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Digital inhibitors in higher education during the COVID-19 pandemic

Chipo Mutongi [1,*] and Tinashe Muchuri [2]

[1] *Department of Management Sciences, Midlands State University, Harare, Zimbabwe.*
[2] *Department of Language Literature and Culture, University of Zimbabwe, Harare, Zimbabwe.*

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Abstract

The novel Corona Virus (COVID-19) global pandemic has brought vast changes to people's lifestyles in general and has changed business processes globally. The education systems are not spared from the COVID-19 impact and business delivery procedures. Africa mainly being the consumer of digital goods and services and not necessarily the producer as shown in the centre periphery model was not spared either. This paper explores the effects of COVD- 19 at institutions of higher learning and how they were immensely affected resulting in increased use of the web 2.0. However, the digital learning methods encountered digital inhibitors which include but not limited to accessibility, connectivity, social, geographical, economic, legal and technological digital issues. Challenges faced by the community of higher learning institutions in Zimbabwe embracing the digital learning tools are discussed. Using a qualitative approach, this article interrogates the impact of these higher education digital inhibitors in Africa with special reference to Zimbabwe during and post COVID-19 global pandemic. The research instruments used were online interviews and experiences. It is against this background that the writers unearth digital inhibitors in higher education during the COVID-19 era. Post COVID-19 era cannot be still business as usual. It is recommended that to bridge the gap there is need to consider Information and Communication Technologies (ICTs) as basic necessity not a luxury that have too be accessed by all as well as being in a position to operate the tools and having information literacy skills.

Keywords: Digital; Inhibitors; Digital inhibitors; Education; Higher education; Web 2.0; Post COVID 19; Corona Virus; Information and Communication Technology (ICT); Information literacy.

1. Introduction

The future is not ahead of us, it has already happened. Unfortunately, it is unequally distributed among nations, organisations and individuals (Kotler, 2005). Today corporate elephants should learn how to dance as nimbly and speedily as mice to survive in this environment if they are to survive in our increasingly competitive and rapidly changing world (Kanter, 1989). Peters and Waterman (1982) argue that "great companies are all driven by changing pressures in the market place". In this case COVID-19 being the pressure. Zimbabwe Higher education systems initially have not been giving attention to providing lessons through digital means opting for face to face tutoring. Even the distance learning education centres opted for physical module production. They were caught unaware. COVID-19 pandemic outbreak came when the Zimbabwe higher education is undergoing fast trek reformation and transformation towards 5.0 compliant. Study areas are being innovated to be 5.0 compliance terms. At the stage colleges and universities were reviewing the higher education curricular the novel corona virus christened COVID-19 pandemic hits the world and Zimbabwe was not spared. COVID-19 pandemic affected formal businesses relegating many into informal trade, induced lay off of thousands of workers leading many surviving from hand to mouth. Price distortions are limiting this digital learning transition as the population is reeling under poverty. COVID-19 pandemic has exacerbated the digital divide in the higher learning sector as the stakeholders are incapacitated in many areas. The Zimbabwe mobile phone service providers which are instrumental to the smooth transition of digital learning are limping in many areas

*Corresponding author: Chipo Mutongi

that include poor connectivity, internet bundle high pricing and mobile money circulation issues. This article is therefore investigating how all these are inhibitors to digital higher education learning in Zimbabwe.

Misfortunes are bad but as to the functional perspective, everything on this planet has a functional component to stabilize the society. We are living in the DVUCADD environment. An environment characterised by dynamic, volatile, uncertainty, complexity, ambiguity, dynamic and disruptive environment. The novel corona virus (COVID-19) global pandemic has brought vast changes to people's lifestyles in general and has changed business processes globally. It is no longer business as usual. Maxwell (2000:101) opines that if one has been avoiding problems, go out looking for them. One will only get better if you gain experience dealing with them. Problems are a sign of life. Mutongi and Mazhawidza (2018) allude that there is need to research about your problem, understand it and acquire great knowledge about the problem. The COVID-19 global pandemic has made the institutions of Higher learning go virtually. This study investigated possible solution measures with the hope that the findings will actually be of handy to policy makers, service providers, learning institutions and students in finding suitable ways in which to accommodate each other in remedying the digital divide by dealing with the digital inhibitors so that education as a human right will become inclusive and accessible to every learner despite of their race, class, status, gender, age etc.

1.1. Digital Inhibitor

The term digital inhibitor was coined by Mutongi and Muchuri. Digital inhibitor is any form of hindrance to access, retrieve, store, share and disseminate information through the use of electronic technology. This then results in the widening of a gap between learners, tutors and institutions.

1.2. COVID-19

COVID-19 means Corona virus disease. It is an infectious disease caused by a newly discovered corona virus (WHO: 2020). It was discovered in China in 2019 and spread throughout the world. The outbreak was first identified in Wuhan, China, in December 2019. The World Health Organization declared the outbreak a Public Health Emergency of International Concern on 30 January and a pandemic on 11 March 2020.

1.3. Review of Related Literature

Watkins, Leigh, Triner (2004) aver that although learners may demonstrate success in conventional education and classroom, that alone is not enough to guarantee success in an online learning situation. Zimbabwe higher education has been undergoing reformation and is moving towards computer based education system that promotes computer technology education. The 5.0 education system being fronted by the Ministry of Higher Education, Technology and Innovation is prioritising digital learning at all levels where for example universities have portals where students do registration online, make fee payments online, submit assignments online, tutors mark assignments online, post podcasts of their tutorials online and also are urged to do Zoom and Webinar tutorials with their students. However, Kapungu (2007) as quoted by Nyamadzawo (2011) posits that the economic climate in Zimbabwe has derailed some milestones towards realisation of these goals and impacted negatively on the implementation of these programmes. Further to this impact of the hyperinflationary era, the outbreak of COVID-19 has stretched the economic incapacitation to higher levels as economic activities were stalled. This affected the operations of mobile banking and mobile network provisions and hindering student access to these mobile services.

The people of the South are alleged to be lagging behind because of their failure to embrace the technological progress in the North (Bridges, 2001 as quoted by Kapuya, 2007). This negatively impacts on their education systems thereby inhibiting a smooth circulation of knowledge in Higher Education sector in Zimbabwe. The economic inhibitor can give birth to several factors which can be regarded as inhibitive to the success of digital higher learning in Zimbabwe. Currently the country's economy is suffering to ever skyrocketing inflation at the estimation of 448% annual that is eroding the population's earnings. Digital learning is a high investment area that requires a lot of funds in order to acquire the digital equipment required in the development of a working system and Khaled (2006) argues that this activity of acquiring technological tools my weigh heavily in poor countries like Zimbabwe thereby furthering the digital divide gap in the existing incomes. Kapuya (2007) further assets that the prevailing economic hardships of that time faced by most Zimbabwean families negatively affected normal learning in the country and this economic turndown has persisted in the COVID-19 lockdown era where all economic activities came to a standstill.

People are attached to already existing pedagogies and practices making it difficult for them to adjust to innovations and upgrade existing ones (Borotis S, Poulymenakou, A 2004). This paper explored how digital learning system accessible to all students across the divide; whether the quick transition from face to face tutorship to digital tutorship worked well with tutors and students alike; were the students in the remotest spaces and the underprivileged catered

for in the digital learning plans; were support systems for tutors working from home due to the issue of social distancing and the lockdown supported with enough to enable access to online platforms for their ever presents online whenever they were needed; were there any measures in place from digital service providers to cushion the students and unemployed parents in the salary uncertainty situations provided by COVID-19 for the provision of the data bundles; how was the bandwidth working with an overloaded clientele due to an instant overshooting subscription from thousands of students surfing the net every day at almost the same time across the divide; were the digital gadgets needed to access the digital learning platforms enough to service the students and the tutors at large; were the servers of the learning institutions upgraded to hold such an upsurge of information load. Digital inhibitors were identified. There were literature gaps in the sense that studies on digital challenges during COVID 19 era were done in other countries not in Zimbabwe for example Ghana. Emmanual Aboagy (2020) researched on COVID-19 and e-learning: the challenges of students in Tertiary institutions.

2. Methodology

The study made use of interpretive philosophy, qualitative research methodology, descriptive design and convenient and purposive sampling.

Data was gathered through interviews observations, knowledge, attitude and personal experiences. The researchers took into consideration the COVID-19 pandemic induced regulations by (WHO) and use the online data collection for this research. The population of the study were lectures and students of three higher learning institutions in Zimbabwe.

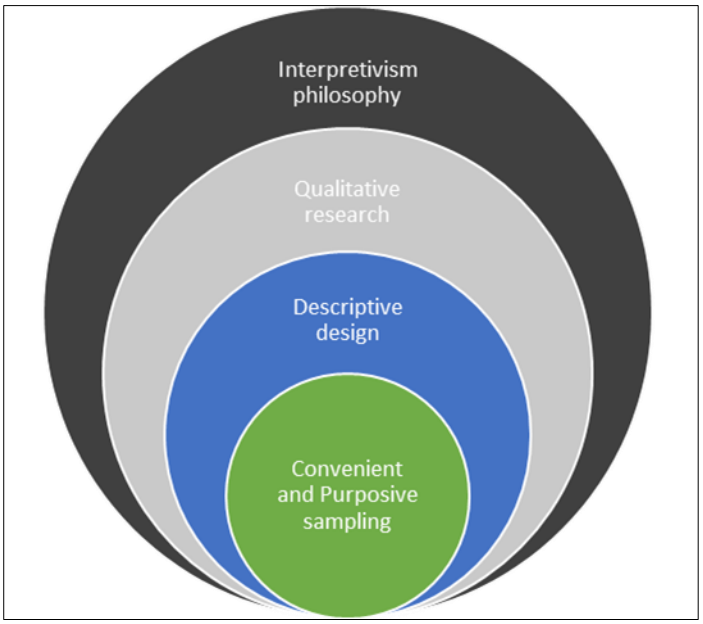

Figure 1 Methodology

3. Results

3.1. Digital inhibitors to Lecturers

Lecturers said they used social media platforms such as WhatsApp and Facebook to reach their students during the novel COVID-19 induced lockdown but some students have no smart phones through which they can access the lessons. The most hit were students with disabilities as those with visually impairment could not access the typed lessons together with those with hearing impairments as they both require voice notes and video lessons. The physically impaired were also affected as they had mobility challenges to get to the free WIFI. These coupled with expensive bundles hinders the students to access education. Education is a human right that every global citizen is entitled to and enshrined in the constitution of Zimbabwe (2013:22) as a right for every citizen and prioritised as a national objective on Chapter2:27(1)(b) where the state is obligated to take all practical measures in the provision and promotion of higher and tertiary education. This exclusion of people with disabilities due to lack of the gadgets and means to access education inhibits inclusivity in education.

Lecturers are incapacitated in many ways including financial, mobility, lack of virtual communication skills as they were not oriented due to the World Health Organisation COVID-19 pandemic regulations. Their paltry salaries hinder their mobility to attend to virtual lessons while neither at the campus nor at their home. Most institutions encourage people at large to work from home as a measure to mitigate the spread of COVID-19 to learners and other staffers. There is issue of bundles which are not enough to last the lessons as they have become expensive. Even though the mobile service providers have reacted to the pandemic by issuing what they say are low priced learner's bundles, the issue of connectivity come to play as a hindrance to access to lessons. Network disruptions in the middle of lessons due to poor and slow connectivity affect the transmission of digital lessons to the students. Power cuts also act as an inhibitor to the transmission of the virtual lessons. The power cuts and the slow to poor connectivity hinder the tutors from collating data for their virtual lessons. Some lecturers complained that they cannot make to subsidise the institutions by using their personal phones and laptops in delivering the digital learning services to their clients (students). They want the institutions to provide for office space conducive for them to deliver the lessons not working from their homes.

3.1.1. Digital Inhibitors to Students

Students were also hardly hit by the COVID-19 lockdown protocols that ensured less movement between cities and even within localities as this compounded their challenges in collecting data for their assignments and dissertation writing. They had to fork out more money to purchase bundles. Some unlucky students were defrauded by marauding conmen who took advantage of students who were looking for desperate students in search of discounted bundles offered by the mobile service providers. The 50+ student group membership for students to access the 10gigbityes was not easy to reach causing some bundles to only reach the students after sitting for the examinations yet they were supposed to be used to study for the exams. The reduction of mobile money limits also has a blow to the students as accessing mobile money which is used to purchase internet bundles has become an inhibitor to the students as they cannot afford the expensive bundles for the ordinary user. Some students were promised e-learning data bundles by their institution and they say it was a non-starter as the bundles failed to arrive and this did not compensate the lost time in disrupted face to face tutorials. The promised data bundles never arrived and the students had to sit for examinations before receiving the bundles. Their assumption is that if it was availed, it was issued to just a few hence it did not alleviate the missed face to face tutorials.

On the issue of accessibility there was a mixed bag as some say the internet was accessible in the urban areas while others say it was slow and there was poor connectivity in urban areas and worse in the rural areas where the mobile phones rely on solar power charging system or lack of it. Not every student had access to WIFI for their research and research on assignments and preparation for their examinations. However, to those who were accessing the internet the data bundles were very expensive and most students could not afford. In addition, some organisations failed to pay salaries rendering the discounted data bundles inaccessible to students. Higher learning has also some social inhibitors as some students say that being stuck at home with kids and spouses did not make for a study friendly environment; as their learning was disrupted with noise and even grabbing of digital gadgets by little children who do not understand the importance of what a parent is engaged in. This also applied to those living in high density area who complained about the noise in their hood as it caused a lot of disruption in their e-learning process. Besides, some learners require face to face explanations for them to grasp the learning concepts and this was hampered by poor connectivity as video tutorials were not easy. Some tutors had to use WhatsApp videos to send to students on a group and voice notes in order to reach their students but students say this gobbled their few bundles and could not afford to hear enough of these.

4. Discussion

The Reserve Bank of Zimbabwe has decreed the closure of Ecocash services the platform that provides mobile money circulation in Zimbabwe. This was later reviewed by the decree of daily withdrawal limitations to mobile phone money clients. This impacted the many learners most of whom are not employed and are not bankable as the access to banking services are inaccessible. Mobile money is used to purchase data bundles required to access the digital learning platforms. The decree by RBZ caused a shift in the access of the mobile money to finance the acquisition of access to digital learning platforms. There were many challenges when the purchases were not processed during lockdown period as movement was prohibited by WHO health and safety measures to curb the spread of COVID-19. This policy framework left many learners and tutors using Ecocash stranded when the services were shut. The closure of internet cafes in compliance COVID-19 lockdown regulations in Zimbabwe impacted negatively to many learners who found themselves stranded failing to uploading assignments on university portals. The pandemic disrupted higher learning programmes, digital learning programme included.

4.1. Political inhibitors

Zimbabwe shutdown impacted on the functionality, connectivity, and accessibility of internet services as the government was preparing to thwart the July 31 proposed and much hyped demonstration against corruption calling for the removal of ZANU PF from power. Students were affected by slow to poor connectivity to internet activities. Political interference for example the shutdown of social media services during the January 14, 2019 demonstrations adversely affected the flow of information as students and tutors could not access it due to this politically motivated ban.

4.2. Economic inhibitors

Unemployment is a thorn affecting the earning of most families in the urban set ups and poverty is also affecting both rural and urban areas. At one time the former Minister of Primary and Secondary Education suggested that parents and guardians pay school fees in goat form. However, this was shot down from all cylinders of the country's population. For learners and tutors to access the internet they require money and unemployment is working against inclusiveness in the higher education sector in Zimbabwe. Unemployment coupled with less economic activities during lockdown period worsened the situation of most families as they were forced to put their focus on the issues of the stomach before any other issues, education included. Most students were affected as they could not afford purchase of data bundles to access their digital learning platforms. Salaries were cut or not even paid during the lockdown while some informal traders were suffering from loss of income during the lockdown purchasing data bundles for learning children and self was a problem.

Bearing in mind that Zimbabwe is cash and vending economy feeding from hand to mouth, lockdown impacts internet service provision adversely affecting the smooth transition from face to face education to digital learning as high data bundles inhibited learners from surfing the net. Though mobile phone service providers introduced an el-earning data bundle initiative of 10g which was equivalent to almost USD5. However, this initiative has over doubled for the Econet bundles in a shrinking economy further impacting negatively on the capacity of students in accessing digital learning provisions.

4.3. Technical inhibitors

Zimbabwe as a third country relies on importation of its digital gadgets from China and other industrialised countries with high technological advancement. The platforms that students and tutors meet to learn and impart knowledge are all imported and require foreign currency to purchase even the anti-virus software. Lack of knowledge to operate the gadgets and lack of access on use of gadgets and software inhibit learners and tutors in benefiting from digital learning platforms. Lockdown impacted on the imports of gadgets on high demand as COVID-19 limited movement of goods from one country to the other as most countries were focusing on the movement of essential medical goods to use for the fight against the pandemic for example the movement of the personal protective equipment (PPE). Designing lessons require a skill and some lessons changes if mailed to some gadgets and this distortion affects the students as it acts the same way as noise in disrupting learning and a communication barrier.

4.4. Demographic inhibitors

Digital learning was a new thing that most scholars call a new normal that third world countries learners should embrace in order to succeed in their endeavours. However, age is impacting on other tutors and even students alike as they need to be taught on how to use the gadgets for the benefit of their learning. Class has a negative impact as some people for example in the rural areas where there is no electricity who were used to physical lectures soon find themselves being introduced to digital learning platforms. Gender also plays an inhibiting effect as males are introduced to the use of computers more than the females and this has an impact on their ability to computers. Those born before technology are conflicted when it comes to the use of computers and those born in technology are computer able. Reorientation classes were required to make those in the lack adapt to the new normal but the restrictive health measures rendered it impossible.

4.5. Social inhibitors

A classroom or a college environment has a motivational effect to students and the tutors alike. Home is not ideal for study; however, COVID-19 pandemic WHO regulations included staying at home and the issue of lockdowns where people were restricted from moving out of their homes. This means the tutors and students had to use their homes as new classrooms during the day. Some will be lodgers renting for their accommodation together with other tenants who may want to play their noisy music. Noise hinders proper participation in the lessons and limits the grasping of learning area concepts.

Recommendations

What should be done?

- ICT should be regarded as a basic necessity not luxury
- Catch them young. There is need to train children on the use of ICTs from a kindergarten stage.
- Formalization of home schooling
- Information literacy is called for to do away with information overload and cyber-crime and bullying.
- Institutions should provide tutors with enough bundles to connect to the internet.
- Institutions should provide the tutors with new technology skills in order for them to adapt to new normal learning environments.
- There is need for production of lessons on DVDs for the hearing impaired.
- There is need for the production of Audio CDs for the visually impaired.
- There is also need to ensure the students have the gadgets to access the lessons.
- There is need to ensure the students have the means to acquire the expensive bundles for them to be able to access the video and audio lessons on YouTube.

5. Conclusion

Digital inhibitors in the higher education level in Zimbabwe include accessibility, connectivity, social geographical, economic, legal, computer illiteracy, lack of information literacy**.** There is need to regard ICT as a basic need and the formalization of home schooling. Information literacy is called for to do away with information overload and cyber-crime and bullying.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors have no conflicts of interest to declare. All co-authors have seen and agree with the contents of the manuscript and there is no financial interest to report. We certify that the submission is original work and is not under review at any other publication.

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