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

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Abstract: Covid-19 has altered the way countries operate in unprecedented ways. In Africa, South Africa is leading in terms of the number of infected cases. The lockdown that was introduced in March 2020 meant that all sectors except the essential services grounded to a halt as a containment measure. The education sector at both the basic and tertiary levels was also affected. Even though higher education in South Africa continues to be among the best in Africa and beyond, students enrolled in higher education come from diverse backgrounds. Students represent different classes, cultural diversity, and varying levels of computer literacy. The call to exclusively migrate learning to digital platforms remains a practical solution to salvage a difficult situation in many ways. However, not all students have the capacity to actively participate in digital learning for varying reasons. This paper focuses on rural-based UKZN first-year students. It draws from data collected through telephonic interviews. The contribution of the paper is two-fold. Firstly, it addresses the rural-based students’ experiences with the exclusivity of electronic-based platforms adopted for teaching and learning at UKZN. Secondly,
it contends that the acclaimed ‘one size fits all’ remote teaching and learning appears to be ‘phony’ and ‘counterproductive’ because it failed to address the pertinent needs of rural-based UKZN first-year students. The major question raised thus is whether online teaching is meant to reinforce the already existing geo-spatial inequalities in the education system of South Africa or is genuinely meant to salvage an already dire situation.

**Subjects:** Education - Social Sciences; Sociology & Social Policy; Educational Research; Higher Education

**Keywords:** cultural capital; Covid-19; e-learning; rural-based students

1. Introduction and background
In response to Covid-19 lockdown restrictions, social and physical distancing imposed by the national government, South African Universities have moved to e-learning. This transition is not well received by all students especially those from low-income families. Most of these students face a considerable number of challenges that are a barrier to effective learning. Ghirardini (2011) conceptualises e-learning as a learning system obtained using internet technologies to deliver through the internet and electronic devices. It is also called online education, remote teaching, and learning. The main aim of e-learning is to enable teaching, learning and improve performance even in the absence of face-to-face physical interaction. It shares learning material in all kinds of formats such as PDFs, slideshows, email, word documents, and *inter alia*. Also, e-learning can conduct real-time online classes with teachers and students interacting synchronously. Also, students submit assignments and receive feedback online. However, e-learning comes with a lot of data requirements for parties involved to access the platforms.

On the 1st of June 2020, the University of KwaZulu-Natal (UKZN) introduced remote teaching and learning (e-learning) in response to the Covid-19 pandemic. Before the implementation of e-learning, the teaching and learning trial which became known as the dry-run was conducted from 18–22 May 2020. The main aim was to test the online system, academic readiness, functionality, and types of devices used by students as well as access to teaching material. Also, a survey was undertaken to investigate the training needs of teaching staff concerned with e-learning. This was done to ensure that all students had access to online teaching and learning resources, UKZN reached an agreement with network operators for zero-rating of important websites within the university’s network and other online resources. This implied that students accessed certain key websites without financial costs. The key objective for reaching this agreement was to increase access to online resources for both students and staff who could not afford data costs. Also, the UKZN rolled out free data to all teaching staff and students as well as delivering free laptops to the first years National Student Financial Aid Scheme (NSFAS) students.

Irrespective of all these efforts, the majority of UKZN students based in the rural KwaZulu-Natal province still encountered a plethora of challenges in participating in digital learning. The “one size fits all” remote teaching and learning had some limitations as it failed to adequately cater to the pertinent needs of all rural-based UKZN students. Rural-based students require unlimited access to online information which most do not have. Against this backdrop, the ongoing study draws on the narratives of the University of KwaZulu Natal BSc Sociology students from the rural KZN province in South Africa. This study is therefore vital in orienting and unpacking the educational crisis of rural-based students as a result of the Covid-19 lockdown. To highlight the exclusionary character of e-learning, the ongoing study drew narratives from BSc Sociology first-year students who are based in the rural KwaZulu-Natal province. The study is anchored on Pierre Bourdieu’s theoretical acumen on cultural capital to understand ways of exclusion that are coming into existence during the Covid-19 crisis in South Africa.
2. Literature review

The potential impacts of online teaching and learning have been explored in education research. This paradigm shift from traditional pedagogical routine to online-based teaching and learning has not been well received by university students primarily those from rural communities. Taking a cue from Wikramanayake (2014), this transition shows how classrooms are not only established as “brick-and-mortar” but reasonably integrated with virtual platforms. Escher et al. (2014, p. 207) opine that in Africa and other emerging economies, remote teaching and learning of higher education are weakened by the “massification” of education and chronic underfunding. This creates severe capacity problems for online teaching and learning. The authors further highlight that several African countries encounter challenges of internet connectivity and reliable wireless devices (3 G and 4 G). This is even worse in rural African communities in which people walk long distances to get access to the internet (USAf, 2020). In South Africa, Covid-19 has affected more than 1.1 million students enrolled in tertiary institutions (United Nations Education Scientific and Cultural Organization, 2020). Jappie (2020) and USAf (2020) predict that the implementation of online teaching and learning by South African universities will result in an academic disaster because both staff and students are not prepared for this transition. Jansen (2020) concurs and explains that the 2020 academic year in South Africa is now lost due to the extension of the lockdown.

The unexpected outbreak of Covid-19 forced many universities over the world to launch online teaching to ensure that teaching and learning activities continue (United Nations Education Scientific and Cultural Organization, 2020). Millions of students across the world are forced to stay out of universities as lockdown restrictions, social distancing, and physical distancing are being enforced by national governments to contain the spread of Covid-19 disease. According to United Nations Education Scientific and Cultural Organization (2020), the lockdown of universities is more prominent in Africa, South America, and some parts of Europe. The closure of universities in North America, Australia, and Northern Europe is lower than in other parts of the world (United Nations Education Scientific and Cultural Organization, 2020). Although it is a massive disruption shift (Lei, 2020), the advent of remote teaching and learning has been considered a gateway to broader curriculum coverage (Dziuban et al., 2018).

Remote teaching and learning as it has been used by other institutions before the outbreak of Covid-19 have played a vital role in tertiary education (Hrastinski, 2019). Literature provided by Mirriah et al. (2015) concurs that it creates an enabling and productive platform where students can access vast teaching materials regardless of distance. However, in a university like KwaZulu Natal, the majority of students are either located in rural areas or are less privileged in terms of access to quality education (Du Plessis, 2014). The socio-economic condition of these rural and underprivileged students shows that they face more challenges because of using e-learning successfully than those from urban areas in terms of their background and quality matriculation education (Du Plessis & Mistry, 2019). This argument finds complementarity in USAf (2020) who are of the view that some South African students live in circumstances that create conditions difficult to and smooth learning. The unconducive circumstances include overcrowded homes with insufficient or improper amenities (USAf, 2020).

3. Theoretical framework

This paper deploys Pierre Bourdieu’s work on cultural capital to understand ways of exclusion that are coming into existence during the Covid-19 crisis in South Africa. Cultural capital can be differentiated into generalised and particularised categories. Generalised cultural capital consists of membership symbols widely charged with shared significance for large groups or social categories, including social manners, topics of conversation, styles, and tastes. Generalised cultural capital is equivalent to what Bourdieu (1984) calls “habitus.” Particularised cultural capital refers to specific persons and situations. It consists of memories of names, personal habits, and social positions of specific other persons. Whereas generalised cultural capital is primarily transmitted through long-distance media and formal organisations, particularised cultural capital is specific to
local networks of personal contact. Whereas generalised cultural capital can be universally utilised, cultural capital can be employed only in the presence of, or about specific persons. This capital is an asset that individuals, consciously or not, deploy in life. It determines social outcomes and levels of success, in other words, one’s position in a highly unequal society. In a university, cultural capital plays a big role in separating students between those who feel they belong, and those who struggle to fit in and adapt to the standards imposed by the institution between those who have the skills and the material opportunities to use online digital platforms, and those who do not.

The major question raised in this article is whether online teaching is meant to reinforce the already existing geo-spatial inequalities in the education system of South Africa or is genuinely meant to salvage an already dire situation. The article also posits that the bulk of students at UKZN come from rural areas since the university is in a predominantly rural province. Their networks and relations are limited when it comes to forging relations with individuals who may help, and the facilities required for online learning. Their cultural capital is also constrained by economic factors. Most rural students do not have a laptop or a personal computer and cannot afford to buy one. The spatial arrangements in their homes often do not allow for a conducive workspace. The disruptions brought by the necessary Covid-19 containment measures have exposed the unequal structures of university education in South Africa, and reinforced, rather than transformed, the elite assumptions that guide higher education teaching and learning.

As noted by David Mills in his recent blog on education in the context of Covid-19, there are some of the empowering opportunities that digitalisation offers in his example, the opportunity to equalise the unequal structures of traditional academic conferences through more open and inclusive digital conferences. However, the situation in South Africa resonates with many other African contexts and shows that existing structural inequalities in access to digital tools and to the skills required to use them effectively, need to be addressed if we want to make sure that the ongoing transition to digital learning does not end up disenfranchising a large section of the student population. The main argument in this article is that recent debates on the need to decolonise institutions of higher education in South Africa must be revisited and expanded to include the harsh digital divide that a potential long-term move to online learning might create, excluding already excluded students even further.

4. Objectives
(a) To explore the background circumstances of students vis-à-vis the capacity to participate in e-learning.

(b) To examine the suitability of e-learning for students at the University of KwaZulu-Natal
(c) To assess the challenges and coping mechanisms that rural students are facing when engaging in e-learning.
(d) To analyse the exclusionary nature of e-learning on rural-based University of KwaZulu-Natal students
(e) To evaluate the nexus between geo-spatial inequalities in South Africa and the introduction of e-learning in universities.

5. Methodology
This study used remote-based ethnographic fieldwork where the researchers collected in-depth data using digital platforms. Any contact interaction with the participants was not possible due to the lockdown restrictions that existed in the country. This then meant that the researchers opted for communication channels that included telephone voice conversations, email interactions, and social media engagements that included the WhatsApp platform. The participants were largely drawn from the rural KZN province in South Africa. In terms of the inclusion criteria for the study, participants needed to be active first year students at the University of KwaZulu Natal enrolled for any undergraduate programme. The participants also had to be staying in a rural area for them to
fit into the study. The researchers therefore only recruited those students who after the close of a semester would go back to their rural home in KZN. The fieldwork was done for five weeks in rural KZN where the study sought to explore the complex dynamics and impacts of e-learning on rural-based students.

In selecting participants, the study largely relied on purposive and snowball sampling techniques. In terms of the sample size, the study targeted 25 rural-based students and three UKZN staffers responsible for e-learning. The latter was used to understand the University policies on those students who are based in areas where it is difficult to access e-learning materials. This study was cleared by the UKZN ethics board since all research that involves the University students and their staff should be cleared. However, it should be noted that this study was done at the height of the Covid-19 lockdown in South Africa hence all the submissions were made electronically, and correspondence was through emails. At the beginning of the fieldwork, the study relied on initial contacts of already known students who came from rural KZN. These initial contacts introduced researchers to several other potential participants who fit the inclusion criteria of the study. Purposive sampling was then used to select information rich cases from the large pool of people that were introduced by initial interlocutors. The study also identified unique life accounts from preliminary engagements with respondents for a life history assessment in the context of the research. It targeted to select four unique cases among the rural-based University students for further engagement. Participants were recruited on a willing basis as the researchers observed ethical principles that include informed consent. All participants were given an informed consent form to read and decide on whether they were interested to continue with the study or not. Only those students who agreed to proceed with the study proceeded with the study. The researchers also made it clear that participants could withdraw from the study at any stage without any prejudice. The researchers also safeguarded the confidentiality of the participants by not divulging their identities in the study. The study also triangulated primary data with secondary data harvested from newspaper articles, as well as several other publications on e-learning in South Africa among other sources. Triangulation of data sources and methods enhanced the validity and reliability of the information collected. This study used pseudonyms in place of the real identities of the study respondents to protect their anonymity. As such, all the names used throughout this article are pseudonyms. Qualitative data collected was analysed using thematic analysis.

6. Findings

6.1. UKZN’s policy on online learning

As outline above, the study interviewed 3 staff members to understand the university’s online learning policy. The 3 staff members concurred that UKZN has a sufficient supporting online structure. The following are extracts from staff members commenting on the UKZN’s online learning policy.

As an alternative to our normal classroom teaching and learning, the university policy requires all students to use MOODLE Learning management system (LMS). This is an online platform developed by UKZN to allow all classroom activities to be conducted online. Students log in using their LAN username and password to get access to MOODLE. All course material, including PowerPoints, recorded lectures, readings, discussion forums, assignments, and announcements are available on MOODLE. Students are expected to familiarise themselves with the MOODLE. If they face any challenges, they consult Information and Communication Services (ICS) (Participant R, personal communication, June 2020).

Covid-19 has made us realise the importance of our online tools. The university policy requires every staff to engage with students using an online platform. We currently use MOODLE. And that is where you find all the teaching material. As a way of supporting students, the university ensured that all students get data, and all lecturers were given WIFI routers. The university covers all these expenses. In response to the challenges faced by
students, the university has developed an online repository of resources to support students (Participant S, personal communication, June 2020).

In response to the challenges posed by Covid-19, the above extract shows how the university’s policy provides MOODLE as an alternative to traditional classroom teaching and learning. Considering the lockdown restrictions, social and physical distancing, the university compelled everyone to move to online teaching and learning. To support the online strategy, students were given data to accommodate the disadvantaged. Also, the ICS supporting staff are available to assist students facing technological challenges.

6.2. Background circumstances of students
The key to understanding the capabilities of various students to participate in online learning lies in the conditions existing in the household of the participant. The study understood that a learning environment has some basic preconditions which include the physical space where learning is taking place, the enablers in terms of the technology used, as well as the environment in its totality. The study, therefore, sought to understand the various household backgrounds of the students who participated in the study as researchers investigated their suitability to enable effective learning through online platforms. In conceptualising the background circumstances of respondents, the focus was put on the number of people (both adults and children) sharing the same household as this had implications on the level of distractions as well as potential people who could assist the student. The researchers were interested in establishing the source of income for the household as this had direct implications on the capabilities of the household in terms of providing for the requirements to do online learning. On the same point, the study established the extent to which each participant was involved in the sustenance of the household at home and the University. Since the participants were drawn from rural areas, it must be noted that all of them were staying in their rural homes at the time of collecting data and shared their present circumstances in real-time. It was gathered that there were some common structures of the physical houses as was indicated by the students interviewed. Of significance was the fact that living space in almost all the households was shared by household members. This meant that all the students who were interviewed indicated that they shared a room with at least one more family member. The following were some of the extracts from the respondents:

We are 8 people in our home (myself, my mother, 3 siblings, my aunties, and my uncle. We all rely on my mom for survival. My mother does vending and that is our only source of income. We all work towards enabling her to do the selling, but she is in charge of the money for all of us’ (Participant E, telephone interview, June 2020).

There are 11 people at home, and we have a four-roomed house. Every room in the house we must create space so that we have somewhere to sleep, but sometimes when it gets tough, I visit my grandmother in Nquthu. So, the living arrangements are affecting me as I cannot find space to study as it is always noisy. There was a Zoom class that was conducted last week that I attended but I had to leave the house and sit somewhere quiet. The truth is that the living arrangements are not conducive for learning, and I am not coping (Participant D, telephone interview, June 2020).

The sustenance of each household should be understood in terms of the diversity and sustainability of livelihoods. This is a question that was asked to all the respondents. The study sought to establish the stability of households and their ability to create a conducive environment for learning using online platforms. Findings also established that households had varied forms of livelihoods, but they generally could be characterised as subsistence in nature. The following are some of the cases established:

I come from a female-headed household in which my mother works as a till packer. She does not make enough money, but we are surviving. With the money I get from NSFAS, I sometimes give my mother the little I can spare to help at home. Besides the income that my mother and I bring, we do not have any other source of income. Even though we are
managing to cover some key basics, we also have some moments where we struggle just like any other people in our village (Participant B, telephone interview, June 2020).

My parents are retirees, and the source of income is their pension pay-outs. These are not enough to cover the basics of our household. Even though I am on the NSFAS scheme, I still find it difficult to cope with school requirements. As a girl, there are other additional requirements that I need for personal upkeep and my parents do not afford to give me these. The only advantage I have is that I have elder brothers who assist me with some supplementary money to be able to sustain myself at school and at home Participant E, telephone interview, June 2020).

My uncle works as a taxi driver and my mother is not formally working but she sometimes sells fruits and veggies at the market. My uncle is the only person who has a reliable income at home that I can say is used to sustain the household. When I am away from home, I do braid sometimes so when I am at college residence, I can manage to get around 300-400 Rands a week and this is money I use to buy my food and other personal upkeep requirements. I am not on the NSFAS scheme hence I have to work hard for my upkeep when I am at the University (Participant G, telephone interview, June 2020).

I stay with my grandmother and my parents passed away, so we rely on Gogo’s SASSA grant. Apart from that, we do not have any other source of income. When I am at the university, I am funded by NSFAS and I thank God for that at least Gogo does not have to worry about sending me money. However, I would not consider myself as someone who is getting all the basics I require. The lockdown situation has created a unique challenge where I have to do schoolwork at home (Participant F, telephone interview, June 2020).

The above extracts show that a cross-section of students interviewed came from vulnerable households that struggled to meet the basic requirements for survival. Their sentiments also represented wider views that were established through interviews that livelihoods of rural households are largely subsistence and they struggled to shoulder any other additional spending especially that related to enablers of electronic learning.

One key enabler was the requisite gadgets such as a laptop and smartphones. These are central to successful participation in electronic learning. It was established that students who were on NSFAS had some laptops that they received for electronic learning. However, those who were not on the scheme expressed challenges with enabling gadgets. The following are some of the extracts on the point:

In terms of electronic gadgets, I do have a laptop that was given from NSFAS, it was delivered last week so now I can be able to work. Before it came I was using my smartphone it was difficult because it does not have space (Participant A, telephone interview, June 2020).

We do have a library around our area it’s only that now it has been closed due to Covid 19. In terms of accessibility, it is very much accessible but I need at least 20 rands for transport to get to the library and back. Now that I have the laptop that I received from NSFAS, I do not need to use it even if it opens (Participant D, telephone interview, June 2020).

The laptop that I am using is a borrowed one. We do not own any laptops in our household. A friend from church is the one who lent me his laptop for use only during the period when I am doing online learning (Participant E, personal communication, June 2020).

I have a laptop which I was given by my uncle to use while I am at home. It’s not the fastest at all but it helps me to do my school work. So, at the moment I cannot say I have a reliable device because what if he wants it back (Participant L, telephone interview, June 2020).
The study also sought to understand the sources of energy in the households of the students interviewed. Online learning does not only require the requisite gadgets for it to be successful. However, energy sources, reliability, and sustainability become central prerequisites in the e-learning matrix. Without the power to charge the gadgets, it becomes difficult to use the gadgets. Without also proper lighting in the home, it becomes a challenge for the student to study especially at night when there is relatively less noise. The study, therefore, established that households used a mix of energy sources to balance up the cost and accessibility. Grid provided electricity, firewood, solar energy was singled out as the main sources for household energy. The unreliability of grid electricity in rural households was raised as a recurring challenge across the respondents. It was felt that since most of the power is regarded as domestic usage, the power utility did not give the same urgency it would give similar issues should they occur in an urban setting. The following were some of the extracts collected from respondents:

The main source of energy especially for powering electronic gadgets and lighting is grid electricity. Of course, we have challenges of load shedding but of late it hasn’t been bad. It was only last week where we had an electric fault and we didn’t have electricity for 4 days but it is fixed now. I know load shedding is the key challenge but I just have to hope and pray that it does not happen when I need to submit my work (Participant N, telephone interview, June 2020).

For cooking, we mainly use firewood because it is cheaper for the household as we are many of us who live here. We also have a solar system that we use to power some electric gadgets and lighting as well. However, the main challenge is that when there is no sufficient sunlight, then the power of the batteries is also compromised (Participant O, telephone interview, June 2020).

One key feature that was established when profiling respondents is that all of them had done their matric in rural areas. This had some implications on their computer literacy according to the findings. To this effect, the study noted that their exposure to the University environment was benefiting them significantly as they were improving their computer literacy through interaction with others. Now that they were based in the rural areas again due to the lockdown, this meant that their exposure was brought back to their default settings with limited exposure. The following were some of the extracts on this point:

To be honest with you, I did my matric here and I am not very good with using the laptop. I wish I could get someone to teach me just the basics of using this laptop. I don’t even know what to do now. It would be better if there is someone who can assist me with the basics for me to be able to navigate the tasks alone. That would be better because I am stressed. When I was at campus one of my friends had said he was going to teach me now I am stranded here (Participant B, telephone interview, June 2020).

It is difficult to get many people who are exposed to computers in rural areas. There is a friend of mine who is also studying at UKZN and we come from the same village. But the truth is we are in the same situation such that we cannot teach each other. We both need guidance when it comes to the usage of computers/laptops (Participant D, telephone interview, June 2020).

6.3. The challenges faced by rural based students when engaging in e-learning
This study unpacked a plethora of challenges faced by rural-based University of KwaZulu-Natal (UKZN) students. Most rural-based university students who participated in this study reiterated that they came from under-resourced schools that had little or no exposure to Information and Communications Technology (ICT) in teaching and learning. They had little or no access to computers before their tertiary education at UKZN. Upon settling at the university, they did not get proper orientation on the use of computers. This created challenges to a smooth transition to e-learning. Commenting on the challenges faced by rural-based UKZN students when engaging with e-learning, the following students had this to say:

Although we have been using other technologies such as cell phones, the biggest challenge that I have is on how to use the laptop. I have a laptop that I got from NSFAS but I am still
facing challenges in accessing online material. Of course, our lecture gave us material to use but we were hoping to get more orientation especially on how to access the Moodle and UKZN drive from home. Also, we always hear about the global protector which can make us have access to zero-rated websites but no one has clearly explained to us how it works. So, this online teaching is benefiting the privileged and those previously exposed to ICT (Participant C, telephone interview, June 2020).

The lockdown came at a time when we were still trying to grasp with moodle and other online facilities. Right now, I do not know how to borrow a book online from the library yet our lecturers expect us to submit a good assignment that is well referenced. This transition to online teaching and learning is very difficult for some of us who have never get exposed to this kind of teaching. I think the university should consider that there are some students from rural schools and underprivileged families require more orientation to online learning (Participant F, telephone interview, June 2020).

The above narratives show how technology hindered their successful transition to e-learning systems as well as other online technologies introduced by the UKZN in response to Covid-19 regulations, social and physical distancing. Although the participants concurred that they were digital natives who are conversant with technology such as mobile phones, a closer introspection into the narratives provided by participant C and participant F indicated that they found it difficult to transform such experience into e-learning. From the above sentiments, this article reflects on the cultural and environmental principles underpinning the construct of digital natives. The reality is that the majority of rural-based first-year students are digital strangers in so far as e-learning is understood. They face serious challenges in transiting to computer-based technologies and any type of online-based technology for teaching and learning although they were given laptops and data. They did not get a proper orientation to e-learning. From the foregoing, this article submits that being a rural-based student in this transition to e-learning has resulted in a strong students' feeling of disconnectedness from the institution.

The learning environments at home appear to be a challenge for the majority of rural-based UKZN students. Most participants highlighted that the environment at home was not conducive for working. One student narrates that:

My learning environment at home is not conducive at all. I am just trying to be positive that this pandemic comes to pass then we can go back to university. I cannot manage to do my studies at home. I do not have space to do my studies as you can hear the noise of children screaming. I always get distracted whenever I try to study. It’s either I am sent to do domestic work since I am the only girl here at home or I am tired. It is very difficult to work when you are tired especially. At least if we go back to campus I know we will have enough time to study because the environment at school is more conducive (Participant B, telephone interview, June 2020).

Adverse learning environments outlined by participant B were further enlightened by other participants who reiterated that they had difficulties with network coverage and irregular electricity supply. Difficulties with network coverage and ICT access among rural-based UKZN students may translate to educational disadvantages for this social class. It affected their confidence in performing e-learning tasks and participation in Zoom classes, Moodle chatting, and other online platforms.

The biggest challenge I am facing is the network connection and electricity. Sometimes I can go for days without electricity and not having access to the internet. There is nothing I can do I will just have to wait on the day that I can get access. In some instances, I have to walk up to the mountain where there is normally better network signal but is not safe to go alone as a woman (Participant A, telephone interview, June 2020).

Participant G share the concurs and adds that;
I leave in a mountainous village where network coverage is the biggest challenge. It is so hectic sometimes even making a phone call is hard let alone trying to get an internet connection for zoom classes. Internet connection is an ongoing problem that we have had for years. We appreciate the provision of data and laptops but now they mean nothing because we cannot have internet access (Participant G, telephone interview, June 2020).

The narratives of Participant A and Participant G demonstrated network and electricity challenges faced by rural-based UKZN students which, as the study argues, have far-reaching effects on their academic performance. These challenges may hamper rural-based students’ ability to fully participate and engage in school e-learning. Network and electricity challenges in rural areas are not new findings. The two confirm a quantitative study conducted by Seretse et al. (2018). The authors found that most South African rural communities have severe internet problems. Also, Falola and Salm (2004) opines that building telecommunications ICT infrastructure and its maintenance in rural areas impose high costs with fewer returns because of small population sizes and service providers are more reluctant to invest in these communities.

What this article retains from Participant A and Participant G is that not only are there discrepancies in technology access and electricity problem among rural-based UKZN students, but that these disparities and inequalities can function as cultural capital in university access. The position taken by this study is that of technology, internet access, and electricity being variables in cultural capital. Building on the above anecdotal evidence, the study argues that positive dispositions towards the use of technology coupled with reliable electricity are supplementary forms of cultural capital imparting advantages on other students that possess them. Thus, the lack of reliable electricity and internet connectivity affects the success and academic achievement of rural-based UKZN students. This idea advanced in this article verifies the significance of cultural capital propounded by Bourdieu (1973), in obtaining academic achievement. The main argument herein is that the lack of possession of cultural capital might affect the performance of rural-based university students. Access to the internet and electricity are essential to academic inclusion. Their absence typifies the exclusionary character of e-learning especially for rural-based university students facing these challenges. Lack of legitimate cultural forms, coupled with difficulties in network coverage constituted major causes of hindrance and alienation for rural-based university students.

Students’ learning attitudes, academic achievement, and academic objectives are all influenced by their family backgrounds, (Checchi, 2006). Students from better familial origins, according to Bourdieu and Passeron (1977) cultural reproduction theory, inherit the majority of their socially important cultural patterns from their parents. They can improve their academic performance owing to their cultural capital. The size, structure, and environment of a family, among other things, have an impact on academic achievement (Onatsu-Arvilommi & Nurmi, 1997). Looking at the findings presented herein, this confirms what a lot of students shared as they explained how their economic deprivation created difficult environments that compromised their learning. Furthermore, the education of parents has an intergenerational inheritance effect, (Fang & Feng, 2008). Their educational status has a substantial impact on their children’s access to educational resources, as evidenced by their cultural reproduction capacities (Currie & Moretti, 2003; Krishnan, 2009). University students’ mental health has also been proven to be influenced by their family’s history, income, and local location. The article therefore argue that every step of a child’s education reveals the impact of familial background on access to educational resources. The advent of online learning due to Covid lockdowns has then further highlighted these disparities.

6.4. Coping mechanisms employed by rural-based students when engaging in e-learning
As outlined above, the introduction of e-learning has created adverse challenges for rural-based students at the UKZN. These students employed different strategies to cope with the challenges posed by the transition to e-learning. This study established different coping mechanisms employed by these students to navigate challenges caused by remote teaching and learning.
The findings established that most students facing internet connectivity and electricity challenges utilised other platforms such as WhatsApp. Some mentioned that they prefer working at night to avoid disturbances and to utilise night data. The following are extracts that demonstrated key coping strategies:

I have never attended any zoom classes. I tried one day and I could not connect but this does not mean that I don’t have to work. I normally prefer working at night to catch up with what other people have covered in class. The reason why I work at night is to use night data that we were given by the university and also it will be very quiet and there is no one to disturb. This has worked for me although sometimes understanding of the material is a challenge (Participant A, telephone interview, June 2020)

The other day I had to walk a distance from home so that I can have quiet time to study, and it is too risky because of the crime I cannot walk around carrying a laptop. I normally walk away from people for 2 reasons. First, to find better network connectivity, and second to find a quiet place where there are no disturbances. This strategy has worked for me because I can catch up with my classmates. However, sometimes strategies will not work because I find some of the readings difficult to understand and we need tutors or lecturers to assist (Participant C, telephone interview, June 2020)

I have never attended any zoom class ever since the lockdown started. To catch up, I have tried to wake up at night to see if I can succeed in getting internet but this did not work for me. I am lucky to have a very close friend who downloads notes and sends them to me via WhatsApp so it is much better, but I feels lost and left out. My wish is to go back to campus because this is going to affect my studies a lot (Participant D, personal communication, June 2020).

The above narratives show that rural-based UKZN students employ different coping strategies to keep themselves connected to remote teaching and learning. Although the students who participated in this study utilised different coping strategies, central to their extracts is the failure to understand some of the reading materials. They require the assistance of tutors and lecturers to strengthen their subject comprehension and build learning skills. These coping strategies alone are inadequate to build their academic confidence, improve aptitude and knowledge base.

Central to coping strategies employed by rural-based UKZN students in the wake of a transition to e-learning is the recognition of their agency like that of Bourdieu (1973). This study view coping strategies employed by rural-based UKZN students as interlinked with their everyday life, individual identity, and social fields. This implies that their meanings of coping strategies are attached to the practices of everyday life. Applying Bourdieu’s (1973) theoretical gist into the context of this study implies that rural-based UKZN students are active and holistic beings whose social ties and coping strategies are grounded in an interconnected world. Against this backdrop, the sentiments of the above participants reflected how social capital attunes them to e-learning and to have some sense of belonging to the university space. In doing so, they are to some extent able to navigate the exclusionary character of e-learning. As an illustration, materials that Participant D can get via the WhatsApp platform are inherent in social relationships used by rural-based students to gain access to the University environment even though they are in remote areas. The choice of using the WhatsApp platform works perfectly given the context of internet connectivity and electricity challenges explained above.

6.5. Geo-spatial inequalities in South Africa and the introduction of e-learning in universities
Higher education in South Africa has continued to occupy the pinnacle position in Africa and registering some ground-breaking research in the global area. It is important to acknowledge that these achievements however need to be understood in the context of South African segregation history. This is even though racial segregation ended more than a decade ago yet some of the systems that exclusively served the minority whites under apartheid remain functional, while
those which served Black students remain dysfunctional. While there have been significant transformations in South Africa’s higher education system since apartheid, issues affecting higher education today remain alive and persistent. Some of these issues are more pronounced among students coming from vulnerable households predominantly from rural areas and other less privileged areas. The much-needed transformation has not managed to address some structurally embedded inequalities in wealth distribution such that university access has changed from being dictated by race to being dictated by economic wealth hence making poor families going to poorly resourced schools. Focusing on higher education, the many problems that manifest at the university level are bred and incubated by a poor background and lack of exposure. This was evident in the findings of the study where it was gathered that rural students tend to struggle with the enablers of technology in both access and usability. Juxtaposing this with the adoption of online learning, the paper argues that such a move can only lead to the further marginalisation of the poor students as they are expected to learn using a platform that they are not properly equipped to use. Yet their counterparts have an edge over them. The paper, therefore, argues that this has a net effect of further perpetuating the marginalisation of poor students while at the same time compromising the quality of the graduates.

Studies have shown that higher education in South Africa is still racial and class-based. Class structure in South Africa has had great significance in post-apartheid higher education. In this paper, we use class to refer to the norms and experiences that come from living within a particular economic and financial resource base. Closely related to the core of the paper, we single the rural and urban divide that characterises University education. This is the reality with the UKZN that caters to a more rural target population. There is an acknowledgment that education is unequal at all levels in South Africa. Saddled with deepening racial segregation at schools and universities, higher education is racially, and class stratified. This becomes particularly apparent in the different coloured students from rural areas at historically disadvantaged universities. There is no doubt that the privileged minority who include whites attend the previously advantaged universities. Such an analysis was already bad without the complications of Covid 19. Now that there is a push for online learning, we argue that this will be a double-edged sword for the rural and poor students. A reference point is the 2015 countrywide protests that engulfed South African universities. It must be acknowledged that students protested institutions’ language policies, high fees, structural inequalities, and colonial symbols. At the core of the protests were Black disadvantaged students confirming the centrality of class and race struggles in the South African exclusive university system.

The latest episode of the adoption of online learning in South Africa to deal with the effects of Covid 19 will undoubtedly deal a heavy blow on the already struggling poor rural students. The paper argues if the disadvantaged students were dropping out of university during the pre-Covid 19 era due to a myriad of challenges, the situation can only get worse. In the final analysis on the suitability of online learning, the response as gathered from the respondents and available literature showed that this is not sustainable. It is two pronged, there seems not to be an alternative while the solution seems to exacerbate the already precarious situation in the country.

6.6. Summary table of key themes

7. Conclusion
COVID-19 has changed the way universities operate. The University of KwaZulu-Natal (UKZN) is among the universities that have moved to e-learning in response to the pandemic, social and physical distancing as well as lockdown regulations imposed by the national government. There have been mixed feelings towards this transition. While others see this as the panacea to challenges caused by the pandemic, others view it as excluding the already disadvantaged students. This study has successfully unpacked the exclusionary character of e-learning during the COVID-19 pandemic. The initial part of the results has explored the various household
backgrounds of the rural-based students who participated in the study. Their background circumstances indicate that the environment at home is not conducive to learning. Also, these students face a considerable number of challenges such as internet connectivity, ICT access, electricity shortages, and inter alia. These challenges appear to be a barrier to rural-based students’ ability to fully participate and engage in e-learning. Thus, this paper argues that the “one size fits all” remote teaching and learning has failed to adequately cater to the pertinent needs of rural-based students hence it affects their sense of belonging to the UKZN academic space. Pierre Bourdieu’s theory of cultural capital has been used to explain this exclusionary character of e-learning. However, rural-based students are not tabula rasa. They are active beings with the ability to respond to the exclusionary nature in multifarious ways. To this effect, the study also established different coping mechanisms employed by rural-based students to navigate challenges caused by remote teaching and learning.

This article recommends that basic computer skills must be provided to first year students during the orientation process and/or as a prerequisite first year module. Given the importance of ICT and e-learning, higher education institutions must develop prerequisite strategies to assess first-year students and provide essential support in technology-related learning. The findings of this study are also important in creating greater accessibility and equitable learning spaces. This could be accomplished by negotiating and engaging more with students and understand their challenges.

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