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From Traditional Face-To-Face Contact to Face-The-Screen Method of Teaching and Learning: The Challenges Faced by South African Rural School Learners and Tertiary Students during Covid-19 Lockdown and Beyond

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ABSTRACT

South Africa, like many countries around the world that were affected by the pandemic, introduced the COVID-19 lockdown in March 2020 and schools and tertiary institutions were closed. The purpose of this study was to discuss the challenges faced by South African rural school learners and tertiary students during COVID-19 and beyond. This study used secondary data sources specifically academic materials. Through the qualitative method of research, it was found that South African rural learners and tertiary students faced challenges of online teaching and learning during COVID-19 and beyond the pandemic. This study discussed some of the challenges encountered by South African rural learners and tertiary students during the COVID-19 lockdown and beyond. Some of the challenges include poverty and equality, poor infrastructure, the problem of network coverage and connectivity, lack of computer skills, lack of technological resources, inadequate reading and writing skills, and inability to comprehend the English language. The study recommended that the South African government should try to address the problem of disparities by improving services in rural areas. The study seeks to contribute to the existing body of knowledge on technological teaching and learning. The study provides data that will help policymakers, government officials and researchers. It will also help tertiary students, especially those who specialise in technology.

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INTRODUCTION

The outbreak of the virus, which later became known as the COVID-19 pandemic, started in Wuhan, China, at the end of December 2019.[1] By 2020 most countries around the world had been affected by COVID-19. The outbreak of this disease prompted many countries to close their educational institutions. The purpose of shutting down these institutions was to curb the spread of the virus. South Africa was not free from the disastrous effects of COVID-19, which forced the government to impose a nationwide lockdown that led to the closure of educational institutions, among others. The announcement of the lockdown by the South African government witnessed millions of learners

[1] Toyin Cotties Adetiba, "Rurality of Rural University Students, Using Technology for Teaching and Learning During the Covid-19 Pandemic: Echoes from Kwazulu-Natal Province of South Africa," n.d.

and students in the country becoming temporarily out of educational institutions. The announcement saw those well-resourced institutions, particularly those in urban areas immediately migrating to online learning and their rural counterparts, could not migrate due to a lack of resources. The closing of basic education schools and tertiary institutions was to prevent the spread of the virus. To save the academic year, both basic education schools and education of higher learning came up with the strategy of teaching and learning during the closure. In this sense, traditional face-to-face contact was replaced by the face-the-screen method of teaching and learning. The face-the-screen method of teaching and learning became the only ideal measure that could help address the impact of COVID-19 on saving the academic year. However, the face-the-screen method of teaching and learning faces some challenges, especially for rural learners and students. Not only were learners and students affected by online teaching and learning, but educators and lecturers were also affected. On 18 March 20220, it was announced that schools and tertiary institutions would be temporarily closed and this would affect about 17 million learners from preschool to secondary and about 2.3 million tertiary students.[2] In the South African context, school learners are those who attend school from primary to secondary (grade R-grade 12), and tertiary students are those who attend an institution of higher learning, whether university or college.

This paper will discuss the challenges faced by South African rural school learners and tertiary students during COVID-19 and beyond. Through a review of secondary data, it was found that South African rural learners and students encounter some challenges concerning online teaching and learning. It was found that poverty and inequality, poor electricity supply, problems of network coverage and connectivity, lack of computer literacy, lack of technological resources, inadequate reading and writing literacy and inability to comprehend the English language are some of the challenges experienced by rural learners and students in South Africa. This paper will also come up with some recommendations on how the South African government and particularly the two educational institutions, namely the DBE and the DHET as well as private companies can address the challenges faced by both rural learners and students on online teaching and learning. The study is premised on the following research questions:

- What are the challenges faced by rural learners and students regarding online teaching and learning during the COVID-19 lockdown and beyond?
- How can these challenges be addressed?

The study will help policymakers, government officials and researchers, particularly in the DBE and DHET. It will also help tertiary students with information, especially postgraduates on how the pandemic has required the world to transition from traditional face-to-face to face-to-face methods of teaching and learning. The study attempts to fill the gap in the study by coming up with some recommendations.

LITERATURE REVIEW

Duma et al. describe rural schools as being characterised by distance to town, poor conditions of roads, and bridges to school restricted access to information technology, poor access to services such as electricity, water and sanitation and limited or no access to lifelong learning.[3] Cristobal-France et al. also argue that in South Africa, rural areas lack the economic and social viability that is needed to sustain the improved technology.[4] According to Mhlanga et al., many universities that were in isolated places during the lockdown couldn't continue with online learning due to various issues,

[2] Statistics South Africa, "Road Transport Accident Deaths on the Increase in South Africa," 2022, https://www.statssa.gov.za/?p=17175.
[3] Nkosinathi Martin Duma et al., "Digital Inequalities in Rural Schools in South Africa," *Open Science Journal* 6, no. 3 (2021).
[4] Tony Bates et al., "Can Artificial Intelligence Transform Higher Education?," *International Journal of Educational Technology in Higher Education* 17, no. 1 (December 15, 2020): 42, https://doi.org/10.1186/s41239-020-00218-x.

and energy was among those issues.[5] Mete, et.al., posit that internet cafés have been established in most areas to eliminate the digital divide.[6] However, in some rural areas, this infrastructure is non-existent. When discussing poor network coverage, Dube argues that even though online learning seemed to be one of the best ways to learn during COVID-19, the innovation was hindered by poor network coverage in some rural areas.[7] With regard to poor network coverage, some South African provinces such as Kwazulu-Natal experienced some difficulties in accessing network coverage because some of these provinces are surrounded by mountains and forests, and as a result school learners and students were unable to transition to online learning.[8]

Bauber et al., posit that rural communities have challenges in accessing the internet in their homes and this can contribute to students lagging in their studies.[9] Bauber et al., further argue that of those students who do not have home connectivity, 36 % do not have their own computers in their homes and 54% of these people reside on a farm or other rural setting.[10] Odendaal also argued about the lack of internet connectivity among rural households and he said that about 79.2% of households in rural areas lacked access to the internet as compared to 54% in urban areas and 47% in metropolitan areas.[11]

Sikhakhane and Lubbe like other scholars, argue that about 98% of people in rural areas have no computers or internet and therefore, learners and students will not be able to access online learning.[12] Oyedemi and Magano discussed computer illiteracy among rural communities hence, some of the students who are from such disadvantaged communities come into the institutions not knowing how to operate a computer or laptop because they grew up not having computers or laptops in their homes.[13] It is not learners and students who lack computer skills, there are even teachers who are not computer literate, and as a result, it is difficult for them to assist their learners with their online learning.

Most rural households lack access to the internet because they don't have technological resources such as computers in their homes or at work.[14] Choung and Manamela postulate that 60,9% of students residing in cities access the internet, compared to 26,3% of those living in rural areas.[15] According to Mukuna and Aloka, during the pandemic, working without technological resources or devices means that both educators and learners would not make any significant progress, especially in online studies.[16] With regard to inadequate reading and writing literacy, most school learners in rural areas are still experiencing problems with reading and writing literacy. According to Eberhard et. al, learners from schools in rural conditions are not only digitally illiterate but also functionally illiterate because of their poor basic reading skills.[17] Cekiso et. al., mention factors that inhibit

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[5] E. Mhlanga, F. N. Tlou, and Z. Sibanda, " Challenges of Online Teaching and Learning in the Crisis of Covid 19 in Lupane Rural Schools in Matabeleland North in Zimbabwe," *International Journal of Latest Research in Humanities and Social Science.* 5, no. 3 (2022): 1–8.

[6] Mete Yildiz, T Kaya Bensghir, and A Cankaya, "Using Internet Cafés as an Alternative Means of Combatting the Digital Divide," *Retrieved June* 9 (2003): 2009.

[7] Ndumiso Dube, " The Philosophy of Ubuntu in Secondary Schools in the Gweru District of Zimbabwe: A Critical Reflection" (University of South Africa, 2021).

[8] John Mhandu, Innocent Tonderai Mahiya, and Evelyne Muzvidziwa, "The Exclusionary Character of Remote Teaching and Learning during the COVID-19 Pandemic. An Exploration of the Challenges Faced by Rural-Based University of KwaZulu Natal Students," *Cogent Social Sciences* 7, no. 1 (2021): 1947568.

[9] J Bauer, C Brooks, and K. Hampton, "Poor Internet Connections Leave Rural Students Behind" (Michigan State University, 2020).

[10] Bauer, Brooks, and Hampton, "Poor Internet Connections Leave Rural Students Behind. ."

[11] N. Odendaal, "Most S African Households Still Lack Access to Internet.," April 14, 2015.

[12] Munyaradzi Sikhakhane, Samantha Govender, and Mncedisi Christian Maphalala, "South African Teachers Perspectives on Using the Computer as a Tool for Teaching and Learning," *International Journal of Education and Practice* 9, no. 1 (2021): 93–104, https://doi.org/10.18488/journal.61.2021.91.93.104.

[13] Toks Oyedemi and Saki Mogano, "The Digitally Disadvantaged: Access to Digital Communication Technologies among First Year Students at a Rural South African University," *Africa Education Review* 15, no. 1 (2018): 175–91.

[14] Odendaal, "Most S African Households Still Lack Access to Internet."

[15] M. Choung and M.G. Manamela, "Digital Inequality in Rural and Urban Setting: Challenges of Education and Information in South African Youth Context. ," *Bangladesh E-Journal of Sociology,* 15, no. 2 (2018).

[16] Kananga Robert Mukuna and Peter J O Aloka, "Exploring Educators' Challenges of Online Learning in COVID-19 at a Rural School, South Africa," *International Journal of Learning, Teaching and Educational Research* 19, no.10(2020):134–49.

[17] Birgit Eberhard et al., "Smart Work: The Transformation of the Labour Market Due to the Fourth Industrial Revolution (I4. 0).," *International Journal of Business & Economic Sciences Applied Research* 10, no. 3 (2017).

learners from improving their reading and writing literacy and these factors include the educational level of parents, home environment, and socio-economic status.[18] Rural learners are experiencing challenges of resources and as a result, they cannot acquire the quality education that other learners receive in urban areas.[19]

METHODOLOGY

The study adopted a qualitative research approach. The secondary method of research was used to collect, interpret and analyse data. The sources that were used to undertake the research comprised academic materials such as journal articles, internet materials, newspapers, dissertations and theses. These materials were used to assess and identify challenges experienced by South African rural learners and students during and post-COVID-19 lockdown.

PRESENTATION OF FINDINGS AND DISCUSSION

Through a review of secondary data, it was found that South African rural learners and students encounter some challenges concerning online teaching and learning. It was found that poverty and inequality, poor infrastructure, problems of network coverage and connectivity, lack of computer literacy, lack of technological resources, inadequate reading and writing, and language inability are some of the challenges experienced by rural learners and students in South Africa. These are discussed later.

The Problem of Poverty and Equality.

According to Chen, poverty refers to the state or condition in which people or communities lack resources.[20] Poverty in rural South Africa is caused by different factors, and one of the biggest factors is the legacy of apartheid. The apartheid government applied racial segregation and economic inequality, leaving blacks with limited access to resources, education, and employment opportunities.

Rural areas are remote places where basic services are neglected. These rural areas were created by the apartheid regime and still exist three decades later. Dube as cited in Marongwa and Garidzirai argues that rural areas are isolated places that are found in forests, mountains, and the countryside.[21] According to Dube, rural people are deprived of economic resources such as good health, services, quality education, electricity and transport.[22] In South Africa, rural areas lack the economic and social viability that is needed to maintain technology improvement.[23] Duma et al. say that rural schools are those that are found very far from the centre, these schools are far from many people.[24] According to Duma et al., rural schools are characterised by distance from town, poor conditions of roads and bridges to schools, restricted access to information technology, poor access to services such as electricity, water, and sanitation, and limited or no access to lifelong learning.[25]

When urban school learners started teaching and learning online, those who grew up in rural areas were left behind because they could not access online teaching and learning due to the

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[18] Madoda Cekiso et al., "Factors Affecting Grade 6 Learners' Reading Performance in a Rural School in Maluti, South Africa," *Reading & Writing-Journal of the Reading Association of South Africa* 13, no. 1 (2022): 327.

[19] Chava Frankfort-Nachmias and David Nachmias, *Research Methods in the Social Science* (London: Edward Arnolds, 1981); Margaret Funke Omidire, "Experiencing Language Challenges in a Rural School: Implications for Learners' Life Aspirations," *Early Child Development and Care* 190, no. 10 (2020): 1619–37.

[20] Yu Chen et al., "Artificial Intelligence (AI) Student Assistants in the Classroom: Designing Chatbots to Support Student Success," *Information Systems Frontiers* 25, no. 1 (February 14, 2023):161–82, https://doi.org/10.1007/s10796-022-10291-4.

[21] Anathi Onceya and Nkosiyazi Dube, "Perceptions of Caregivers Regarding Factors That Perpetuate Differential Parenting in Katlehong, Johannesburg, South Africa," *Journal of Social Development in Africa*, no. 2 (2020): 7–39; Nhlanhla Landa, Sindiso Zhou, and Newlin Marongwe, "Education in Emergencies: Lessons from COVID-19 in South Africa," *International Review of Education* 67, no. 1–2 (April 28, 2021): 167–83, https://doi.org/10.1007/s11159-021-09903-z.

[22] Onceya and Dube, "Perceptions of Caregivers Regarding Factors That Perpetuate Differential Parenting in Katlehong, Johannesburg, South Africa."

[23] Bates et al., "Can Artificial Intelligence Transform Higher Education?"; Landa, Zhou, and Marongwe, "Education in Emergencies: Lessons from COVID-19 in South Africa."

[24] Duma et al., "Digital Inequalities in Rural Schools in South Africa."

[25] Duma et al., "Digital Inequalities in Rural Schools in South Africa."

shortages of resources needed for online learning. Other rural families live in areas that are not conducive to learning, such as connectivity problems, limited data access, power blackouts, and a lack of learning facilities. Teaching and learning online have not been easy for many learners and students in rural South Africa. Online teaching and learning have been expensive for them because of poverty and inequality. Rural schools and tertiary institutions are situated in communities faced with socio-economic challenges that exacerbate inequality and digital exclusion. These inequalities have their origin in the apartheid legacy of unequal educational delivery. Hassim argues that in 2018, the National Education Infrastructure Management System (NEMS) found that only 4675 out of 23471 schools had internet connectivity for teaching and learning.[26] Hassim further said that nationally, only 22% of households had computers, while 10,5% had connections.[27] In the Northwest and Limpopo provinces, 3.6% and 1.6%, respectively, have access to the internet at home.[28]

Due to the closure of educational institutions and companies because of the COVID-19 lockdown, students and parents, especially those who were attending tertiary institutions and working in the urban areas did not have a choice but to return home and this exacerbated the problem of poverty because rural households had now many mouths to feed and this became a very serious problem for those who do not have. The closure of educational institutions not only affected those students who were attending tertiary institutions in the cities but also those who were attending rural institutions returned home and faced similar situations. Because everybody had returned home, many rural homes became overcrowded, as the houses were too small to accommodate all the returnees. The overcrowded homes also impacted the returnee students because they could no longer have their own space for studies and navigate online learning, unlike at their institutional residences, where they had their own space to study.

The closure of companies also had an impact on working parents. Those parents who were no longer working due to the temporary closure of their companies became unemployed, and they eventually depended on the Unemployed Insurance Fund (UIF). However, the funds were not enough to sustain the families and, on the other hand, take care of their children's education, such as buying them internet data, computers, and smartphones and paying their fees for computer training. Some parents depended on street trading, which was also closed during the lockdown, unfortunately, these people did not qualify for UIF, and they had to fend for themselves. The COVID-19 pandemic has made a broken and unequal system even worse, placing learners and students from poorer communities at a huge disadvantage.[29]

Poor Electricity Supply

Most rural areas have poor infrastructure, such as electricity. Electricity is one of the Human basic needs. In some rural areas in South Africa, there is a problem with electricity, it is either unstable or non-existent. During the rainy season, people experience blackouts. During blackouts, communities, especially learners and students, suffer because they cannot access online learning. If there is no electricity, it will be difficult for learners and students to recharge their technological devices, such as laptops and cellphones, among other devices, so that they can continue with their online learning. The most important use of electricity is to support network coverage and use devices to access online learning. Recent information from DBE shows that some South African schools remained without electricity, and therefore it will be difficult for them to access online teaching and learning.[30] Even for schools that have electricity, it is insufficient for their needs, and as a result, they also encounter challenges with online teaching and learning.[31] Many universities in isolated places during the

[26] S. B. Hassim, "The Digital Divide: Barriers To The Realization Of Digital Rights For Learners In South Africa," 2023.
[27] Hassim, "The Digital Divide: Barriers To The Realization Of Digital Rights For Learners In South Africa."
[28] Hassim, "The Digital Divide: Barriers To The Realization Of Digital Rights For Learners In South Africa."
[29] S Mohamed, "South Africa: COVID-19 Pushes Inequality in Schools to Crippling New Level, Risks a Lost Generation of Learners," *Amnesty International Press Release 15 February 2021*, 2021.
[30] *Access Denied : Internet Access and the Right to Education in South Africa* (Global Human Rights Clinic at the University of Chicago Law School, ALT Advisory, Acacia Economics, and Media Monitoring Africa, 2020).
[31] *Access Denied : Internet Access and the Right to Education in South Africa*.

lockdown could not continue with online learning due to various issues, and energy was among those issues.[32]

Load shedding, which was introduced a long time before the COVID-19 pandemic, is worsening the problem of electricity in rural South Africa. Electricity reduces access to the internet, and this becomes a problem in areas where there is already instability of electricity and low levels of network coverage, especially in rural areas. Load-shedding disrupts teaching and learning in most educational institutions because some institutions do not use generators during blackouts.[33] During load-shedding, communities, especially learners and students, find it very difficult to log into the internet so that they can start learning. Those who study and write their exams online suffer the most because they will not submit their online exams on time, and this will lead them to be disqualified. This is because in some areas load-shedding lasts many hours.

Another issue that exacerbates the electrical problem is cable theft. Electrical copper cables are stolen in South Africa almost daily, and this is negatively impacting learners students and the community in general. The unlawful extraction of copper cable harms communities, as it interrupts many things in communities, including education. Cable theft places those affected in a position of not having electricity for days or even weeks.[34] Once electric cables are stolen, it will be very difficult for learners and students to access the internet, as their technological resources or devices fail to work, and it can take days or weeks before the problem is fixed. Those who can afford to make use of generators and solar panels can cope with power outages, but for those who cannot afford them, their studies become disrupted by these blackouts.[35] Load shedding and cable theft are not the only things that cause unstable electricity in rural communities. Sometimes, electricity can be affected by workers' strikes and years of poor maintenance.[36]

The lack of community libraries in rural areas can also negatively impact the education of learners and students. The establishment of community libraries in South Africa is to ensure that people in the community have access to information.[37] The establishment of this facility will assist those learners whose schools do not have libraries. According to Adedokun and Zulu, public libraries are used as resource centre as well as educational places for the communities.[38] However, one is unlikely to find a community library in rural areas. Where there are libraries in rural areas, tribal authorities might be responsible for the establishment of such facilities. Sometimes these community libraries are far from other communities, and therefore, it would be difficult for them to be accessed. Because of the non-existence of public libraries in some rural areas, the local people are denied one of their rights as stipulated in the constitution of the Republic of South Africa, which states that access to public libraries is a fundamental human right for South Africans.[39] Due to the lack of community libraries in rural communities to access information, they depend on local community resource centres to provide them with information.[40]

Community or public libraries do have computers and sometimes free Wi-Fi, where the local community can access the internet. During the lockdown, it was very difficult for learners and students to make use of these facilities as these facilities were closed, and as a result, many learners and students were affected as they could no longer access study materials as well as submit their

[32] Mhlanga, Tlou, and Sibanda, " Challenges of Online Teaching and Learning in the Crisis of Covid 19 in Lupane Rural Schools in Matabeleland North in Zimbabwe."
[33] N McCain, "Education Sector Concerned as Impact of Load Shedding Cuts down Valuable Teaching and Studying Time," *News24* 20 (2022).
[34] Estate Living, "Cable Theft Is Not Just a Petty Crime: How Cable Theft Affects Our Communities," November 8, 2021.
[35] Global Citizen, "South Africa Power Cuts Are Widening the Digital Divide and Wealth Gaps . Load Shedding Means South African Unable to Afford Internet Struggle to Study or Work Online," *Thomson Reuters Foundation*, July 19, 2022.
[36] Global Citizen, "South Africa Power Cuts Are Widening the Digital Divide and Wealth Gaps . Load Shedding Means South African Unable to Afford Internet Struggle to Study or Work Online."
[37] Theophilus Adedayo Adedokun and Sylvia Phiwani Zulu, "Towards Digital Inclusion in South Africa: The Role of Public Libraries and the Way Forward," *Interdisciplinary Journal of Economics and Business Law; Vol. 11, Issue 4*, 2022.
[38] Adedokun and Zulu, "Towards Digital Inclusion in South Africa: The Role of Public Libraries and the Way Forward."
[39] Adedokun and Zulu, "Towards Digital Inclusion in South Africa: The Role of Public Libraries and the Way Forward."
[40] Denise Nicholson, "The'Information-Starved'-Is There Any Hope of Reaching the'Information Super Highway'?," *IFLA Journal* 28, no. 5–6 (2002): 259–65.

assignments on time. During the lockdown, many tertiary students wrote their exams online, and it became very difficult for them to complete their exams on time because of the closure of these facilities. Internet cafés, like public or community libraries, are other infrastructures that have been established to eliminate the digital divide.[41] Yildiz et.al, describe an internet café as a place where communities, especially those who don't have computers and modem connections, can buy temporary internet access.[42] These kinds of facilities have been established to help those who cannot afford to have their internet or Wi-Fi in their homes.

In South Africa, in almost every township and suburb one will find an internet café that helps the community access computers and the internet. However, in rural areas, there are few internet cafés and some of them are far from the communities, and as a result, it is difficult for them to be accessed. To access these facilities, the rural folk would need public transport to reach them and public transport is not always available in rural areas. Due to the distance, learners and students would not be able to access online learning and therefore, they wouldn't be able to complete their online exams or school work on time. Lack of internet access can make it difficult for individuals to apply for jobs, complete school work, access government services, as well as stay connected with families and friends. For the reason that most of the rural learners and their educators, as well as students, relied on internet cafés for their online needs, and due to the imposition of lockdown regulations, these facilities were closed, which hindered rural learners, educators and students from accessing online learning. Apart from being closed, and accessing internet cafes, sometimes it is costly to others, especially those who are living in poverty.[43] Even if these facilities are opened, they will be hampered by unstable electricity in rural communities, and this would inhibit learners and students from accessing online learning.

Telecommunications can also be classified as one of the infrastructures to access the internet. The lack of telephone facilities in rural areas can also impact rural communities. According to Herselman, telephone facilities can make it possible for rural schools to keep abreast with the latest developments, especially in the area of learning.[44] It will be easy for rural schools to access the internet and exchange information with their urban counterparts. However, telephone facilities in rural areas are not always available, only individual rural homes, especially those who can afford to have landline phones. Because most rural communities live in poverty, it is very unlikely for them to have such facilities and, as a result, both learners and students will encounter some difficulties in accessing online learning as well as exchanging information with their urban counterparts.

The Problem of Network Coverage and Connectivity

Even though online learning seemed to be one of the best ways of learning during COVID-19, the innovation was hindered by poor network coverage in some rural areas.[45] Network coverage becomes very problematic for both rural learners and students to access online learning materials provided by both educational institutions, namely the DBE and the DHET.

There are various causes of poor network coverage and connectivity. Unstable electricity, for example, is one of the reasons for poor network coverage. During electric blackouts, the internet becomes inaccessible, and this affects both learners and students because they would not be able to access the Internet and as a result, they would not be able to submit their assignments and other school work on time.

Another cause of network coverage problems in rural areas is the environment or geographical location. Most villages in rural areas are surrounded by mountains, dense bushes or forests and big rocks and it becomes very difficult for the communities to access internet connectivity on their technological resources such as computers, laptops and cellphones and this affects learners

[41] Yildiz, Bensghir, and Cankaya, "Using Internet Cafés as an Alternative Means of Combatting the Digital Divide."
[42] Yildiz, Bensghir, and Cankaya, "Using Internet Cafés as an Alternative Means of Combatting the Digital Divide."
[43] Onceya and Dube, "Perceptions of Caregivers Regarding Factors That Perpetuate Differential Parenting in Katlehong, Johannesburg, South Africa."
[44] M. E. Herselman, "ICT in Rural Areas in South Africa: Various Case Studies," *Informing Science Proceedings* 3 (2003): 945–55.
[45] Dube, " The Philosophy of Ubuntu in Secondary Schools in the Gweru District of Zimbabwe: A Critical Reflection."

and students with their online studies. If one wants to access the internet, he or she must move to the spot where he or she would be able to access the internet. In Kwa-Zulu Natal, for example, most villages are surrounded by mountains or are next to the mountains and therefore it is difficult for students to access online due to poor network coverage.[46] Even communities in other South African provinces such as Limpopo, Mpumalanga and Eastern Cape face a similar problem of network coverage due to their geographical locations.

Network limitations and internet access are experiencing a big impact on learning.[47] It makes it difficult for both learners and students to access study materials. The problem of network coverage affected learners and students during the lockdown as they struggled to submit their work before the stipulated time. They become frustrated because they are scared that they will not get the marks they have worked for. Not every learner and student has easy access to the school work sent to him or her. Poor network coverage was a challenge that affected online teaching and learning during the COVID-19 lockdown and it is still a challenge in post COVID-19 pandemic.

Meanwhile, many communities in rural South Africa do not have Wi-Fi, which is an essential part of accessing information.[48] Many schools in rural areas have either very little or no technological infrastructure. Rural communities have challenges in accessing the internet in their homes and this can contribute to students lagging in their studies.[49] Some of these students are unable to access the information required online to study for tests or complete their projects.[50] The socio-economically disadvantaged students, especially the rural ones, are least likely to have internet connectivity at home. Only 47% of students who live in rural areas have high-speed internet access at home, compared to 77% of those living in the suburbs.[51] Of those students who do not have home connectivity, 36% do not own computers in their homes, and 58% of these people either reside on a farm or in other rural settings.[52] Students with internet access are often higher in digital, than those who lack internet access. According to the General Household Survey (GHS) Information and Communication Technology (ICT), from 2002 to 2013 is that 59.1% of South African households lacked any kind of internet access in 2013.[53] Although access was common in the Western Cape and Gauteng, 78.1% and 69.8% of households in Limpopo and Eastern Cape, respectively, lacked internet access.[54] The reason why the Western Cape and Gauteng have the highest internet connection than Limpopo and Eastern Cape is that the latter provinces are richer than the former. About 79.2% of households in rural areas lacked access to the internet compared to 54.8% in urban and 47.2% in Metropolitan areas.[55] Meanwhile, the survey showed that 30.8% of South African households accessed the internet using mobile devices, compared with 10% at home and 16% at work. All of these are caused by the digital divide in the country.

While many urban areas have home internet connectivity through Wi-Fi fibre, this kind of service is non-existent in rural areas. Rural households are less likely to have home internet connectivity than urban households.[56] Rural communities depend on purchasing data, which is too expensive for them since most rural communities lost their jobs due to the country's lockdown.[57] Some tertiary institutions give their students free data to access online learning, but this gets

[46] Mhandu, Mahiya, and Muzvidziwa, "The Exclusionary Character of Remote Teaching and Learning during the COVID-19 Pandemic. An Exploration of the Challenges Faced by Rural-Based University of KwaZulu Natal Students."
[47] Mukuna and Aloka, "Exploring Educators' Challenges of Online Learning in COVID-19 at a Rural School, South Africa."
[48] N. Ntaka, *Basic Education in a Pandemic: The Pitfalls of Online Learning in an Already Unequal Society.* (Daily Maverick: Corner Stone. , 2021).
[49] Johannes Bauer, C Brooks, and K Hampton, "Poor Internet Connection Leaves Rural Students Behind," *Michigan State University. Https://Msutoday. Msu. Edu/News/2020/Poor-Internet-Connection-Leaves-Rural-Students-Behind*, 2020.
[50] "Digital Divide in South Africa. " (Huge Connect. , 2023).
[51] Bauer, Brooks, and Hampton, "Poor Internet Connection Leaves Rural Students Behind."
[52] Bauer, Brooks, and Hampton, "Poor Internet Connection Leaves Rural Students Behind."
[53] Odendaal, "Most S African Households Still Lack Access to Internet."
[54] Odendaal, "Most S African Households Still Lack Access to Internet."
[55] Odendaal, "Most S African Households Still Lack Access to Internet."
[56] "How Covid-19 Changed the Way We Learn. ," *Census* (Stats SA., 2022).
[57] Onceya and Dube, "Perceptions of Caregivers Regarding Factors That Perpetuate Differential Parenting in Katlehong, Johannesburg, South Africa."

exhausted before the month's end and once data is exhausted, it becomes difficult for students to access online learning, such as submitting assignments and writing online tests.[58] Some communities depend on government social grants, that are too little to take care of households and also to buy data for children to access online learning. The cost of data is affecting mostly learners and students and this prevents them from accessing online learning. Because the Internet data is too costly, learners and students will not be able to access online learning, and this also disadvantages learners and their teachers, as well as students and their lecturers, from accessing online teaching and learning. On the other hand, a lack of internet data will hinder teachers and lecturers from conducting online teaching if their learners and students do not have enough data to access what is being taught online.

Lack of Computer Literacy

Gamede defines computer literacy as a standard of awareness with the basic hardware and software concepts that allow one to use personal computers for word processing, and entry of data electronic communication and worksheets or databases.[59] In most rural areas, it is very rare to find learners and educators, students and lecturers having computer skills. If educators and lecturers lack computer literacy, they will not be able to help their learners and students with digital literacy. There are people in rural areas who do not even know what a computer is because they have never seen it before. The reason is the socio-economic conditions they are living in.

About 98% of the community in rural areas had no computers.[60] This is because many people in rural areas are not working and, therefore, do not have money to worry about computers. Some rural communities depend on social grants and child support grants, and therefore their meagre income cannot allow them to buy computers and also to take care of the family. The only worry they have is where the next meal will come from. These people also do not have infrastructure, such as electricity and telephones, to access computers or the internet. In order to operate a computer and access the internet, one should have electricity as well as a telephone.[61] According to Sikhakhane and Lubbe, computer skills mostly affect youth, especially those under 30 years of age.[62] Most of these people are educated and some are still learning at schools in villages where there are no resources.

The same as Basic education, Higher education in South Africa is still reflecting its apartheid past. Historically, white institutions of higher learning continue to be well-resourced with computers, compared to their rural counterparts.[63] Black students who attend these institutions do not perform very well compared to their white counterparts as a result of the existent inequality in the country.[64] Lee-Shong argues that Information and Communication Technology (ICT) at historically white institutions has become a key component of their teaching and learning practice.[65] However, black students enter these institutions with little or no computer skills. This is because black rural students grew up not having computers or laptops in their homes, and there were no computer laboratories at their schools and they had their first encounter with a computer when they arrived at the university.[66]

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[58] Siyabonga Theophillus Pika and Sarasvathie Reddy, "Unintended Pedagogical Consequences of Emergency Remote Teaching at a Rural-Based University in South Africa," *Education Sciences* 12, no. 11 (2022): 830.
[59] Oluwatoyin Ayodele Ajani and Bongani T Gamede, "Decolonising Teacher Education Curriculum in South African Higher Education.," *International Journal of Higher Education* 10, no. 5 (2021): 121–31. P. 7
[60] Sikhakhane, Govender, and Christian Maphalala, "South African Teachers Perspectives on Using the Computer as a Tool for Teaching and Learning."
[61] Jonathan. Charteris-Black, *Corpus Approaches to Critical Metaphor Analysis* (Palgrave Macmillan, 2004); Sikhakhane, Govender, and Christian Maphalala, "South African Teachers Perspectives on Using the Computer as a Tool for Teaching and Learning."
[62] Sikhakhane, Govender, and Christian Maphalala, "South African Teachers Perspectives on Using the Computer as a Tool for Teaching and Learning."
[63] Carmelita Lee Shong, "Exploring First-Year, Rural Students Computer Acquisition Experiences at an Urban University in South Africa," 2020.
[64] Shong, "Exploring First-Year, Rural Students Computer Acquisition Experiences at an Urban University in South Africa."
[65] Shong, "Exploring First-Year, Rural Students Computer Acquisition Experiences at an Urban University in South Africa."
[66] Oyedemi and Mogano, "The Digitally Disadvantaged: Access to Digital Communication Technologies among First Year Students at a Rural South African University."

Most of these students are digitally disadvantaged. However, students from the cities are digitally more advantaged and computer literate on their arrival at the university.[67] Their white peers grew up having computers at home and also their schools had computer laboratories where they could acquire computer skills. It was not easy for black rural students in a white institution, particularly for those who had no skills or knowledge of computers when they started their tertiary years. The lack of computer skills limits from many opportunities the computers bring to the learning environment.[68] Furthermore, a lack of computer literacy can also affect teachers. Most rural teachers in South Africa are unable to use online learning Apps and therefore, it is difficult for them to assist their learners with their online learning.[69] Rural teachers must be computer-literate to be able to train their learners. Like teachers, university lecturers do not have the technological skills and abilities to operate computers.[70] The lecturers were not properly technologically trained to manage online classes.

Herselman argues that computers and computer resources are the key to education and businesses today.[71] Nowadays, it is very difficult for someone who is not computer literate to complete his or her studies successfully or to find better employment. According to Herselman, in most rural schools, it is unlikely that you will find a computer lab, even if it can be someone with knowledge of the internet, as compared to urban schools.[72]

The effectiveness of online delivery was greatly affected by the lack of training for both students and staff.[73] Online learning during the pandemic, educational institutions failed to utilize the potential of this new pedagogy because both students and faculty members were not ready for online classes due to a lack of digital skills as well as computer skills.[74] Privileged students are more likely to excel on ICT literacy exams compared to underprivileged students.[75] This is because privileged students have more access to computers than underprivileged students. Moreover, students who do not have access to computers will lack the skills to use them and this will create a digital divide or exclusion, especially when they leave school to join the corporate world.[76] South Africans living in rural areas are the ones who suffer the most from the digital divide. Some people in rural areas lack electricity because they cannot afford it or it has not been installed in their homes due to geographical location. Furthermore, the lack of computer skills contributes to digital illiteracy. One cannot be digitally literate without knowing a computer, especially a basic computer. Computer literacy and digital literacy are hand in glove, they cannot be separated. Many students were not digitally literate when they first entered higher education because these people were also not computer literate or did not have computers at home. In some tertiary institutions in South Africa in the past, for example, at the University of Durban Westville, computing, which included the use and *access* to the internet, was only taught to Commerce, Computer Science, Engineering and Mathematics students while other faculties such as Health Sciences, Arts, Education and Public

[67] Oyedemi and Mogano, "The Digitally Disadvantaged: Access to Digital Communication Technologies among First Year Students at a Rural South African University."
[68] Shong, "Exploring First-Year, Rural Students Computer Acquisition Experiences at an Urban University in South Africa."
[69] Dube, " The Philosophy of Ubuntu in Secondary Schools in the Gweru District of Zimbabwe: A Critical Reflection."
[70] Pika and Reddy, "Unintended Pedagogical Consequences of Emergency Remote Teaching at a Rural-Based University in South Africa."
[71] Herselman, "ICT in Rural Areas in South Africa: Various Case Studies."
[72] Herselman, "ICT in Rural Areas in South Africa: Various Case Studies."
[73] Rudolf M Oosthuizen and Claude-Hélène Mayer, "At the Edge of the Fourth Industrial Revolution: Employees' Perceptions of Employment Equity from a CIBART Perspective," *SA Journal of Industrial Psychology* 45, no. 1 (2019): 1–11; Eleanor A Hendricks and Bonginkosi Mutongoza, "Paragons of Inequality: Challenges Associated with Online Learning at a Selected Rural University in South Africa1," *The Independent Journal of Teaching and Learning* 18, no. 1 (2023): 8–21.
[74] Ogunlela G Oyebanjo, "Green Entrepreneurship: Why Now and What next? Sub Theme: Entrepreneurship and Sustainability," *Covenant Journal of Entrepreneurship (CJoE)* 2, no. 1 (2018): 15–25; Leah Braganza et al., "Exploring Approaches to Professional Development for Online Teaching in Higher Education: A Case Study of the Graduate Diploma in Psychology," in *The Future of Online Education*, ed. Stephen Paul McKenzie et al. (Nova Science Publishers, 2022), 191–212, https://doi.org/10.52305/LERQ4827; Hendricks and Mutongoza, "Paragons of Inequality: Challenges Associated with Online Learning at a Selected Rural University in South Africa."
[75] "Digital Divide in South Africa."
[76] "Digital Divide in South Africa."

Administration students were not given computer literacy classes, let alone allowed Web browsing.[77] That is why some of the tertiary students still struggle with computer and internet operations because they are being marginalised.

Meanwhile, the digital divide did not exist only between rural and urban learners and students but also existed among university academics. For instance, at the University of Durban Westville, only 67% of academics had access to the internet, while the other 33% were marginalized because they used outdated 386 personal computers (PCs) that had limited or no access to the internet. Some academics did not have PCs at all, and newly appointed staff were not given PCs because they were too junior.[78] The older members of staff had PCs and internet access, but they were unable to use the facilities because they had no formal training.[79]

Lack of Technological Resources

Many people in South Africa, particularly in rural areas, lack technological resources because of their background. Poverty and inequality denied them the opportunity to own or have these resources. Technological resources include computers, smartphones, laptops, tablets, television and radio, among others. The lack of some of these resources, especially computers or laptops during the COVID-19 lockdown made it difficult for learners and students to access online teaching and learning. Television and radio are resources only available to most rural communities. These two resources are the only source of information among rural communities, even though sometimes they cannot get information through this resource due to lack of electricity in their areas and it is not every community in rural areas owns television or radio, some cannot even afford these resources. Lack of some technological resources means that learners and students will not be able to access the internet and therefore they will not be able to access online learning. The available technological resource for most rural students is the smartphone, even though some rural parents cannot afford to buy it for their children due to the situation in which they are living. However, the most needed technological resource in the world of digital is a computer or laptop where learners and students would be able to type and submit their assignments and other school work. A lack of technological resources means a lack of digital literacy because these people cannot be digitally literate without a computer or a laptop.

Many schools in South Africa have either minimal or no technology infrastructure, especially in rural areas. Most rural households lack access to the Internet because they lack the knowledge and confidence to use the Internet, either at home or at work.[80] These people also do not have computers in their homes and that is why they lack the skills and knowledge to use the internet. According to Stats SA, in 2020, among all households with children aged S-24, computer ownership remained very low, at 24.7%.[81]

The lack of technological resources in rural communities means that the digital inequality between the haves and the have-nots will persist. According to Stats SA, most households did not have digital assets, such as laptops and tablets at home, that would allow learners to learn remotely using digital tools.[82] People without technological resources will not be digitally literate because a person can only be digitally literate if he or she can access the internet. Furthermore, most parents and guardians are unfamiliar with technological resources or devices due to several factors, such as buying a mobile phone that can be used to access the internet, lack of electricity, low network coverage, expensive data, or Wi-Fi. The lack of all these resources affects online teaching and learning in most rural communities.

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[77] Justin P. Paley, "Pauline Pseudepigrapha and Early Christian Literacy: Are the Clues Hidden Right in Front of US?," *Religions* 14, no. 4 (April 14, 2023): 530, https://doi.org/10.3390/rel14040530.
[78] A M Singh, "Bridging the Digital Divide: The Role of Universities in Getting South Africa Closer to the Global Information Society," *South African Journal of Information Management* 6, no. 2 (2004).
[79] Singh, "Bridging the Digital Divide: The Role of Universities in Getting South Africa Closer to the Global Information Society."
[80] Odendaal, "Most S African Households Still Lack Access to Internet."
[81] "How Covid-19 Changed the Way We Learn. ."
[82] "How Covid-19 Changed the Way We Learn. ."

In rural South Africa, some learners and students do not have technological resources such as smartphones, computers, laptops, and tablets, among others, especially those who do not qualify for the National Student Financial Aid Scheme (NSFAS). Most students who qualify for NSFAS are often given free laptops to use to access online learning. Most rural parents cannot afford to buy their children these resources because they are not working and because the resources sometimes are too expensive, therefore, these students would automatically become academically excluded. According to Marongwe and Garidzirai, some learners and students in rural areas do not have experience with online learning, and as a result, they do not have knowledge of technology.[83] In addition, learners and students living in rural areas are more likely to be disadvantaged when it comes to access to technology. It was found that 66.7% of learners living in rural areas do not have access to home computers, compared to 13.95% who live in urban areas.[84] Furthermore, 60.9% of students residing in cities access the internet at home, compared to 26.3% of people living in rural areas.[85]

Rural learners only see computers in public libraries when they are visiting cities or towns and these places are also very far from them in terms of distance.[86] Learners, especially those who reside in rural areas, face some difficulties in not knowing how to make use of digital tools in classrooms.[87]

Like rural learners, educators and lecturers also lacked sufficient technological resources such as personal computers and other electronic devices, such as laptops and smartphones, among others, because they had never been trained on how to use them, especially in terms of internet access. The lack of these devices made it difficult to teach and learn during the COVID-19 lockdown because learners and students were no longer going to classes. According to Mukuna and Aloka, during the pandemic, working without these resources or devices meant that both educators and learners would not make any significant progress, especially in their online studies.[88]

There is a need for personal electronic and internet devices for rural learners to cope and keep up with their urban counterparts. The failure to access online learning resources had many effects, for example, learners and students in rural areas felt isolated.[89] Technological resources are very scarce in rural areas, so some learners and students have to share them with their siblings and parents, and this results in their school work lagging behind or sometimes causes friction in the households.[90]

Inadequate Reading and Writing Literacy Skills

Literacy has become a major problem in developing countries, and South Africa is one of those countries. The standard of literacy in developing countries presents a serious challenge to the Global Information Society (GIS).[91] In South Africa, a low level of literacy, particularly in rural areas, is a challenge because the medium of instruction for the Internet is English. Most school learners in rural areas still experience problems with reading and writing the English language. Duma et. al, say that learners from schools in rural conditions are not only digitally illiterate but also functionally illiterate because of their poor basic reading skills.[92]

[83] Newlin Marongwe and Rufaro Garidzirai, "Together but Not Together: Challenges of Remote Learning for Students Amid the COVID-19 Pandemic in Rural South African Universities.," *Research in Social Sciences and Technology* 6, no. 3 (2021): 213–26.
[84] Oyedemi and Mogano, "The Digitally Disadvantaged: Access to Digital Communication Technologies among First Year Students at a Rural South African University"; Choung and Manamela, "Digital Inequality in Rural and Urban Setting: Challenges of Education and Information in South African Youth Context. ."
[85] Choung and Manamela, "Digital Inequality in Rural and Urban Setting: Challenges of Education and Information in South African Youth Context. ."
[86] Ajani and Gamede, "Decolonising Teacher Education Curriculum in South African Higher Education."
[87] Ajani and Gamede, "Decolonising Teacher Education Curriculum in South African Higher Education."
[88] Mukuna and Aloka, "Exploring Educators' Challenges of Online Learning in COVID-19 at a Rural School, South Africa."
[89] Mukuna and Aloka, "Exploring Educators' Challenges of Online Learning in COVID-19 at a Rural School, South Africa."
[90] Mukuna and Aloka, "Exploring Educators' Challenges of Online Learning in COVID-19 at a Rural School, South Africa."
[91] Singh, "Bridging the Digital Divide: The Role of Universities in Getting South Africa Closer to the Global Information Society."
[92] Duma et al., "Digital Inequalities in Rural Schools in South Africa."

Several factors influence inadequate reading and writing literacy among rural learners. The first factor is the legacy of colonialism and apartheid.[93] Colonialism and apartheid were methods of inequality in which black people were denied equal access to education opportunities for both Basic Education and Higher Education.[94] Even after the attainment of democracy, the historic and structural inequality was not eliminated.[95] A black child still receives the same education their parents had received during apartheid. Disparities in access to funding and quality of education do not exist only in primary and secondary schools. Inequality also exists in the higher education system.[96] The second factor is the educational level of parents or a parent.[97] Some parents of rural learners cannot read and write, and therefore, it would be difficult for them to help their children with schoolwork, such as reading and writing. Thirdly, the home environment of learners is also a factor.[98] Most learners do not have reading materials because their parents cannot afford to buy them reading materials due to poverty. Even if their parents can buy them the books they want, their home conditions where they live do not allow them to practice reading and writing because their houses are overcrowded and noisy, and therefore school learners would not be able to find a space where they can teach themselves how to read and write. Sometimes their parents would disallow them to write homework at home because they believe that school work should be written at school and not at home. Instead of helping their children with schoolwork, parents prefer to give them house chores, such as cooking and cleaning. The final factor is the socioeconomic status of learners.[99] Some rural families are not working and they depend on government social grants and this money is very little to provide for the family as well as looking after their children's education. School libraries in rural areas have shortages of books. The libraries sometimes contain few and torn-out books, which makes it difficult for learners to acquire reading skills. All these factors affect the reading and writing literacy of rural learners and therefore they will not be able to read the language used by computers or the Internet.

Inability to Comprehend the English Language

Rural learners and students cannot read and write the language that is being used by computers or the internet properly, and therefore, it becomes difficult for them to access online learning. While South Africa has 11 official languages, the available educational resources are mainly in English.[100] "Language is a medium of expression that enables us to express our ideas and emotions or communicate with others."[101] Rural areas are experiencing challenges of resources, and as a result, they cannot acquire the quality education that other learners receive in urban areas.[102] Another area of concern is the teacher's educational background.[103] Many teachers in rural areas are not well trained to deal with learners who cannot speak and write English language very well. Qualified teachers are rarely appointed to teach in rural schools, and this leads to a lack of skilled English

[93] Hellen Agumba, Zach Simpson, and Amasa Ndofirepi, "Towards Understanding the Influence of Rurality on Students' Access to and Participation in Higher Education," *Critical Studies in Teaching and Learning (CriSTaL)* 11,no.1(2023):22–42.
[94] Agumba, Simpson, and Ndofirepi, "Towards Understanding the Influence of Rurality on Students' Access to and Participation in Higher Education"; ML. Ocampo, "Global Perspective on Human Language; The South African Context.," *A Brief History of Education Inequality from Apartheid to the Present*, 2004.
[95] Agumba, Simpson, and Ndofirepi, "Towards Understanding the Influence of Rurality on Students' Access to and Participation in Higher Education."
[96] Ocampo, "Global Perspective on Human Language; The South African Context."
[97] Cekiso et al., "Factors Affecting Grade 6 Learners' Reading Performance in a Rural School in Maluti, South Africa."
[98] Cekiso et al., "Factors Affecting Grade 6 Learners' Reading Performance in a Rural School in Maluti, South Africa."
[99] Cekiso et al., "Factors Affecting Grade 6 Learners' Reading Performance in a Rural School in Maluti, South Africa."
[100] P Hanekom, "Covid-19 Exposes South Africa's Digital Literacy Divide," *Mail & Guardian* 8 (2020); Tenielle Schmidt et al., "Myths, Misconceptions, Othering and Stigmatizing Responses to Covid-19 in South Africa: A Rapid Qualitative Assessment," *PLOS ONE* 15, no. 12 (December 22, 2020): e0244420, https://doi.org/10.1371/journal.pone.0244420; Duma et al., "Digital Inequalities in Rural Schools in South Africa."
[101] David W Shwalb and Ziarat Hossain, *Grandparents in Cultural Context* (Routledge New York, NY, 2018); Omidire, "Experiencing Language Challenges in a Rural School: Implications for Learners' Life Aspirations."
[102] Omidire, "Experiencing Language Challenges in a Rural School: Implications for Learners' Life Aspirations." P. 4
[103] Omidire, "Experiencing Language Challenges in a Rural School: Implications for Learners' Life Aspirations." P. 8

English-proficient teachers.[104] Even though rural schools in South Africa are governed by the same curriculum and policies as all public schools throughout the country, rural schools usually do not have the support and resources to conduct teaching properly Gardiner, 2008 as cited in Omidire.[105] Resources such as books, newspapers, educational television programmes, and radio are not always available for learners to acquire language skills.[106] Because resources are in short supply in rural areas, rural learners will not be able to improve their language and won't be able to access online learning. Another challenge for rural learners is that they lack exposure to English beyond the classroom.[107] In other words, they seldom speak the English language at home and as a result, there will be no improvement with regard to language, and therefore, they will not be able to access online learning.

Due to the unavailability of educational resources, it is difficult to get African languages to be used by computer applications, which makes it challenging for those whose mother tongue is not English to use computers and the internet. The English language has become more difficult to learn for primary and secondary learners. Even if they could access computers and the internet, they would encounter some difficulties with concepts that they do not understand due to their lack of proficiency in the English language. During the lockdown, it became very difficult for learners to access online learning because of language competency.

Even first and second-year tertiary students encounter problems with internet access because they too, are not yet proficient in the English language, especially if they come from rural areas where they have never been exposed to reading. First-year students from rural areas are embarrassed to ask others for help.[108] Rural students become very shy when they first encounter white students, especially if they require information related to digitalisation because they cannot express themselves very well, especially in the area of speaking. It becomes very difficult for people who have never used the internet before, especially when the internet uses a language that is not theirs, and therefore, it will be challenging for them to become digitally literate, and online learning will be more difficult.[109]

RECOMMENDATIONS

This study recommends that the South African government try to address the problem of disparities by improving services in rural areas. The government must make sure that it provides rural communities with quality and stable electricity and builds community libraries, internet cafes and telecommunications so that learners and students can access online learning. The government and the private sectors must become partners in improving network coverage in rural areas so that rural learners and students can access the internet. South Africa's Telkom, in collaboration with the government, should provide every house in rural areas with Wi-Fi fibre at an affordable price since rural communities are living in poverty. Internet data should be made affordable to rural learners and students. Both DBE and DHET should provide computer training skills to teachers and lecturers so that they can provide training to learners and students. Computer literacy courses should be developed and made compulsory for all tertiary students and lecturers. This is because, without computer skills, you will not be able to write online assignments or examinations or do research. Because many rural learners and students do not have computers or laptops, the DBE and DHET should ensure that they provide learners and students with these gadgets. Both departments, DBE

[104] M.K. Sembiring and Bryan D. Hinton, " Pedoman Penafsiran Alkitab, Surat Paulus Kepada Jemaat Di Roma," in *A Handbook on Paul's Letter to the Romans,* ed. Barclay M. Newman and Eugene A. Nida (Jakarta: Lembaga Alkitab Indonesia, Yayasan Karunia Bakti Budaya Indonesia, 2012), 224; Omidire, "Experiencing Language Challenges in a Rural School: Implications for Learners' Life Aspirations." P. 13

[105] Omidire, "Experiencing Language Challenges in a Rural School: Implications for Learners' Life Aspirations."

[106] Omidire, "Experiencing Language Challenges in a Rural School: Implications for Learners' Life Aspirations."

[107] Omidire, "Experiencing Language Challenges in a Rural School: Implications for Learners' Life Aspirations." P.11

[108] Agumba, Simpson, and Ndofirepi, "Towards Understanding the Influence of Rurality on Students' Access to and Participation in Higher Education."

[109] Who We Are and Custom Content Solutions, "The Digital Divide: Overcoming Barriers to Digital Learning in Post-Covid-19 South Africa," n.d.

and the DHET provide rural learners and students with technological resources such as laptops or tablets so that they can access the Internet like their urban counterparts. Learners should be provided with reading materials such as newspapers so that they can practice how to read and write for future digitalisation. The DBE should ensure that parents are involved in their children's education. English language as an internet medium of instruction in the world is giving learners and students a tough time because they are incompetent in the language, therefore, the South African government should introduce other languages, especially African languages to be used by computers or the internet so that even those who are educationally disadvantaged can have access to computers or internet.

CONCLUSION

This paper has discussed some of the challenges encountered by rural school learners and tertiary students during the COVID-19 lockdown and beyond, regarding the face-the-screen method of teaching and learning. The transition to online teaching and learning has not been easy for rural learners and students in South Africa during the COVID-19 lockdown and afterwards. Online teaching and learning require good socio-economic status, reliable network coverage and connectivity, good infrastructure, computer literacy, technological resources, reading and writing literacy and competent language abilities. However, the study exposed that the challenges, such as poverty and inequality, among other challenges discussed in this paper, pose a major barrier to rural learners and students to transition to face-the-screen methods of teaching and learning. Due to these challenges, the country cannot overcome the digital divide. Education inequalities in rural South Africa have been further exacerbated by these challenges. \The South African government, particularly DBE and DHET should ensure that they address the problem encountered by rural learning institutions in the provision of resources and infrastructure.

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