A COMPARATIVE ANALYSIS OF THE IMPACT OF THE COVID-19 PANDEMIC ON RURAL UNIVERSITY STUDENTS IN SOUTH AFRICA AND UGANDA

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ABSTRACT

The outbreak of COVID-19 significantly caused shifts in higher education's environment and operational norms. This has propelled new educational strategies, models and frameworks. Globally, COVID-19 wreaked havoc on institutions of higher learning, such as universities. This was a qualitative comparative and phenomenological study aimed at exploring the impact and implications of COVID-19 on rural university students in South Africa and Uganda. The services offered to rural communities have a bearing on educational institutions in those environments. The study further suggested possible contingency plans to counter the negative impacts caused by such pandemics on rural students in universities. The findings, through a thematic analysis, revealed that rural university students in the two countries were affected by COVID-19 instructional, psychological and social ways. In conclusion, rural university students have peculiar challenges due to their unique but disadvantaged settings. The study recommends that online teaching and learning be prioritized to benefit rural students, preceded by adequate training in Ed Tech skills for both lecturers and students. There is need for guidance and counselling psycho-social interventions for rural university students to address the related challenges.

Keywords: COVID-19, Rural, University, Students

INTRODUCTION

Globally, COVID-19 has wreaked havoc on universities and similar isntitutions and other organisations (Mukute, Francis, Burt and de Souza, 2020; Hedding, Greve, Breetzke, Nel and Jansen van Vuuren, 2020). The COVID-19 crisis impacted negatively on higher education and disrupted the norms that forced these institutions to come up with strategies to counter the its effects on education. Globally, universities have been known for teaching and learning, research, and community engagement among its core priorities. However, one of the major effects of the COVID-19 pandemic was the closure of universities and schools in South Africa and Uganda from March 2020 to gradual and partial re-opening (Chisango and Marongwe, 2021; Kyamazima, 2020, Mazarura, 2021). It exposed the reality of inequalities among the established and historically disadvantaged universities in Africa (Fataar, 2020) hence portraying rural students as a vulnerable group due to differences in how they have been educationally affected compared to their urban counterparts. In support of Fataar, Sahlberg (2020) echoes that the pandemic exposed and amplified the existing inequalities in education system across the world. The rural and urban poor communities are characterised by poverty, congested accommodation, high child numbers and low standards of living, and all these have a bearing on universities that are in such environments (Mazarura, 2021).

This was a global education disaster characterized by students' confinement to homes, some without access to basic amenities (Kyamazima, 2020). Also, Ogunleye, Basu, Mueller, Sneddon, Seaton, Yinka-Ogunleye, Wambga, Miljkovi, Mwita, Rwegerera and Massele (2020)

indicate that COVID led to an automatic lockdown that forced the university students to be home-bound in South Africa and Uganda that brought an abrupt shift from traditional to remote learning methods (Dube, 2020). Spaoul (2020) states that COVID-19 exposed limitations in educational institutions' systems and the non-conducive conditions students endure, marked with extreme poverty, malnutrition, child labor and lack of basic public resources. (Spaoul, 2020; Fataar, 2020).

COVID-19 has unearthed questions pertaining to Higher Education in Africa. The researchers of this study sought answers to the following questions: Are the students in rural South African and Ugandan universities encountering the same challenges? How are the challenges impacting on students' education in rural universities of South Africa and Uganda? How prepared are the universities to combat similar pandemics in the future? The education sector is a key contributor to the economic development of countries and pushes individuals to participate in mainstream economic activities. With the outbreak of COVID-19, governments across the globe were forced to impose lockdown restrictions to curb the spread of the virus. This largely impacted on the education sector at multiple levels. Literature attests that the lockdown restrictions did not impact on the education sector uniformly but rather, it was dependent upon the locality (Fanelli, Cajuste, Cetta & Emmanuel, 2020). Countries, regions, urban or rural, were not hit the same way but in different degrees and hence the impact was in varying degrees. UN (2020) reports that the impact of COVID-19 on the education sector would be felt more by low and average-income households and that the loss of instructional time due to lockdowns would hurt the poorest communities most (UNDP, 2014).

Many scholars agree that the resource inequalities between rural and urban areas were aggravated by the pandemic since rural communities are less likely to have access to the technology infrastructure needed to successfully implement online teaching and learning (Fanelli, Cajuste, Cetta and Emmanuel, 2020; Cristobal-Fransi, Montegut-Salla, Ferrer-Rosell, & Daries, 2020; Dube 2020; du Plessis and Mestry, 2019). A survey that was done in Uganda between 2017 and 2018 established that only about 8% of rural households had access to power and technologies compared to 71% in urban areas. Fanelli, Cajuste, Cetta and Emmanuel (2020) argue that electricity was key in the implementation of online teaching and learning. In the same vein, Chisango and Marongwe (2021) state that the digital divide was deepening in rural areas, hence impacting negatively on the economic and educational attainability. Pokhrel and Chhetri (2021) echo the same sentiments that many students from rural areas do not have access to smartphones or TV at home in addition to poor internet connectivity. Given that the pandemic acted as a wake-up call to adopt and embrace technology for teaching and learning, how then would students in rural areas manage given that the digital divide in rural settings is wide and making online learning difficult if not impossible at all? It should also be noted that the impact of the pandemic on rural university students has had non-educational implications in the two countries that might help to expose, based on the socio-economic differences, the differing experiences among these students. These perceived differences create a solid justification for the comparative analysis study on the impact of the COVID-19 pandemic on the rural university students in South Africa and Uganda.

Previous studies have focused more on the impact of COVID-19 on specific countries, some on lessons learnt and challenges encountered by students and lecturers. Very few studies if any have focused on comparing the impact faced by rural university students as a vulnerable population and more so, in South Africa and Uganda. This is the gap this study intended to bridge and add to the body of existing knowledge. South Africa and Uganda are both African countries though located in different regions, the former being a Southern African Development Community Country (SADC) while the latter is an East African country. So, there is bound to be

possible similarities and differences that can be drawn from how the COVID-19 crisis continues to impacting on the lives, both educational and non-educational, of the rural university students in these two countries. The study aimed at exploring the impact of COVID-19 on rural university students in South Africa and Uganda and suggesting possible contingency measures to counter the effects of such pandemics in the future for rural universities. The research questions were hence geared towards achieving the two objectives, that is, what has been the impact of COVID-19 on rural university students in South Africa and Uganda, and what contingency measures can counter the challenges associated with such pandemics in future for rural universities?

Rurality was key to this study. Many scholars have noted that COVID-19 has caused instability in higher learning institutions. These university closures intensified the possibility of widening inequalities between the haves and the have nots (Chisango & Marongwe, 2021) and the rural and the urban university students. Mncube, Mutongoza and Olawale (2021) state that COVID-19 continues to cause serious challenges to education globally with devastating effects. These effects have been troubling in developing and developed countries, rural education systems in developing countries have predominantly been most vulnerable to possible collapse Mncube et al., (2021). du Plessis and Mestry (2019) and Mncube, et al., (2021) argue that the unique context of rural universities makes it problematic and challenging to implement approaches like those executed in the developed world and more urban-based institutions.

Dube (2020), Doepke, et al., (2020) and Fataar (2020) argue that online education favours students from affluent areas more than those whose roots are low-income families especially from rural communities that are characterized by poor basic service delivery, low access to technological goods and services, power cuts or no power at all, poor sanitation, damaged or no roads and struggling to put food on the table (Ferri et al., 2020; Du Plessis, 2014; Dube, 2020). It is argued by Cristobal-Fransi, Montegut-Salla, Ferrer-Rosell, and Daries (2020) that in South Africa, rural areas typically lack the economic and social viability that is needed to sustain the improvement of technology and education. The same case is evident in Uganda where the rural settings are basically characterized by low socio-economic status, low standards of living and poor education facilities (Kyamazima, 2020). Scholars like Fataar (2020) have argued that online teaching and learning may not be a suitable pedagogical alternative for students studying in rural institutions of higher learning or living in rural areas. Such circumstances according to du Plessis and Mestry (2019) make it difficult for governments to provide and sustain quality educational services in rural areas, and subsequently leads to sub-standard quality of teaching and learning in the rural areas.

REVIEW OF LITERATURE

Most scholars concur that the COVID-19 pandemic has significantly transformed the landscape of higher education beyond national boundaries (Yuan, 2021). While looking at what the impact the pandemic has been, there is also need to assess how universities in Africa have responded to the lockdown (Gachago in Ligami, 2021), given the abrupt migration from the traditional chalk and board method to full online teaching and learning. The challenge faced by higher education and other sectors is that COVID-19 is still looming. The availability of and access to technology is a critical positive response to the effects of the pandemic on education. In South Africa with its inequalities (Fataar, 2020; Mazarura, 2021), an enabling infrastructure is needed to ensure that this shift will not intensify the already existing digital divides (Chisango and Marongwe, 2021). Ensuring student access to devices and data comes to the forefront as do questions around psychosocial, economic, and educational inequalities, as well as environments conducive to

learning do. UNDP (2020), UN (2020) and UNESCO IESALC (2020) report that the greatest impact COVID-19 in Africa on education is the upscaling of inequalities, marginalisation and low possibilities as far as acquisition of the much-needed knowledge and skills that are essential in preparing students for the real work/life world are concerned.

The Impact Of COVID-19 on University Learners

The pandemic has had a huge impact on higher education in South Africa especially for first year undergraduates who were still struggling to adjust to university life. Similarly, Kyamazima (2020) states that education in Uganda was grossly disrupted and was characterised by uncertainty and proposed that the education system should not leave any scholar behind. Echoing the same sentiment as expressed by Kyamazima (2020), the Deputy Minister of Higher Education in South Africa, Buti Manamela, observed that, "no student should be left behind and those who have no study gadgets or internet connectivity should not be treated as though they are the cause of Covid-19" (quoted in Njilo, 2020, para. 4). Manamela realised that the transition to online teaching and learning was going to deepen the divide and exclude students from socially and historically disadvantaged backgrounds, hence the need for investing in sustainable infrastructure, innovations in management and teaching practices. Hedding, Greve, Breetzke, Nel and Jansen van Vuuren (2020) posit that some universities struggled to kick start online lessons since some students argued that they could not have online lectures due to unavailability of tools such as laptops, computers and data, items that were viewed as luxury by students from poor socio-economic backgrounds. So, students argued that universities should provide them with the gadgets and other necessary resources (Molosankwe, 2020).

Mazarura (2021) argues that COVID-19 had a huge impact on rural university students who had limited access to the internet. The other constraint was the willingness by lecturers and students to carry out online teaching and learning. Mahud, et al., (2021) observe that students were also affected by psychologically by stress, depression and anxiety as well as low resilience. al-Mamun, Hosen, Misti, Kaggwa and Mamun (2021) conducted a study in Bangladeshi in 2021 on the cognitive disturbances among students in Bangladesh during the pandemic and established that students suffered mild to severe symptoms of depression, anxiety and stress that affected their studies. In line with this challenge, Mukute, et al., (2020) in their study they carried out in Southern Africa, established that emotional and physical distance of studying amidst the pandemic became a challenge that created anxiety in some students. Petrie (2020) concurs that most students who were forced by COVID-19 to study online from home experienced psychological and emotional distress and failed to engage productively.

Mazarura (2021) reiterated) that millions of students in poor households grapple with inadequate access to electricity and internet (Hedding, Greve, Breetzke, Nel & Jansen van Vuuren, 2020) and access to televisions and radios. Mazarura referred to the example of Ethiopia, where most people live in rural areas. The seriousness of the challenges faced by students in Africa is also revealed in a study conducted by the United Nations Educational Scientific and Cultural Organisation (UNESCO) and International Institute for Capacity Building in Africa in June, 2020 (Mazarura, 2021). The study established that across 10 African countries, less than 15% of school leaders were keeping in touch with at least 80 percent of their pupils. From the former study, it is observed that 85 percent of schools were not in touch with their students during the pandemic. In support of the above, Donoso and Retzmann (2021) state that few students had sufficient access to digital equipment or a reliable internet connection at home when schools and universities turned to online teaching and learning.

It is also well documented that some medical students in both Ugandan and South African rural universities were negatively affected by COVID-19 including some engineering and Information Technology students. Bongomin, Olum, Nakiyingi, Lalitha, Ssinabulya, Sekaggya-Wiltshire, Ocama and Byakika-Kibwika (2021) state that the COVID-19 pandemic had had a huge negative effect on the clinical learning experience of the students at Makerere University. Bongomin, et al., (2021) carried out a study in Uganda and established that COVID-19 posed a significant impact on education in the medical arena and caused students' low levels of interest in pursuing internal medicine career paths. The migration from traditional ways of teaching to online learning could not fully enable the acquisition of clinical skills and competencies expected of medical students.

Bongomin, et al., (2021) also reported that university students incurred huge transport costs during this period. The same authors state that the number of passengers in each transport facility were tremendously reduced by governments in order to achieve social distance as a vital standard operating procedure in the fight against the spread of the pandemic (same as in South Africa). This pushed the costs of using public transport higher (Bongomin, et al., 2021). They further mention that transport options that were university-funded were inadequate for all the students. All this affected the students negatively, whose sole source of financial livelihood is their parental figures. Pokhrel and Chhetri (2021) argue that the vulnerable group of students with learning challenges faced online learning difficulties and that some academically competent learners from rural backgrounds were unable to access and afford online learning.

Studies in Columbia also indicate that institutions of higher learning resorted to online classes (Agnoletto and Queiroz, 2020) just like in South Africa and Uganda. It is reported that vulnerable households in the rural areas of Columbia had no access to internet connectivity and power (Rieble-Aubourg & Viteri, 2020). These limitations had adverse effects on the quality of education in the rural areas of Columbia as viewed by Rieble-Aubourg, et al., (2020). Concurringly, Mukute, Francis, Burt and De Souza (2020) carried out a research in southern Africa and established that digital learning challenges were more acute in rural communities with low levels of material resources, lack of internet infrastructure and information and communications technology illiteracy. Literature has it that some students in rural parts of South Africa and beyond faced challenges in adapting to online education and learning (Mukute, et al., 2020). Both lecturers and students experienced difficulties in utilisation of online options as initial means. Pokhrel and Chhetri (2021) postulate that transitioning from traditional face-to-face learning to online learning was a unique experience for both academics and students and were expected to familiarise with little or no other alternatives available.

It is well recorded that because of the history of most African countries, most students studying in rural universities had inadequate access to laptops, phones and computers which are vital for digital pedagogy processes (Hedding, Greve, Breetzke, Nel & Jansen van Vuuren, 2020). Some parents could not afford such gadgets since they were battling to put food on the table (Murgatrotd, 2020). Other students had no finances to buy data bundles, while others did not have radio or television and families that had limited resources, for instance, computers had to compete using them (Mukute, et al., 2020; Hedding, Greve, Breetzke, Nel & Jansen van Vuuren, 2020). Additionally, most families had inadequate allowance for home-based learning (Pokhrel & Chhetri, 2021; Marongwe & Kariyana, 2021; Hedding, Greve, Breetzke, Nel & Jansen van Vuuren, 2020). The environments were not conducive and congested and hence, competition for space (Mukute, 2020).

Contingency Measures to Counter The Challenges Associated with such Pandemics

It is argued by some scholars that universities should always think and plan ahead of any eventualities and have some contingency measures in place to counter the impact. Other than using only e-learning platforms for online learning, the utilisation of alternative spaces like other platforms such as Zoom, Google Class, group fora like Messenger, Whatsapp and Telegram are necessary (Pokhrel & Chhetri, 2021). These platforms, according to them have been tried for teaching and learning and can work very well especially for students in rural areas. Such platforms can be used even beyond the pandemic. All what is needed is to coach the students on how to use them responsibly to perpetuate education (Marongwe, Mbodila and Chisango, 2019).

Learning and teaching limitations are sometimes overcome by being creative, innovative and flexible. Academics are therefore challenged to develop creative initiatives that are helpful in overcoming online learning difficulties. Pokhrel and Chhetri (2021) posit that educators were learning from others and collaborating with those who are at institutions that can easily navigate through virtual learning to improve online teaching methods. Doucet, et al., (2020) also note that there were unique chances for collaboration, new remedies and readiness to achieve learning from other stakeholders plus emerging for both university teachers and learners. Furthermore, lecturers and students should be well trained in information and communication technology systems (El Said, 2021) because pandemics such as COVID-19 are predicated by scientists to be disorganising lives in the future as a result of global warming.

To counter future mishaps, universities should formulate policies that act as a guide to the university communities and other stakeholders. Pokhrel and Chhetri (2021) acknowledge that policy strategies are key for the future. This would prepare the education system for such uncertainties in the future. The drafting of policies should be informed by lessons learnt from the COVID-19 pandemic. The policies should focuse on training needs, procurement of ICT gadgets, partnering with established universities, parents, funders and other relevant key stakeholders. The policies should also focus on online assessments (Ho, Cheong & Weldon, 2021). Ho et al., (2021) further advise universities to emphasise facilitation and improvement efforts by educators, modulation of assessment methods to accommodate the workload, appropriateness, and fairness for all the sudden changes using emergency remote learning during crises. Policies should focus on contingency plans and other alternative learning activities or resources to supplement the inadequacy or learning deficits in emergency remote learning. El Said (2021) proposes that universities should develop and maintain competitive channels of communication between students, lecturers and management to keep stakeholders informed.

METHODOLOGY

Given the context and circumstances where universities were closed in both South Africa and Uganda and remained closed for the most part of the year 2021, the researchers opted for a desktop research method. Data were collected using nonphysical methods such as telephone interviews, WhatsApp chats and SMS messages. This was a purely qualitative and explorative study based on the phenomenological design to enable the researchers to achieve a deeper understanding of the lived experience of the Covid-19 pandemic-related closure of educational institutions in the academic, social, psychological and economic lives of the rural university students (Martons and Booth, 1997; Smith and Flowers, 2009). COVID-19 was the experience whose effect was not clear before the inquiry (Cohen et al., 2007) and hence we dug deeper into how it was being experienced (Pring, 2000).

In each country, respondents were selected using purposive, convenience and snow-ball sampling approaches based on availability and willingness of the rural university students to participate in the study. Purposively, they were a homogenous sample, that is, university students, irrespective of the level of year of study who linked the researchers to more students in the rural areas because of the prevailing challenges related to closure of universities and difficulties in individual reachability due to poor telephone and internet connections in the rural areas. They were rural university students because of their unique circumstances. Basing on convenience sampling (Leed, 1980), the respondents were selected due to availability of their telephone contacts to achieve online interviews. Purposively too, respondents were selected due to their typicality and homogenous nature (Cohen and Manion, 1994; Lavraska, 2008; Gay, 1981; Ndeskoi, 2016). The participants were consciously chosen because of their appropriateness in advancing the purpose of the study and possession of rich information relevant to the study (Rule & John, 2011) hence use of purposive sampling technique. The respondents were both male and female rural university students facing the impact of the COVID-19 pandemic-related universities' closure. Both postgraduate and undergraduate students participated in the study. They had to have provided informed consent to participate in the study. The respondents were 8 in number (Milward, 2006) from each country.

A semi-structured interview guide was developed for the rural university students, as guided by the two key objectives of the study. The research questions and sub-questions in the interviews were helpful in exploring how the Covid-19 pandemic and the resultant closure of universities affected their educational, social and psychological lives; and the necessary contingency plans that the students thought could be put into place to curb the negative effects, should such closures happen again in future. The semi-structured interviews and extra questions were for elaboration purposes. The interviews were conducted online, and identification of respondents was largely done through phone contacts, using a snowball method and through WhatsApp messages and voice notes which had data collection affordances of effective interaction and expression. The availability of respondents for online interviews was key because of challenges related to stability of internet connectivity due to the rural setting. After the interviews, data was transcribed and themes to guide analysis were generated. The interviews allowed the researchers to get under the skin of participants through probing and thought-provoking questions that were relevant to the study. The questions asked to South African and Uganda participants were similar for a fair comparative analysis. Appropriate appointments for interviews were made with the participants for appropriate time for researcher-participant dialogue. The interviews were very successful, characterized by availability and willingness on the part of the participants. No interview was cancelled or postponed. The interviews took approximately between 30 and 50 minutes. The interviews were audio recorded after informed consent was given by the participants. The recording allowed us to thereafter listen to the interview responses, transcription, coding, and generation of themes. This allowed the researchers to focus on the sessions to avoid distractions and leaving out important points raised.

The primary data collected from rural university students was transcribed and coded using themes and analysed using thematic analysis, that is, semantic themes (Leedy, 1987) and narrative analysis (Smith, 2003). The emerging themes were used to describe the rural students' experiences during Covid-19. The same themes were used to generate possible contingency measures to be suggested for overcoming the negative impact of this pandemic and future pandemics. The vital and key statements from the university students were identified and emerging themes from these statements noted. The findings were henceforth, using an integrative approach, analysed concurrently, that is, both negative impact of Covid-19 and contingency measures. Using narratives, description of the phenomenon under study was done, accompanied

by the respondents' assertions. These findings were instrumental in the drawing of conclusions and recommendations.

Ethical Considerations

The researchers sought permission from the two universities that participated in the study and permission was granted on the condition that the study was not going to mention the names of the institutions. One university in South Africa and another in Uganda participated in the study. Being a comparative study of two countries based in different African regions, care was taken by the researchers to ensure that ethical policies and procedures of the two countries under study were strictly observed. The researchers were very transparent to the participants by clearly explaining the purpose of the study. It was explained that the study was intended for educational use to strengthen the researchers' collaboration and advancement for the cause and the betterment of students studying in rural universities of the two countries. After explaining to the targeted participants, participants were asked to sign electronically the consent forms showing their willingness to participate in the study. We assured participants that their dignity, privacy, confidentiality and anonymity would be respected. Findings of the study were shared with the participants to check the correctness and accuracy of their views.

Limitations Of The Study

The study was carried on a small scale, and such is the nature of qualitative studies and was limited in extensiveness but substantial and deep in intensity. Therefore, results of this study are confined to the cases that were used since they were specific rather than generalised. However, educational institutions in similar situations can draw lessons from the study. Future studies should focus more on a wider scale for generalisability of the findings. Given the prevailing circumstances of COVID-19 and its consequent shut down of educational institutions, it was challenging to connect easily with the participants physically for interviews, hence the researchers opted for an online approach to data collection through telephone conversations, WhatsApp messages and voice notes. This made the inquiry miss some of the key elements such as facial expressions and face-to-face in-depth interaction. Future researchers in this area may need to engage in physical focus group and one on one in-depth interviews to gather a deeper and more detailed set of findings on the impact of Covid-19 on both rural and urban university students.

FINDINGS AND DISCUSSION

Data presentation and discussion occurred concurrently. Themes that emerged from the data collected through use of interviews were presented, categorised and discussed. Numerous themes such as; educational, psychological and social among others emerged from the research question that asked, "What has been the impact of the COVID-19 pandemic on your studies?" In response to this question, striking similarities on how the on-going COVID-19 pandemic is impacting negatively on students' studies were noted.

Educational/Instructional Challenges in Nature

Students from both University A in South Africa (SA) and University B in Uganda (Ug) concurred that there was a setback in their studies. Rural university students insinuated that the educational goals that they had set faced major setbacks as they couldn't envision themselves completing their education as planned., as one student in university B asserted,

> "educationally, I have experienced a setback in the mind because of the time we have spent without going to school; even the vision that I have been with, it is always hard to start afresh after the lockdown.''

This kind of sentiment was also echoed by another student from the same university who argued That,

> "the closure of the university due to Covid-19 has affected me in the way that I had planned that by 2022, we shall have left school, but since no studies are happening, our plans are extending day and night, as we are ageing.''

This is indicative that re-adjustment back to the normal and regular study rhythm when the gradual re-opening of universities happens, will be slow and the warming up to stable study is usually characterised by another impending closure (closures in South Africa and Uganda was abrupt during the 3rd and 2nd waves respectively). A postgraduate student at University A, (SA) with a painful and low voice explained,

> "I had dreams of completing my studies in a record time but with these abrupt closures of the university my dreams are shattered. I know I have to add an extra year for me to complete my studies. It is so disheartening, sometimes I think of quitting the studies".

In a similar fashion an undergraduate student at University B (Ug) thus expressed,

> "The COVID-19 pandemic is hitting hard on me. This on-off of the university is making me to be off track, I cannot remain focused, my future is full of uncertainty. I was hoping to change the social and economic status of family within no time, but I have no hope of what will become of me tomorrow".

Drifting slightly from the issue of losing hope as indicated by the participants above, but still causing delays, one participant from University A (SA) talked about the challenges of online learning in her rural context mentioning issues like on-off power cuts without notice, poor or no internet connectivity at all, unaffordability of data and her own limited ICT skills. She thus stated,

> "I am technophobic, I was not exposed to technology in my high school and now I am an undergraduate in my first year, my family struggles to buy me data. In my place there are abrupt load shedding, and it affects the internet connectivity and I have not yet received a university laptop".

This was also re-echoed by a participant from university B (Ug) who said,

> *"When it comes to e-learning, data that needs to run a whole session is very expensive and as if that is not enough, the network (internet) in the rural areas is still so poor which can't help students such as myself to learn on-line.''*

Therefore, form these submissions, when it comes to rural location, it is not just about the willingness for students to utilise the available learning alternatives, but also the availability of the internet connectivity if it's the benefits of its affordances are to be reaped by these students.

From the above excerpts it is evident that the pandemic impacted negatively on learners' studies in both countries. The students' education was at stake due to delays experienced and high internet costs. The inference is students require continuation of studies through onlinisation of learning, but this too has challenges because internet connection in South Africa and Uganda is not broad in most rural areas as indicated by the participants. This finding is in line with Dube (2020) and Kyamazima (2020) who observed the same in South Africa and Uganda respectively. In Uganda, personal internet has become extremely costly with the new government taxes on internet and is even worse for some rural families that struggle to put food on the table. Instead of internet being taken as a necessity that drives online learning it is however regarded by many families in the rural areas as luxury. There might also be need for universities through their partners to avail laptop computers to every single student with an allowance to cover internet costs. It is also time to consider subsidies on internet for the education sector if online learning might be the new normal way for learning for a good number of months since in Uganda the vaccination rate is below 5 % while in South Africa it is slightly above 5% although the pace is slow. Some students were faced with an additional challenge of parents losing their jobs due to lockdown hence this placed a heavier burden on their ability to equip their university children with the logistics they needed to participate in online learning.

It also emerged from the data collected that the universities in the study took a longer time to migrate all learning programmes while the more affluent universities had already integrated all their programmes online. The participants cited reasons for delayed migration of the learning programmes as limited digital skills for some academics and students, students not having tools of trade, attitude of some lecturers and students towards embracing technology. They had hoped that the COVID-19 would soon disappear, and people would go back to their normal life. A student from University A (SA) explained,

> *"I have got a cousin who is studying at University X, he told me that for them all their programmes were uploaded on their e-learning management systems and did not experience any major disruptions, they moved and switched to online swiftly".*

This same sentiment was expressed by a female student from university B (Ug) who elaborated,

> *"Can you imagine private universities for example university Z had already uploaded all the subject content on their university e-learning systems and their students are busy studying ahead while some of us from serious government universities stopped all learning when the educational institutions were closed? Even in research, those students from those other universities are busy progressing with their supervisors because those same supervisors had already posted all instructions online. For us we are delayed in every way possible. I was also surprised to learn that this same university was able to conduct examinations online…I don't know how they did it but this is something to think about so that universities don't get into a situation where the students' future is frozen*

due to lack of preparedness. How I wish lecturers and faculties would post learning subject content online to be accessed during such circumstances.''

Another student from university A pointed that that this failure to migrate content in time could be caused by lack of skills in the use of the ICT tools,

"*What affected us most was that our lecturers were not competent enough to use technology including us students. Personally, I do not have the ICT skills for me to navigate through. So, the university had to train lecturers and students first on how to use the e-learning management system and equipped us with the basic skills".*

Whereas lecturers have struggled to adapt to online instruction, this challenge of lack of skills to use these online tools has been worsened by lack of these same skills by the students themselves because of lack of training and necessary exposure as one undergraduate student from university B (Ug) asserted,

"*Hmmm, as students we might put blame on the lecturers for not knowing how to conduct online lessons, but to be sincere with you, even us students we don't know how to learn using technology. Even something as simple as using tracking to read research comments from the supervisor is very hard. We have to call the supervisor to ask what those formats mean and what we should do about it. I think the university has a lot to do but on our part as students, we need to take a personal initiative and learn computer skills because where our education system is heading, face to face lecturers might become a thing of the past in the near future.''*

In other words, the effort to gain ICT skills should be a concerted effort by the universities, lecturers and students as these are the key players if educational benefits are to be maximised.

It also emanated from the data collected that the limited digital skills had an effect on the quality of work uploaded on students' platform since lecturers just took programmes that were designed for face-to-face and uploaded them in their raw form to be used for remote learning. However, it should be noted that for postgraduate students in university B, online assessment was not done because all stakeholders did not plan for it. This created a difference between the two institutions. At university A (SA) however, the limited online assessments techniques hindered the quality of assessments, and some students mistakenly submitted incomplete work by clicking wrong icons, sometimes kicked out by the system and work forcibly submitted, online cheating, power cuts and some connectivity just dropping, and work submitted unintentionally. A student from the same university (SA) had this to say,

"*I could see that the lecturers were struggling to use the platform and they were confused as to which stuff to upload. There was a lot of cheating during the online assessments, some lecturers forgot to lock the tests. I was surprised to see my work submitted after spending only 20 minutes for an exam that was supposed to last for 2 hours. When I reported to my lecturer, he said he could not help me because he thought I wanted to cheat, and I failed the exam".*

What was experienced by the student above was common across all the students participated in the study from university A (SA). This finding on poor handling of online assessments due to inadequate techniques is in line with the findings by Pokhrel and Chhetri (2021) who state that

student assessments are carried out online, with a lot of trial and error, uncertainty and confusion among the teachers, students and parents.

It can be inferred that there was information gap and limited ICT skills on how to use the e-learning management systems, administration of assessments, quality and amount of work to be uploaded on the system. This implies that these universities under the study were not ready for remote learning, and they did not have time to re-design the programmes and assessments to match the new mode of learning and teaching ignited by the COVID-19 pandemic. Furthermore, one of the students from SA alluded to the issue of lecturers' failure to formally check for plagiarism as they used to do before when submitting a hardcopy. It could be that lecturers did not know how to use the settings for the system to automatically subject the students' work for plagiarism check or that the system was not wired, or software not yet configured. The implication is that students were not submitting original work, and this can hinder creativity and promote cheating which is a serious academic offence.

Psycho-social and Cognitive Impact

It emerged from the findings of the study that psychologically and cognitively, the rural university students' mental and emotional comfort amidst educational and health discomforts has been affected. The experiences were the same for students under study in SA and Uganda. Settling back into their rural communities has culminated into a lot of psychological uneasiness that has been marked by stress, anxiety, hopelessness about the future and boredom. To the students, the closure of universities due to the pandemic has caused what they term as mental prison, as one student from university B (Ug) asserted,

> *"it has not been easy to keep up with the life of staying at home, keeping up with many people that are gathered at home is not easy somehow. I get stressed and it feels like being imprisoned since it comes with boredom and missing of the social gatherings that make me feel alive.''*

It should not be ignored that the covid-19 situation has further affected rural university students' cognitive and affective aspects. It has been reported that some students are now marked by hopelessness about the future of their studies and lives in general as one student from the same university argued,

> *"psychologically, I am losing hope in education because I see my friends who left school having something they can show to the public. For me, I have nothing and even the community is demanding me a lot.''* while another re affirmed, *''I have a lot of fear and anxiety due to the profound effect of uncertainty.''*

This admission indicates that the stress, hopelessness and despair among rural university students seem to be a compounded issue that is a cocktail of both intrapersonal and interpersonal unmet expectations. As much as the students have personal frustrations, these are aggravated by both perceived and actual societal expectations and pressures placed onto them in their rural communities. The psychological and cognitive well-being of the students had impacted negatively on the quality of their studies. Students' study groups, friends, love matters, to mention but a few, have been disrupted and to a greater extent, the relationships they had formed to co-exist in the university environment were broken. The COVID-19 pandemic forced them to be far away from each other while observing the protocol dictated by the World Health

Organisation as a measure to reduce the spread of the virus. Emotionally, students are not well, they miss their girlfriends/boyfriends, and it affects concentration on their studies because there is a gap that is not being closed, as one postgraduate student from university B expressed,

> "*The closure of universities forced me to make very serious decisions as far as my family is concerned. I had to move with two of my children to the village because at least there is free food. My wife and our last child stayed in town because she has a job to protect. I miss my wife, and this has greatly affected our intimacy and increased suspicions from the both of us about possible infidelity. This virus had better go so that we can live our normal lives again.''*.

This same sentiment was expressed by a participant from university A,

> "*I cannot focus on my work, I miss the love of my life, we used to stay together and could help each other to do our assignments. Now, I can't even see her because of the movement restrictions*". Another student from the same university also indicated that, "*We had formed our study group that was helping us to clarify issues that we had missed in a lecture. We were so used to seeing our lecturers in front of the class but now we only hear their voices because we switch of cameras during the virtual classes*".

The disruption of the environment was felt by students from SA and Uganda. Economically, students had to grapple with rural low standards of living, coupled with difficulties that have emanated from the fact that parents have lost sources of livelihood and survival due to lockdown restrictions. Money is needed in all aspects, that is, in purchasing, laptops, computers, airtime and internet bundles to communicate with research supervisors and classmates in the urban centres about what is transpiring at the university. To some university students, the lockdown that forced universities to close led to poor quality of life as one student from university B (Ug) asserted,

> "*the lockdown has limited my any opportunities of any part time or casual work and it has really affected me so much. I now live-in absolute destitution,''*

Another student from the same university viewed the economic effect of Covid-19 and its related consequence of closure of universities as economic too,

> "*the most challenging problem in the rural area is our parents being poor to the extent that they can't support when it comes to e-learning. My parents have nothing to offer me in terms of money, yet I have to be in contact with my classmates to get information about what is going on at the university. Sometimes I can even spend a week without being on chat because I can't afford it.''*

Another said,

> ''*when I am at school, I save a lot. When I am home, I end up spending the little I have because of family problems. I had planned to use this little savings to start a business in future and now I have spent all of it at home because the family needs are many.''*

A student from University A (SA) explained,

> "*I felt the economic hardships more than before. My parents and I had to spend our budget more on financing me to sometimes go to the internet café in town. I needed money for transport and for paying to the internet café. My parents had also to engage and pay the services of an expert to train me on how to use the ICT gadgets effectively in order for me to be able to participate on the online learning*".

It can be noted that inadequate skills in the usage of the digital technologies costed some students more. Therefore, the economic challenges are evident, and these have aggravated the educational, psychological and cognitive effects of the pandemic.

CONTINGENCY MEASURES

Universities should not wait cataclysmic calamities to consider online teaching and learning. In the short term, students should be made to appreciate the ownership of personal computers as an integral part of online learning. Internet for the education sector should be subsidised to enable teaching and learning to take place with ease. It should not be assumed that both lecturers and learners have adequate edtech knowledge hence a need for training for both stakeholders to appreciate the necessity of training in educational technology. Vaccination of all university students would come in handy to minimise the frequency at which universities are closed due to the Covid-19 pandemic. Universities in rural environments should learn from other universities that have progressed well with online classes and assessments and partner with them. They should set up committees that can sit down as peers with the affluent universities and do analysis of what has worked, not worked, how they did it and what they are still to do, and tailor make that to suit their own unique environments. It is understandable that contexts are not the same, but it is always good to learn from others.

Drawn from the discussion of the study, universities should redesign programmes suitable for online learning than simply shifting programmes that were designed for face-to-face learning. Programmes that were in existence before the outbreak of the COVID-19 pandemic were suitable for only that period. COVID-19 has and is still forcing people to do things differently and change should be imminent and inevitable. Lecturers and students need to be thoroughly trained on how to use ICT tools and engage with e-learning platforms. Without equipping lecturers and students with the necessary skills, such universities will be defeating themselves. The one-size-fits all training approach should be avoided especially for lecturers since the world of education keeps evolving. Capacitation of lecturers should go a long way in terms work quality. Lecturers should work towards exploring the best practices for online home schooling, create environments that allow academics and students to research on the best practices and explore other alternatives like use of a flipped classroom with the help and support of important stake holders such as the university management.

Lastly, universities should come up with contextually enduring, practical and realistic policies to improve online teaching and learning practices. Policies should also address issues of fundraising and appealing to funders to support rural university students to ensure tools of trade are made available to staff and students and digital capacitation training workshops for both academics and students. We argue that without tools of trade such as laptops, data, connectivity in rural areas, electricity and training of both lecturers and students, universities would be hitting a dead end.

DECLARATION OF CONFLICT OF INTEREST

The authors declare no conflict of interest that could have appeared to influence this study.

DISCLAIMER

The content of this article is solely the responsibility of the authors and does not necessarily represent the official views of the funders, National Institute for the Humanities and Social Sciences (NIHSS).

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