Consulting Teaching and Learning at a Zimbabwe University During Covid-19: Roadmap to Recovery and Beyond

Efiritha Chauraya and Wonder Muchabaiwa

Midlands State University, Zimbabwe

Email: efirithachauraya@fastermail.com/chaurayae@staff.msu.ac.zw

Abstract: *The Covid-19 pandemic has caused probably the most significant world-wide disruptions in all sectors of the economy in human history. This study prescribes a Zimbabwe state university where little has been done to explore what can be done to prepare the institution to have students continue learning in the face of any threat similar to Covid-19. The study provides snippets of lecturers' and students' reflections on their experiences with teaching and learning during the Covid-19 era. Utilising a qualitative approach that employed face-to-face semi structured interviews, data was solicited from 10 lecturers and 20 students. Data was thematically analysed. Both positive aspects and negative outcomes of teaching and learning during the covid crisis were recorded, and from these outcomes, lessons which will help the university systems withstand future emergencies and crises were drawn. These lessons are the novelty and contribution of the study. Key among the lessons were that the institution: continues mobilizing resources to build and strengthen support for teaching-learning, strengthen the registration process, develop a system for online examinations, lobby government to subsidise cost of data bundles, and increase connectivity to remote parts as well as offer online counselling services for students and lecturers.*

Keywords: *Teaching and learning, Covid-19, Lessons learnt, Rural-urban divide, Socio-economic divide, Zimbabwe.*

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1. Introduction

The Covid-19 crisis has tested the education systems worldwide in unprecedented ways. A new normal, which saw learning institutions adjust their ways of doing business, imposed itself as did personal and professional life. Teaching and learning transitioned from face to face to virtual and then blended. At the time of writing the article (April-May 2022), Zimbabwe institutions of higher education were migrating from the virtual teaching and learning mode to the blended teaching-learning revolution. Even as it appears (at the time of writing this article) that

the coronavirus that caused the covid-19 crisis may soon be old news, no one knows what pandemic will struck next, so lessons learnt from the Covid-19 crisis are good preparatory ground for institutions of higher learning in Zimbabwe and beyond, to contingently plan to manage unplanned and unexpected emergencies, such as Covid-19, so that students are not left without studying as what happened when Covid-19 hit the whole world in March 2020.

Advantages and challenges of online teaching and learning during Covid-19 have been extensively documented for the whole world ((Vijayan, 2021; Chaturvedi, Purohit, &

Vermo, 2021; Magomedov, Khaliev, & Khubolov, 2020) and for Zimbabwe in particular (Dzinamarira & Musuka, 2021; Chingara, Muparuri, & Muzenda, 2021; Maphosa, 2021; Nhongo, & Tshotsho, 2021; Zinyemba, Nhango, & Zinyemba, 2021). Studies, though relatively very few, have gone further to interrogate the teaching and learning during Covid-19, with a view to reflect on implications for future practice (Tran, Kerkstra, Gardocki, & Papuga, 2021; Lennox, Reuge, & Benavides, 2021) but for Zimbabwe, in particular, there is a clear gap with regard to teaching and learning preparation for any future catastrophe. This emphasises the importance of this study as none such study succinctly focuses on this aspect. Given the paucity of research into policy implications for the future based on insights gained from the experiences of teaching and learning during the covid-19 era in Zimbabwe, this study primarily sets out to use the experiences as springboards for assisting in navigating and managing such tumultuous moments and exceptional circumstances to ensure continuity of education provision as the country and other nations move forward in uncertain and unknown situations.

The overarching question was: What are the perceptions, opinions and viewpoints of the lecturers and students regarding teaching and learning at the institution during the Covid-19 era. For both lecturers and students, research sub-questions that framed the central focus of the main research question were:

a) What were your experiences with teaching and learning during Covid-19 era?
b) How do you feel with regard to your experience(s)?
c) How would you describe the lessons you want your university to learn from your teaching/learning experiences during covid -19?

1.1 Theorectical Farmwork

Researchers approach their research studies from a theoretical perspective (Grant & Osanioo, 2014). This study centred on pedagogical aspects of online learning; hence a suiting theoretical perspective is one that grounds itself in online education. Within this grounding, theories such as the 'Integrated Model' by Anderson (2011), that delve on whole online learning were deliberatively dismissed as inappropriate because of their conviction that none of the lecturer's instruction should be delivered by face-to-face. This conviction made the study to disregard such, as the study is conceived in the context of blended learning. Blended learning is a hybrid of face-to-face and virtual learning. The beauty of blended learning is in its catering for learning content as well as physical support of students socially and emotionally (Picciano, 2017). This aspect of blended learning further guided the choice of the theoretical framework. The teachers' physical presence is by itself a social soothing tablet. Even as socio-emotional

support can be relayed online, its effectiveness does not measure up to that of face-to-face delivery, (Piccano, 2017; Bates, 2015; Siemens, 2005). This study, thus, subscribes to the philosophy of learning as a collective and collaborative enterprise, hence grounded itself in theories that share the same view. Collective and collaborative learning is a strategy in which learners of different performance levels work together in groups to achieve a common goal (Gokhale, 1995). The theory of Constructivism, which views learning as inherently a social activity meshed well with this view and focus. The philosophy of Constructivism kick started this study by way of guiding the main research question and the 3 subsequent research sub-questions. In this way, the theory of Constructivism sign-posted the study by way of providing the vision of the study. Having jump-started the study, Constructivism was kept front, centre and end of the study not only through further guiding the conceptualisation of the literature review (thus connected the researchers to existing knowledge), selection of the phenomenological qualitative research approach (and the related exploratory case study design), and the thematic data analysis, but also permeated even the recommendations proffered. Constructivism thus, became fundamentally indistinguishable from the study itself., and this is why the researchers put a substantial amount of critical thinking into its identification and application in the study.

To this theory, knowledge is therefore socially constructed as the student engages in reciprocal activities of action and reflection with other students and the lecturer. However, the age-old theory of Constructivism was developed at a time when technology had not impacted on learning (Anderson, Rourke, Archer, & Garrison, 2001). With the coming of the digital age, Constructivism has undergone revisions and refinements to make it adaptive to the era as the theory interacted with the development of internet. It is, thus, judicious to acknowledge that the digital age gave birth to derivates of the theory of Constructivism. This development has seen this study, (whose focus is on pedagogical aspects of online education) settle for derivatives of Constructivism. The 2 chosen derivative theories, which are in essence specialized forms of Constructivism adapted to the digital age, are Connectivism (Siemens, 2005) and Online Collaborative Learning (OCL) (Harasim, 2012). The 2 were chosen as they were found to be of great relevance, fitness and soundness to the study focus. The 2 chosen theories neatly complement each other, overcoming shortcomings of each other. The 2 converge on the following ideas:

- Moving Constructivism from the face-to-face platform to online dashboard as they see merits of shifting teaching and learning to internet and net-

worked education in response to the digital age currently prevailing.

- Learning is more than knowledge acquisition, but also building of information networks. Teaching and learning are an interplay of lecturer, student and content item being learnt. Learners collaboratively solve problems and actively contribute to their knowledge infrastructure through levering on knowledge counterparts, networks and links (Picciano, 2017).

- The teacher is not separated and isolated from the student's learning process but rather is integral in the learning equation, as an active engager and facilitator of knowledge creation, provider of appropriate resources, learner activities and representative of the subject domain who ensures that the concepts, practices and principles of the subject domain are integrated into the learning cycle. The teacher is, therefore, the link of the knowledge community and also a state of the art in that discipline. Technology is utilised to primarily increase, enhance and improve interaction between lecturer and student, (Picciano, 2017; Harasim 2012; Downes & Siemens, 2009; Siemens, 2005)

Integrating the 2 made them complement each other as OCL is suitable for small instructional environments and Connectivism is compatible with large scale networked education. These 2 theories provided dimensions of insights to the study, particularly in answering the research questions, bringing out the nature and meanings of the students' and lecturers' learning and teaching experiences during Covid-19 and drawing lessons from the experiences.

2. Literature Review

This literature review contextualises this study by fitting it with extant research.

2.1 Teaching and Learning during Covid-19

This section examines literature about teaching and learning during the Covid-19 era from a global perspective to the African and Zimbabwe perspective. It must however be appreciated that literature on teaching and learning during Covid-19 is still building. Much research on Covid-19 has been conducted in developed countries such as Germany, United Kingdom, Australia and United States of America as well as in Africa and other developing countries (Jaradat & Ajlouni, 2021). Many studies on teaching and learning during the Covid-19 era have

explored teacher-learner expectations, perceptions and perspectives mainly bordering on challenges and advantages of the crisis on teaching and learning (Adnan & Anwar, 2020; Doll, Ragan, Calnin, Mason, & House, 2021; Hoss, Ancina, & Kaspa, 2022; Makin & Layton, 2021). Little has been explored on lessons learnt from experiences of teaching and learning during the Covid-19 era and their implications for future planning by institutions of higher learning especially in the Zimbabwean context. This study, therefore, sought to fill this void. Thus, recommendations of this study not only enrich existing literature related to teaching and learning in higher education during Covid-19 crisis, but offer suggestions of survival beyond the crisis.

Literature has it that online teaching and learning was the most viable route of teaching and learning during the Covid-19 induced lockdown as counties tried to curb the spread of the deadly virus. Record has it also that China was the first country in the world to adopt the online teaching and learning through what Huang, Liu, Tlili, Yang, and Wangu (2020) call 'Disrupted Classes, Undisrupted Learning'. The same initiative is referred to as 'Suspending Classes Without Stopping Learning' by Zhang, Wang, Yang, and Wang (2020). Several authorities researched on the experiences of teachers and learners with teaching and learning during the crisis from all over the world. Godber and Atkins (2021) explored the phenomenon of teaching and learning during Covid-19 crisis in New Zealand but extended further to survey and analyse educational outcomes for the Netherlands, Switzerland, United Kingdom and Belgium. Donnelly, Patrinos and Gresham (2021) surveyed the Ukrainian experiences, Toquero (2020) looked at the Philippine context; Hoss, Ancina and Kaspar (2022) studied the German case, Adnan and Anwar (2020) reported on the Pakistan case, Demuyakor (2020) and Owusu--Fordjour, Koomson, and Hanson (2020) surveyed the Ghananian context, while one of the most extensive surveys on the African continent on this phenomenon was undertaken by the Human Rights Watch (2020) in Burkina Faso, Cameroon, the Democratic Republic of Congo, Kenya, Madagascar, Nigeria, South Africa and Zambia. The departure that this study makes is settling on qualitative methodology in order to get deeper in recording the experiences, attitudes and feelings of the participants, notwithstanding the limitations of the employed case study design.

2.2 Challenges encountered

Numerous studies on teaching and learning during Covid-19 era again examined challenges posed on teaching and learning. by the Covid-19 crisis from a global to an African perspective. Prominent among the constraints was limited to unavailable internet connectivity. Studies from developed countries mainly registered limited internet

access (Vijayan, 2021; Chaturvedi, Purohit, & Vermo, 2021), ridiculously slow speed (Erlam et.al, 2021), while studies from developing countries mainly reported unavailability of internet connectivity (Human Rights Watch, 2021; Demuyakor, 2020; Maphosa, 2021; Owusu-Fordjour, Koomson, & Hanson, 2020; Dzinamatira & Musuka, 2021; Zinyemba, Nhango, & Zinyemba, 2021). Compared to developed countries, developing countries face challenges with online learning emanating from poor and limited internet connectivity (Maatuk, Elberkawi, Aljawarneh, Rashaideh & Alharbi (2022)

Affordability of e-learning was another challenge registered especially by Human Rights Watch (2021); Pokhrel and Chhetri (2021); Adnan and Anwar (2020); Maatuk et al, (2022), who recorded that students from impoverished backgrounds fell far behind with learning because of lack of affordability to engage on online learning. Lack of resources such as infrastructure, hardware, software, and data among others was so openly uncovered by the likes of Vijayan (2021) and Chaturvedi et al, (2021). Huang et al, (2020) established that the reason online teaching and learning was a success story in developed countries was mainly because both lecturers and students had the right infrastructure, gadgets and other related resources. Another challenge noted was the general technophobia (Doll et al, 2021) on the part of lecturers.

2.3 Bright spots registered

Literature also documents some bright spots of the Covid-19 crisis on education. Yaseen and Joshi (2021) report that mobile technology for teaching and learning was a welcome move by most students who found the mode far more comfortable, easier and motivating (Jiang et.al 2021; Demuyakor, 2020). These authors report that unlike the older generation who use mobile technology more for chatting, playing games and other pass time activities, the digital generation uses mobile technology more for learning and prefer it to books and pens. Thus, the most captivating effect of the Covid-19 crisis on teaching and learning was the integrating of new technologies into the education system (Magomedov, Khaliev, & Khubolov, 2020)

The insights from the literature review helps to further stimulate debate as the study seeks to ravel a raft of measures that the institution can undertake so that the students continue learning during or outside of an emergency. It is the focus of this study to audit areas of weakness and strength from teaching and learning during Covid-19 crisis at the studied institution and suggest measures that may make institutions of higher learning withstand any such emergency.

3. Methodology

3.1 Approach and design

Integral to this study was an interrogation of the experiences of lecturers' and students' teaching and learning respectively during covid-19 lockdown with a view of coming up with ways that can optimize teaching and learning beyond the covid era. To enable the interrogation, the researchers utilized a qualitative phenomenological approach and a Zimbabwe state university was the research site. Gleaning insights from Creswell (2017), the approach was adopted because of its fitness with the focus of the study. Creswell (2017) is of the view that human experience can be meaningfully understood through a captivating penetration of their thoughts and insights, and the qualitative approach granted the immersive penetration that generated extensive knowledge about lecturer and student experiences during covid-19 lockdown. Even as it has its shortcomings, 'a purely qualitative approach' was preferred because of its pros. The greatest of the pros was its assistance in gathering information without pre-conceived assumptions about the phenomenon This was the greatest advantage of this method of inquiry for the study. Through employment of the approach, the researchers understood the meaning, opinions and viewpoints of the lecturers and students. Participants were asked what and how their experiences with teaching/learning during the covid-19 era were, what these experiences meant to them, and what lessons they wanted drawn from their lived experiences. 'Experience' was broadly meant to involve their views, thoughts, opinions, emotions, feelings and attitudes. For exploring these experiences, the qualitative approach was considered most suitable as all these attributes were more on a personal level and needed delving in detail to gain a better understanding of the lived experiences. This gave the study a context. The other advantage was its allowing use of a relatively small group of 10 lecturers and 20 students as research participants.

Even as the study was a case study of only one university out of the more than 20 universities in the country, and its findings therefore not representative of all universities, inarguably, that cannot detract the shared experiences, as the lessons drawn are applicable to a wide range of higher education contexts. The phenomena studied was teaching and learning at the institution, and it was interrogated within the context of a particular faculty during covid-19, thus could not present a more generalized information. This, however, was not a concern to the researchers as the central focus was not so much to make an empirical contribution, as to provide snippets of teaching and learning experiences during the Covid-19 induced crisis and then draw learnings from the experiences. For this simple reason the study was an exploratory case study. The

exploratory case study was merited in this study because it permitted provision of an initial understanding of the experiences of lecturers and students with teaching and learning during covid-19 which were then used as basis of nuanced way forward. According to Yin (2014), an exploratory case study is most appropriate where the researcher is "to gain an extensive and in-depth description of the social phenomenon"., (p. 25). Also, the outcome of the study was not pre-determined, and according to Yin (2014), an exploratory case study is the best design in such circumstances. Yin (20214) goes further to say that for an exploratory case study the questions to be tackled are 'what' and 'how' and in this study the what and how questions framed its central focus. Answering 2 'how' questions and 1 'what' question, an exploratory case study enabled the researchers to gain an in-depth description of the social phenomenon as the researchers explored presumed casual links that were felt to be too complex for either experimentation or survey, (Merriam, 2009; Yin, 2014). Exploratory case studies do not and cannot generate generalizability, but rather serve to identify issues that may require further interrogation, (Given, 2008). This is the case with technology-enabled teaching and learning during covid-19 lockdown in Zimbabwe which is relatively a new phenomenon that needs exploring to get a nuanced understanding of it.

3.2 Population and sample

Only one faculty out of the 9 faculties at the conveniently selected university was purposively chosen. Convenience sampling (also called opportunity sampling) (Sharma, 2017) was employed to select the university and faculty considering geographical proximity as the 2 researchers were at this university and were both housed in the chosen faculty and so the study sample was readily available to the researchers. Since the study was self-supported, convenience and purposive sampling of the research site and faculty respectively was found, to, not only be incredibly prompt, but also affordable and easier to implement as it saved time when gathering data since the sample was on-hand. Thus, the study utilised convenience and purposive sampling techniques in combination because the researchers considered ease of access to the participants and perceived knowledgeability of the informants in relation to the study focus. Lecturers and students in the chosen faculty formed the study population. From this population, a sample of 10 lecturers (who taught both undergraduate and postgraduate classes), 10 post graduate students and 10 undergraduate students were purposively sampled. Purposive sampling (also known as judgmental, selective or subjective) (Sharma, 2017) was employed because the researchers relied on their judgment when selecting the participants. Only lecturers and students were included in the study because they were considered expert elicitations as they were at the coalface of teaching and learning during the covid-19 era. Although effort was made to include students from all the 5 departments in the faculty, no random sampling was employed, hence the narratives from the participants are not representative of all students in the faculty and university. Since university stipulation requires only PhD holders to teach postgraduate classes, all the lecturers were PhD holders. The majority of the lecturers, (70%), were male while 65% of the students were female. The mean age of the lecturers was 61,5 years, ranging from 41 to 70 years.

3.3 Data collection

Semi structured face-to-face interviews were utilized to solicit information from both students and lecturers. Upon the research study ethics approval, the first author drew up an interview calendar. Ethics approval for the study was granted by the researchers' institution. Participation in the study was voluntary and informed consent was rendered by all participants after being informed about the study purpose and assured of the confidentiality of their data. All interviews were by appointment and took place in the lecturers' offices (for lecturers) and in the 2 researchers' offices (for the students). The 2 lecturers engaged in data collection through semi-structured interviews. The shortest interview lasted 37 minutes and the longest 58 minutes. All interviews began with formal conversations of the experiences of teaching/learning during covid-19, then flowed into how the interviewees felt about their experiences, the lessons they learnt and the way forward. Because of the exploratory nature of the study, the researchers prompted on as wide a variety of experiences as possible while allowing the lecturers and students to determine in how much detail to respond. Interviews ended with an invitation to the interviewees to contribute any additional relevant insights. All the 30 interviews were voice recoded. The first author conducted 16 interviews while the second author conducted 14. Though the study was conducted during the period of 'return to normalcy' in Zimbabwe, all covid protocols were duly observed. The greatest advantage enjoyed by the researchers through employment of semi structured interviews was allowing the researchers to adjust questions (McNamara, 2009) and even change the flow of issues as new insights emerged (Merriam, 2009).

3.4 Data analysis

The 2 researchers were both involved in the analysis of data. Thematic analysis was utilized following build-on steps as outlined by Braun and Clarke (2006). First was repeated reading of the transcribed data by the 2 researchers independently, to get a deeper understanding of the issues. The researchers then independently coded the data before identifying the initial themes. An inductive process was instituted here whereby the content of the

narratives directed the coding and the subsequent theme-emergent process. After this, the 2 researchers then came together to further refine the themes. Coding and initial theming was done independently in order to enhance the trustworthiness of the data analysis process.

The following themes were extracted from the data: i) Preparedness of lecturers and students for online teaching and learning ii) Availability and affordability of technical equipment iii) Technical know-how iv) Preferred mode of teaching and learning and v) Hyper stress levels registered. Data is presented according to these 5 emergent themes and recommendations proffered by the researchers were drawn from the data.

4. Results and Discussion

4.1 Preparedness of lecturers and students for online teaching and learning

Engagements with lecturers and students revealed that the institutional move from the brick-and-mortar lecture room to the e-classroom was without planning as the institution was caught unaware. As such no lecturer or student had experience with virtual teaching and learning and this could be the reason why the transition to online learning posed summonable challenges to both lecturers and students, but going forward this experience gave them experience. Students described their learning experiences during the covid-19 crisis as "challenging", "awkward", "problematic", "abnormal" "unusual", "thorny", "deceitful", "tough", "stressful", "non-engaging" (as connection with lecture was lost), "taxing", "hard" and "exhausting". Lecturers on the other hand also proffered same descriptors when describing their teaching experience during the lockdown. They found their teaching "challenging", "time consuming", "exacting", "burdensome" (especially marking on line), "tiring", "exhausting" and "stressful".

This finding corroborated those of all studies reviewed. This is mainly due to the fact that the covid crisis hit the whole world unexpectedly.

4.2 Availability and affordability of technical equipment

On issues of availability of technical equipment, the study revealed two things: Socio-economic class and geographical location. As people caught unprepared, 6/10 (60%) of the lecturers and 8/10 (80%) undergraduate students and 7/10 (70%) post graduate students reported that they did not have appropriate gadgets such as laptops to support independent teaching and learning. The participants reported that during the period of normalcy, they relied on the computers in the institution's laboratories. This, they reported, compromised remote teaching and learning as key to success of remote learning is an appropriate technical equipment (Maatuk et al, 2022). These fifteen students declared financial inability to afford online learning devices. Neither gender nor level of studies showed an effect on this finding as numbers of males and females tended to balance, and the issue also ran almost balanced through the levels of study. Thus, even as learning depends on individual student's learning abilities (Golder, 2018), factors such as availability and suitability of resources were recorded as substantially impacting on lecturer teaching and student learning. Several lecturers indicated that they were working from their smart phones as they lacked laptops for virtual teaching. One lecturer commended: *Very few of my students attend the e-classes. When I follow them through WhatsApp, mainly through the group created for the class, the students from rather impoverished backgrounds indicated that they did not have the gadgets. I can with certainty and beyond any debate tell you that some did not receive education at all after university closure.*

Another lecturer remarked: *Even though learning was briefly stopped and then resuscitated during covid period, the new form it adopted excluded and discriminated against some students on basis of their socio-economic background.*

On the same issue, a student commented: *I don't have a laptop to myself. I relied on my father's smartphone. It is not practical that I use my father's phone all the time. I have a phone but you see it only supports phoning and texting.*

Yet another student from a rather insecure environment narrated a similar ordeal: *My parents are always quarreling and fighting. Worse now my father who used to work at Bubyi hotel got retrenched. I live in rural areas with both of them. I live together with 4 others from the extended family. I could not access Google classroom even as I was registered. I do not have a laptop and my phone is malfunctioning. Even if it were functioning, it does not have applications needed for this type of learning. It does not have sufficient space to open study guides and module outlines. It is not that sophisticated and compatible.*

Inequalities between high and low socio-economic backgrounds that in Zimbabwe predate the covid-19 pandemic era were amplified and magnified by the pandemic, with students from lower socio-economic backgrounds less likely accessing and benefiting from online classes than their peers from affluent backgrounds. Thus, at the studied institution, online learning benefited only the well to do students. This finding is in alignment

with literature on challenges encountered by developing countries (Human Rights Watch, 2021).

A completely different story was narrated by a student from the well-to-do background.

Students such as this one were in the minority. With such students and 52% lecturers, while they had the requisite tools, they bemoaned the high cost of data bundles which they said they could no longer afford. Lecturer X remarked that: *Even as I upgraded to a smartphone so that I could access online teaching, the cost of internet data to sustain the teaching is prohibitive. What the university is giving us is far too little*

A student from an affluent background observed that affordability of data was a challenge even with some of their lecturers. We *logged in but did not hear from our lecturer who later said that she did not have internet data. This was the order of the day with some of our lecturers, such that in some subject areas we did not get anything from the lecturer save for the module outline posted on the Google classroom,*

While all the 10 lecturers indicated that they were located within urban areas during the Covid-19 lockdown era, the 20 students were spread throughout the country with 14 (70%) of them located in rural areas during the covid lockdown. According to data from the United Nations Development Programme, accessibility of internet in Zimbabwe varies with geographical location (Ali et al, 2022). There exists a structural nature of electricity scarcity in Zimbabwe with most rural areas without access. There is therefore, an urban advantage in the Zimbabwe electricity profile, but even as this maybe, 60% of the Zimbabwe urban area is not electrified. The country as a whole has an electricity penetration rate of 44%. Rural areas in Zimbabwe are mostly unelectrified, and even where electricity supply is recorded, the supply of electricity is erratic and unreliable. As of 30 April 2021, 80% of rural Zimbabwe had never known electricity (United Nations Development Programme Report, 2021, as cited in Ali et al, 2022).

The study recorded students who had appropriate devices, but could not connect because of lack of electricity, confirming that availability of requisite gadgets does not on its own and of its own necessarily translate into accessibility into the learning platform. An urban-rural divide was thus established. This finding concurs with the observations made by Nhongo and Tshotsho (2021) that teaching during Covid-19 crisis excluded rural settings. Most families in rural areas live below the poverty datum line, and hence cannot afford solarization even as Zimbabwe enjoys abundant sun energy. Students from such environments suffered double tragic. Covid-19 crisis did not cause the rural-urban divide, but it only laid it bare

as at no other time did the rural-urban divide impacted on students' learning like during Covid-19 crisis.

Referring to semester results, a lecturer remarked that the rural-urban divide and the socio-economic divide created disparities around the learning gap and resultantly student achievement. *E-education in its current state and form does not adequately apply to all students. It fails to cater for their various socio-economic backgrounds and hence reduces quantity and quality of some student's learning. It contributed to learning losses of some groups of students thereby widening increasing inequality. The semester results reveal this disparity as mediocre performance characterize results of the affected students.*

What stood out then was the inequity and inequality as a result of the digital divide. Students from low socio-economic backgrounds and those from rural settings experienced heightened challenges to their learning compared to their counterparts from high socio-economic backgrounds and urban areas. Cumulatively, these factors contributed to severe loss in learning for students as remarked that some students *did not receive education at all after university closure.* These results, though not generalizable, align with literature as they are consistent with observations made by the Human Rights Watch (2020), Godber and Atkins (2021), and Donnelley et.al (2021), who all concur that e-learning resulted in differentiated educational outcomes in environments of varied technological capability and socio-economic well-being.

4.3 Technical know how

Another hurdle registered by 13/20 (65%) students and 5/10 (50%) lecturers was lack of technical know-how on part of the lecturers. Although the level of digital literacy varied, a lack of competency and confidence of lecturers with utilizing technology was recorded. The majority of the students (80%) confirmed that the lecturers seemed not to have the much-needed skills of teaching through technology. Black (2020) distinguishes between 'teaching with technology' and 'teaching through technology'. While quite a number of lecturers might have 'taught with technology', 'teaching through technology' was a new phenomenon to almost all of them. Almost all the lecturers had at one point or another used technology to support their in-person on-campus learning, but the new thrust was ceased with technology-based teaching and learning. Lacking technical know-how on part of the lecturers was not unexpected considering that the transitioning of learning from lecture rooms to homes caught everyone off guard. 67-year-old male lecturer noted: *While at home we were told that the teaching platform recognized by the institution was the google classroom. Thereafter we received online training on the Google classroom as a teaching platform, in form of videos but I did not grasp*

that. I am slow at grasping technology. I dropped that down ad resorted to WhatsApp. It is not resistance to the changing norms of teaching and learning but simply lack of skills

Feedback about lecturers from students is reported to have a high positive impact on teaching and learning and may thus lead to the best fit of learning delivery (Floden, 2017; Godber & Atkins, 2021). It should be noted that at the time of holding the interviews, lecturers and students at the institution had begun returning to university buildings as the threat of the virus was beginning to ease. Lecturers had received further doses of training on Google classroom but some lecturers confessed that they still had serious challenges with the google classroom-the only teaching-learning platform that the institution recognised. *I still have serious challenges with the Google classroom. especially with how to make the learning process interactive. What I simply do is post module material on the students' e-learning accounts. I have no way of telling if my students are grasping. With the classroom-based teaching, I read the students' facial expressions and other body languages and use these as a measure of their comprehension,* 65-year-old female lecturer. While gender did not reveal any impact, age did, with all who reported that they encountered challenges being the old guards. It would appear that the older the age, the more the technological incompetence. This finding was, however, not supported by the reviewed literature. Consulted literature was not agreed on the relationship between chronological age and technological proficiency. McCausland et.al (2015) found age being a predictor of technological proficiency. However, a study by Staddon (2020), who researched on young and adult learners, found no difference between the young and adult learners' attitudes towards technology, and even their technological proficiencies were not significantly divorced of each other, only that the older learners used fewer technological platforms while the young used a greater breath of technological platforms. The results revealed that where the adult and young learners used the same technology domain, their proficiencies were not significantly different.

4.4 Registration challenges

Students registered substantial issues with online registration. The registration process was not fluent and automatic. Many students who had paid their fees remained unregistered. Such students, though paid up, could not join the Google classes thus compromising their performance. The same process denied some students who might have successfully registered access to amend modules allocated them but outside their areas of study. This finding was found peculiar to the institution as the reviewed literature did not reveal such.

4.5 Preferred mode of teaching and learning

Eighteen (90%) of the students preferred blended learning. This mode combines digital teaching with traditional classroom teaching, a hybrid learning practice that George (2020) as cited in Chaturvedi et al (2021) call 'phygital learning'. This was in sync with the finding by Jaradati et al (2021) where students preferred online learning citing mainly that they found themselves learning at their own pace and in their own time and in their homes. Much in rhythm with the theoretical framework, the student is a self-directed learner.

4.6 Hyper stress levels registered

Both lecturers (80%) and students (97%) reported trauma, anxiety and psychological distress. Students said their stress emanated from uncertainty (100%), loss of academic sessions (78%), poor learning environments (42%) and unequal access to education (64%). Students revealed that they could not guarantee their return and stay in the institution, especially as they found themselves skipping examinations and subsequently postponing semesters yet their progression and mobility depended on the postponed semesters. Online lectures reduced interactions between lecturers and students and also between students themselves. These interactions have incontestable value addition. What the students found themselves interacting with mostly was uploaded content with the remark "*I have uploaded material for you. Check your e-learning and read the material",* said one student. Yet what the students said they valued most were physical interactions rather than dry interactions with content. Lecturers registered same sentiments especially those that found their physical and psychological environments weighing against teaching as they were less-than-ideal for purposes of teaching. This finding is in consistence with the expectations of the theoretical framework.

5. Conclusion and Recommendations

5.1 Conclusion

While there exists extensive research on challenges encountered during Covid-19 era regarding teaching and learning in higher education, lessons drawn from teaching and learning experiences are limited. Utilising an exploratory case study, this research study documented the challenges, drawbacks, losses, limitations and bright spots from the experiences of teaching and learning during COVID-19. It is the lessons from these experiences which the study used as launching ground for the future as the institution re-thinks how it may better withstand future shocks, henceforth constructs resilience of its education system beyond the coronavirus era.

However, utilisation of the case study design makes the evidence-based claims emerging from this case study context specific as they are born out of subjective experiences of the research informants, and therefore may not be applicable and generalisable to other contexts. Furthermore, another limitation of the study was its making use of the convenience and purposive sampling technique which makes the study unable to claim to have exhaustively explored all the ways that place the studied institution on recovery path and ensure its stamina to withstand any crises. However, that said, this does not reduce or dilute the usefulness of the study findings and their implications for policy. It is still possible for other institutions of higher learning to customize and tailor the recommended principles, practices and measures to their contexts. Additionally, the limitation may not undermine the study's contribution to literature, for systemic inequities are challenged through research so that a more equitable future for institutions of higher learning can be built.

5.2 Recommendations

As the institution is crawling back to normalcy, several evidence-based recommendations have been drawn from the research findings and conclusion. The recommendations which may now be too important to ignore, are meant to assist the institution avoid a possible or potential repeat of unpreparedness, and therefore need incorporation into policy if the institution is to survive future crises. The researchers proffer the following recommendations:

5.2.1 Continuous upskilling of lecturers and students

The study findings revealed that online teaching is a special delivery mode that was new to all lecturers and that not all lecturers were good at it. There was a likely risk that in such cases learning outcomes may not have been effectively achieved. In light of this, the researchers recommend continuous upskilling of lecturers so as to update and upgrade their technological skills. There is need by the institution to invest both in the gargets and in the lecturers who bring the gadgets to action, as gaps in any of these two was shown to compromise quality.

Results revealed that lecturers needed to be trained to bring them to desired technological standards. In this regard orientation courses are recommended for the institution so that lecturers are acquainted with new ways of designing and delivering content. Accessing technology is not all there is. On its own and by itself is not enough. The researchers further recommend coupling it up with additional training and re-focusing of the lecturers in digital technology.

Results also revealed that students desired that their learning be a social interplay between lecturers and themselves. Insinuating from this research finding, lecturers needed to change their pedagogical paradigm. In light of this, the researchers recommend that the institution organizes and offer curriculum development and pedagogy workshops that focus on interactive content delivery, so that lecturers effectively interact with and instruct their students. This is much in rhythm with the article's theoretical framework.

It was revealed that the only teaching/learning platform the institution had settled for was the Google classroom. Pursuant to this, the researchers recommend the need by the institution to present lecturers and students with varied ways and platforms that can be utilized for presenting and receiving education materials on-line. Related to this discourse was the rating of the university's ICT infrastructure by both lecturers (100%) and students (100%) as not up to scratch, thus punctuating the need for the university to continue building its technical capacity to support and enhance teaching and learning.

An acute rural disadvantage in the country electricity and power supply was registered by the study. In light of this the institution is encouraged to consider lobbying the government to invest in ICT infrastructure that supports remote learning and increase connectivity to rural areas.

5.2.2 Technical equipment

It emerged in the study that the university had rolled out a laptop acquisition scheme for the lecturers. This showed the university's responsiveness to lecturer needs and digital transformation. Not all lecturers benefited from this scheme. The researchers recommend that the institution strengthens the scheme so that all lecturers acquire the necessary electronic gadgets. To assist the students, the researchers recommend incorporating a laptop and data bundle fee in the tuition fees. This way, every lecturer and student at the institution would be able to own laptop.

5.2.3 Registration and examinations

Students registered serious concerns with online registration. In light of this, the researchers recommend that student online registration process be automated and strengthened. In the same vein, the university should consider developing a system for online examinations so that students can take examinations from their homes during times of emergencies. The researchers recommend that during periods students are on campus, they be given some tasks and tests to do online to prepare them for full scale online examinations during periods of crisis.

5.2.4 Stress management

Both students and lecturers reported trauma and stress. In view of this, the researchers recommend that the institution invests in the provision and promotion of virtual psycho-social support to counter the psychological unwellness during times of crises. Good teaching and learning are not enough. Physical and psychological wellbeing of lecturers and students is equally important all the time. Therefore, in-person and virtual services for warding off the emotional, mental and physical fatigue of students and staff should be invested in.

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