total migration a challenge because of our background."* This aligns with findings from Chivenge (2023), who reported that socioeconomic factors play a critical role in students' ability to engage with digital learning platforms effectively. The digital divide remains a persistent challenge, particularly for students from disadvantaged backgrounds.

Conversely, some individuals with access to ICTs have experienced the benefits of virtual learning. One ODeL (Open Distance e-Learning) student stated, "*Virtual learning is ideal as it affords me an opportunity to learn at my own convenience.*" This highlights the convenience and flexibility that online education can offer, corroborated by research from Nyoni (2022) that found increased flexibility in learning schedules allows students to balance education with work and other commitments. Additionally, a report by the World Bank (2021) emphasizes that online learning can enhance educational access and continuity, especially for those with the necessary infrastructure.

However, challenges remain for those without adequate resources. As noted by Mupfungadze (2022), despite the flexibility offered by online platforms, the lack of access to essential technologies undermines the benefits for many students, illustrating a critical need for investment in rural infrastructure to support equitable education.

The study also revealed a lot of advantages with electronic learning which include the following:

1. E-learning allows for asynchronous learning providing learners the flexibility and convenience to manage their own learning programme.

2. ICTs incorporate interactive elements, like videos, audios, facilitating real-time engagement. This allows students to be in control of the learning process, they can pause, rewind where they have not understood, can skip content as and when desired.

3. Study also revealed that online learning is cheaper compared to face-to-face which is very expensive especially to students who reside in distant locations. One participant had this to say; *Face to face tutorial sessions are very expensive as one requires transport, food and accommodation which is beyond our reach.* The participant went on to say, *Virtual learning would be more convenient and cheaper, but we do not have the resources again, so we find ourselves in a very difficult situation pressed between a rock and hard surface.*

Students in the urban areas who are not very far from the campus expressed preference for face-to-face tutorials because they do not have a lot of expenses.

The study identified lack of digital skills in both lecturers and students. One lecturer had this to say; "S*ome of us were born before computers and navigating through these platforms is a nightmare.*

Lack of skill can be a barrier to effective utilisation of ICTs, and this contributes to the digital gap. This was a very common problem amongst lecturers and students.

To be honest, we need regular staff development on digital tools and skills echoed another lecturer.

Guided by the data generated from the interviews and focus group discussions the following findings were arrived at.

Most of the participants were in the 35 – 45 years category, followed by those in the 25-35 years. Those below 25 years were in the minority pointing to the fact that ODL attracts mature students as opposed to the conventional system which attracts the younger generation which is techno savvy unlike their mature counterparts.

The study settled for students in their final year as these were believed to have experience with virtual learning. The study revealed that slightly above half of the students are based in the rural area and the other group comprised of urban and peri-urban students.

Findings revealed that the majority had smart phones and a few had laptops which were said to be beyond the reach

of many. One participant highlighted; *would be ideal for learning, the screen is bigger and is more user friendly compared to a smart phone.*

The fact that more students have smart phones is a positive indicator to the future of virtual learning. Though small the smart phone can facilitate learning provided other necessities like internet are made available.

One student had this to say with regards to internet; *I have a smart phone but where I stay, there is no network, so I must look for places where there is network.*

Another student had this to say; *attending virtual tutorial sessions is very difficult for some of us because bundles are very expensive.*

Study found out that students register for an average of 5 to 6 courses per semester which translates to 30 – 36 hours of on-line tutorials as each course is allocated 6 hours which was said to be too exhausting for many. The high cost of data in Zimbabwe limits access to information and communication technologies for many citizens.

The study also revealed that a sizeable number of students do not have their own resources but rely on facilities at their workplaces.

Findings revealed that lecturers were overwhelmed working 24/7 a day. This was opined by one lecturer; "V*irtual learning is very demanding, even when you knock-off or take leave you take your baggage with you. Even work that was done by administrative staff has been heaped on the lecturer who now possess the rights to manage all online process.* Everything was now the responsibility of the lecturer which shows that technology is rendering other people redundant as work that used to be done by other officers is now done online. The fact that work is done 24/7 means lecturers need support in terms of data and good laptops to enable them to continue working whilst they are at home.

Another participant had this to say, *the gadgets are readily available, but the problem is affordability. Most of us have multiple responsibilities, we are breadwinners, parents with children who are also in school, and we end up prioritising children. We wish the university comes up with an affordable scheme to help students acquire laptops.*

Some lecturers indicated that the computers they were using were obsolete making their work difficult. *Some of us have old desktops that we cannot carry home yet with online learning its work 24/7. The university should priorities purchase of laptops for lecturers,* said one lecturer. Unavailability of good machinery contributes to the digital divide in the sense that people fail to take full advantage of the digital technologies.

The study revealed that internet facility at the university campus was very good, but the challenge highlighted was non-availability of electricity which was crippling operations. Another lecturer had this to say; e*lectricity has become a serious drawback; without it everything comes to a standstill; we are experiencing frequent interruptions, and it is making work difficult, it is so frustrating.*

Students were asked why they were not making use of available ICT Laboratories with good internet, one student had this to say; some of us *live very far from the Regional Campus, for example, Gokwe, Mberengwa, Zvishavane and travelling to Gweru for internet is more expensive and to make matters worse there is a problem of electricity.* The student went on to say; *it would be greatly appreciated if the University could establish functional ICT laboratories in our respective districts. Otherwise, the Regional Campuses are for the urbanites who are closer and not for us who come from the rural areas.*

Findings point to several challenges to accessing quality education through e-learning platforms in Zimbabwe. These include, lack of infrastructure, e.g. electricity, limited to no internet connectivity, affordability of necessary resources and limited digital skills amongst others. All these factors contribute to the digital divide with marginalised groups facing greater challenges. The digital divide exacerbates inequalities in education with students from disadvantaged backgrounds facing greater challenges as compared to their urban counterparts. This result in disparities in educational outcomes. Addressing these challenges is crucial to ensure equitable access to quality education for all in Zimbabwe and beyond. As purported by Praise Sithole, (Newsday Zimbabwe.20/11/21) "The digital economy and knowledge society should not be a preserve for those in urban areas alone but should permeate the whole community including the very remote areas". Digital connectivity through information and communications technologies (ICTs) has been recognised as critical for every country's future development and prosperity (International Telecommunication Union, 2021). This is also an issue of concern as captured by the United Nations Vision 2030 Agenda, Sustainable Development Goal 9 (SDG 9), which is to *"build resilient infrastructure, promote sustainable industrialization and foster innovation."* Target 9C calls on countries to "significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in the least developed countries by 2030" (United Nations, 2022). Thus, all nations are encouraged to work towards achieving this goal. Education is a common good that must be accessed by all.

Governments, educational institutions and civic communities and NGOs need to work together to bridge the gap.

The attainment of SDG 9 can have a ripple effect on the achievement of other goals, as ICTs have far-reaching impacts. According to the United National Statistical Commission (2020), the proliferation of ICTs and global interconnectivity has enormous potential to hasten human advancement, narrow the digital divide, and foster knowledge-based societies. Therefore, enhancing communication networks can facilitate progress in various areas of nation building.

The digital divide stands in the way of progress hence effort must be made to reduce the gap. As purported by Mutsvairo & Regn (2019); while most regions of the world have enjoyed a robust boom in internet adoption, Africa has plenty of catching up to do. The sentiments are buttressed by the GSMA statistics of 2017 which shows that the number of households with internet in Africa is pegged at 16% in comparison to the global average of 51%. Most of these internet sites are available in English which exacerbates the gap leaving several Africans with their vernacular out of the digital participation. Mutsvairo (2016), goes on to say, access to online technologies remains largely the preserve for the elite, which explains why few amongst Africans, while eager to embrace it, are less keen on celebrating the so-called digital explosion access. The use of the colonial language makes it easy for colonial demagogues to communicate with one another.

5. Conclusion and Recommendations

5.1 Conclusion

This study has established that quality education in ODeL Zimbabwe is hindered by the digital divide and factors contributing to this divide include:
- Limited to no internet connectivity.
- Affordability issues - ICTs gadgets and data costs,
- Inadequate infrastructure and
- A skills gap in utilising ICT tools.

These challenges restrict students' access to quality ODeL. However, to those with access, virtual learning offers convenience and flexibility.

5.1 Recommendations

To bridge the digital divide and promote equitable access to education, it is essential to adopt comprehensive strategies that address both infrastructural and educational barriers. By collectively enhancing digital resources and fostering an inclusive learning environment, we can empower learners and educators across various regions. The following recommendations outline key initiatives that can be implemented to create a more inclusive educational landscape in Zimbabwe: Improved digital infrastructure

which include, internet connectivity, gadgets, road networks and electricity.

1. ODeL institutions should prioritize investing in information centres in different districts of Zimbabwe. For example, setting up equipped ICTs laboratories in various districts for use by students in the locality.
2. Reducing ICT data costs by collaborating with mobile network operators to offer subsidized data bundle rates.
3. Introducing affordable ICT tools' acquisition schemes to help students and lecturers acquire ICT gadgets.
4. Regular trainings to enhance digital skills.
5. Explore blended learning methods that fuse both face to face and online to cater for the needs of all students.

5.3 Further Research

There is a significant gap in scientific research on the actual digital skills proficiency of individuals, highlighting the need to define and establish standardised competency benchmarks through research.

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