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# EXPERIENCES OF SOUTH AFRICAN ACADEMICS MOVING FROM CONTACT TO EMERGENCY REMOTE TEACHING: LESSONS FOR THE FUTURE

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## ABSTRACT

The Covid-19 pandemic disrupted the academic programme of most higher education institutions. To counter this disruption, universities moved from contact to emergency remote teaching. To understand the process of this move, the study explored the experiences of academic staff at a South African university with a transition from contact to emergency remote teaching and the lessons that were learnt for the future. The study was underpinned by Online Collaborative Learning theory (Harasim 2012). A qualitative exploratory case study was conducted to answer the research questions. We generated data from eight academic staff members using focus group discussion and analysed it using an inductive thematic framework. From the analysis, the participants held divergent ideas on digital equity and access to technology, creating online interactive content and teaching modalities, proficiency with the technology and training, limitations with the Learning Management System (LMS) Moodle. The findings indicate the need to prepare academic staff and students for emergency remote teaching before a disruption occurs. The COVID-19 pandemic taught the university that was the research site several lessons about technology-enhanced learning, including the importance of flexibility, technology, student engagement, access and equity, and collaboration. Universities have learned that online learning can be effective but requires careful planning, investment, and ongoing evaluation to ensure success. Importantly, the findings acknowledge that the success of online teaching during the pandemic was influenced by a wide range of factors, including technological infrastructure, pedagogical approach, faculty training and support, student readiness, and the culture of innovation within the community and university.

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## Introduction.

Technology continues to have a growing impact on modern society. The higher education setting provides possibilities to recreate remote learning environments (Chen, Cheng & Chew 2016). From this pedagogical vantage point, several researchers have argued for the need to incorporate technology-enhanced learning (TEL) (Czerniewicz 2020; Daniela 2019; Dunn and Kennedy 2019;

Valencia-Arias, Chalela-Naffah and Bermúdez-Hernández 2019; Chen et al. 2016; Flavin 2016). The urgency in this call was made against the need to find new learning patterns and habits that were aligned to multiple ways in which higher education students' source their knowledge (Dunn and Kennedy 2019). As a pedagogical strategy, the use of technology-enhanced learning is founded on the need to provide answers to the following questions:

How can one teach better? How can one scaffold the student in the learning process? What kind of competencies should be developed? What competencies do teachers need? What kind of technology should be used or not be used? (Daniela 2019, p. 3)

For students, the use of TEL promotes independent thinking and enhances flexible and collaborative opportunities for knowledge construction (Valencia-Arias et al. 2019). Additionally, Valencia-Arias et al. (2019, 1057) explains "... ICTs in Higher Education have forced institutions not only to prepare students appropriately to meet social needs but has also made it necessary for teachers to adopt changes in teaching and learning processes to respond to this new environment". In response to these instructional benefits, universities have seen significant growth in TEL in learning and teaching. However, Kirkwood and Price (2014, 26) explain that although there has been growth in the use of technology, "... there is still much to be learned about its effective educational contribution." Although still on-going, the discourses on TEL in higher education has been abruptly mooted. The Covid-19 pandemic instantaneously forced academic staff to move from contact to remote teaching using TEL (Du Plessis et al 2022). No longer was the discussion on the "... complex, febrile relation of education to digital technology [that] has been an often-contentious project..." (Bayne 2015, 5), there is an immediate acknowledgement of the need for TEL for instructional continuation in higher education.

As the preceding discussion highlights, examining the complex relationship between TEL and teaching in higher education is not a new phenomenon; what is new is its use as a reactional and innovative pedagogical tool during disruptive situations (Hodges, Moore, Torrey, Trust & Bond 2020, p.1). In cases of emergencies, shortage and conflict, educational institutions have found different strategies for instructional continuation (Winthrop 2020). Remote teaching is one such strategy but should not be confused with "well-planned online learning experiences [which] are meaningfully different [ly] from courses offered online in response to a crisis or disaster" (Hodges et al., 2020, p.1). Remote teaching describes teaching practices that are implemented to provide access to learning in situations that would otherwise not be possible to continue with learning and teaching (Winthrop 2020). Remote teaching has been implemented in the past when armed conflict, critical staff shortages and natural disasters disrupted educational programmes (Mhlanga, Denhere, Moloji 2022).

For example, interactive videoconferencing is being used as a remote teaching strategy in Uruguay to offset the shortage of English as a Second Language teachers (Kaiser 2018). Akin to remote teaching is the use of remote laboratories that offer STEM students an opportunity to use the internet to perform experiments (Heradio, De La Torre, Galan, Cabrerizo, Herrera-Viedma & Dormido 2016). During university shutdowns in South Africa, Czerniewicz (2020) documents that blended learning strategies were used to continue with the academic programme. Due to natural disasters like Hurricane Katrina, USA universities such as the Southern University at New Orleans resorted to remote teaching using mobile devices (Meyer and Wilson 2011). In further describing remote teaching, Arnold (2019) explains that it follows an asynchronous approach where teaching is not live as students have flexible access to learning material such as lecture notes, post-reading materials, audio, and video lecturers. From the definition of remote teaching, its purpose is to provide students with the support they need to meet the critical module learning outcomes during a time of disruption in their everyday learning schedule.

The Covid-19 epidemic has disrupted the way that educational institutions plan and implement academic programmes (Winthrop 2020). This pandemic is being described as an unprecedented event in modern history, owing largely to its fast rate of transmission (Ienca and Vayena, 2020). This means that the known ways of dealing with disruption in the academic programme do not suit the instructional delivery required to continue with the academic programme while maintaining the preventative measures to curb the spread of Covid-19, such as social distancing and national shutdowns. According to Hodges et al. (2020), emergency remote teaching (ERT) offers a better way of planning for academic continuation in the light of this global pandemic. ERT refers to the remote delivery of instructional material online as an emergency strategy to continue with an academic plan owing to either an emergency or conflict (Winthrop, 2020). The purpose of ERT is not to develop a well-designed plan

for online learning but to “provide” temporary access to instruction and instructional support...during an emergency or crisis” (Hodges et al 2020, p.3).

As the initial stage to the ERT process, South African universities requested that academic staff re-conceptualise contact classes to ERT. Hodges et al. (2020, p.3) explain that this move on its own is not a novel pedagogical event but what is new is “...the speed with which this move to online instruction is expected to happen is unprecedented and staggering...” A summary of the definitions of ERT, suggests that teaching during a disruptive event involves innovative and creative conceptualisations of learning and teaching intended to support students in attaining learning outcomes despite the abrupt disturbance in their scheduled classroom timetable (Winthrop2020). Although such an abrupt move from contact teaching to ERT is obviously challenging for academics, there has been a need to do so. It is important to document these experiences as part of improving pedagogical practices in general (Mhlanga, Denhere, Moloi 2022; Czerniewicz 2020; Winthrop 2020). Furthermore, this transition to ERT required that academics have expertise in using digital mediums of communication and instruction (Du Plessis et al 2022; Vlachopoulos 2022). Thus, the purpose of this article is to report on the experiences that academic staff at a South African university underwent in reaction to an urgent call to move from contact to emergency remote teaching due to a COVID-19 outbreak.

### **Theoretical framework.**

We drew on the theoretical constructs from Online Collaborative Learning theory (OCL) (Harasim 2012) to explore the experiences of South African academics moving from contact to ERT and the lessons they derived for the future of teaching and learning in higher education. OCL underpins our understanding of how learning communities (academics in the context of this study) are “encouraged and supported to work together to create knowledge: to invent, to explore ways to innovate...seek the conceptual knowledge needed to solve problems” (Harasim, 2012: 90). OCL emphasises the use of internet facilities in enhancing learning environments that foster collaboration and knowledge building (Mhlanga, Denhere, Moloi 2022; Picciano 2017). Harasim (2012, p.111) cautions that the challenge with the move from contact to online teaching “...is not necessarily resistance to change by educators, but the lack of a theory or strategy to assist teachers and guide the pedagogical transformations required”. OCL is congruent with the pedagogical instructional changes currently taking place in higher education to mitigate the impact of Covid-19 on the academic programme. These changes involve a paradigm shift from traditional strategies that students use to access knowledge to a flexible and manageable platform yet guiding them to achieve the learning goals. This shift demands that academic staff are facilitators of learning in which collaborative knowledge construction is fundamental and TEL mediums are used to maximise effective student learning in ERT (Winthrop 2020).

The OCL explains the process of moving from divergent to convergent thinking because of negotiation and discussion among peers (Harasim 2012, p.81). Most academics have divergent views on the role and place of TEL in higher education; however, the advent of Covid-19 has created a temporary convergent understanding of its potential use as an alternative medium for an academic programme (Hodges et al. 2020:1). There are three stages in developing educational applications for online teaching: (i) idea-generating, which refers to the brainstorming phase, where divergent thoughts are gathered; (ii) idea organising, the phase where ideas are compared, analysed and categorised through discussion and argument and (iii) intellectual convergence a stage where intellectual synthesis and consensus occurs, including agreeing to disagree (Harasim 2012, p.81). In this study, our interest was in the idea-generating phase. In this stage, the group members discuss diverse ideas as they start to seek explanations and clarification from one another (Picciano 2017).

In collating different ideas, the members categorise them according to their similarities. The strongest ideas are upheld through this categorisation, and the weaker ones are discarded (Harasim, 2012). In this stage, the academics also recognise and acknowledge divergent perspectives and seek to consolidate them toward a convergence (Harasim 2012). Based on idea generation, we focused on describing how the participants worked as a collaborative group with divergent strategies to understand the content required to move from contact teaching to ERT. That is, we sought to engage participants in describing their collaborative learning activities associated with building content for ERT and becoming members of a knowledge community (in ERT).

### **Phenomenological research design.**

We conducted a qualitative study to answer the research question. The qualitative orientation explores the participants' experiences, meaning, beliefs, experiences and perspectives that they assign to a social phenomenon (Nieuwenhuis 2020). In the context of this study, through this approach, we sought to understand the academics' divergent and convergent ideas as they moved from contact to emergency remote teaching. A phenomenological study design was applied because it explores phenomena, or the appearance of things, as lived experiences (Streubert and Carpenter 1999, p.43). Exploratory studies provide tools for understanding what is taking place to seek new insights to provide answers to questions and view the phenomena in a different trajectory (Yin 2014). Since this study sought to provide answers to questions framed by the pronoun what, an exploratory phenomenological study was conducted to provide answers to the research question: What experiences did academic staff at a South African university undergo to move from contact to remote teaching?

The participants in this study are faculty of education staff members at a South African University across various education fields, namely Science Education, Educational Management, Educational Psychology and Language Education. Eight participants were purposively selected, two participants selected from each of the mentioned fields. Purposive sampling is used in this study to identify and select faculty members that held information-rich and practical experiences of moving from contract to ERT (Creswell and Poth 2018). The participants were selected using the following criteria: full-time Faculty of Education teaching staff and had access to the University Learning Management System, Moodle. We generated data using a virtual focus group discussion. This method of data generation involves gathering participants with related experiences and backgrounds to discuss an issue that they have in-depth knowledge of (Creswell and Poth 2018).

A virtual focus group discussion was conducted with 8 participants through the zoom app. The focus group discussion occurred after the South African Covid 19 lockdown, in August 2022 and lasted 68 minutes. The participants were academics in a South African university responsible for teaching through online learning in the wake of Covid-19 lockdown initiated on the 26<sup>th</sup> March 2020. Universities in South Africa started scrambling for novel ways to support curriculum delivery exclusively through online learning due to unprecedented challenges imposed by coronavirus. The decision to move to online learning was part of an attempt at "social distancing" the practice of limiting large gatherings and in-person contact to slow the transmission of the virus. In addition, universities put in place several arrangements during this period to ensure smoothing running of the online classes. The study, therefore, sought to find the experience and lessons that academics developed with the transition to emergency remote learning through a focus group discussion. The focus group discussion adopted a conversation style as suggested by Kvale and Brinkmann (2008). The discussion was based on the following key questions:

1. How did the university academic staff experiences adapted content, learning materials and teaching strategies for the online environment?
2. What lessons for the future have the university academic staff experiences become aware of because of these experiences?

The focus group discussion was recorded through Zoom App recorder, transcribed, and then analysed. We used an inductive thematic framework to analyse data. Creswell and Poth (2018) explain that inductive thematic analysis is a process that allows an inquirer to read data to provide patterns of meaning to describe the phenomenon under study. We followed Braun and Clarke's (2006) stages of analysis as we familiarised ourselves with the data; we coded it; we generated themes; we reviewed the themes, and finally defined and named them. We followed Lincoln and Guba's (1995) criteria of credibility, confirmability, transformability, and dependability to attend to the study's trustworthiness. We also conducted the study in an ethical manner as we protected the participants from harm, we informed them that they had the right to withdraw from the study at any time, and we assured them of confidentiality and anonymity.

### **Findings.**

Five themes resulted from our analysis of the data to answer the research questions. As themes, participants held ideas about their experience and lessons they learnt about digital equity and access to technology; creation online interactive content and teaching modalities; proficiency with the technology and training; as well as the community and university cultural aspects that shape ERT online teaching.



### **Theme 1: Lessons on digital equity and access to technology.**

Academics noted that equity is the biggest obstacle in preparing for ERT content. One academic explained that it was critical to pay attention to student access to online platforms when designing the content. She explains that:

*The less affluent students, mainly from rural communities and townships, had limited to no access to the internet. When classes transition online, these students lost out because of the cost of digital devices and data plans (Participant C).*

A university claiming to provide equal opportunities for all students must reinforce its ideals with concrete actions to support disadvantaged students even during times of emergency. Participant B remarked:

*I understand that National Student Financial Aid Scheme (NSFAS) caters for students from disadvantaged backgrounds to ensure that they have equal access to higher education; however, I do not think they provided allowances for internet connectivity for students and the tools like tablets and iPad. The reality is that not all students benefitted from NSFAS, for various reasons. Students had a lot of stress and anxiety during this time. I had to use WhatsApp as it was an accessible tool for students to reduce their anxiety.*

As a way of addressing student accessibility issues, academics found stopgap solutions to continue teaching, by sending material, activities, and assignments via WhatsApp to reduce student anxiety, ensure academic support and engagement. Participant F also confirmed that:

*While all of us were linked to Moodle, the majority found WhatsApp far more accessible for students than Moodle during this time. Accessing learning material from Moodle was causing student to have 'mini' mental breakdowns. Moodle was inaccessible to most students in the rural and township areas. I had to post activities and video clips to the whole WhatsApp group at once – there were no issues when WhatsApp was used. We learnt to be self-sufficient and to think on our feet...*

From the participants, the COVID-19 pandemic and the subsequent shift to remote learning highlighted the significant digital divide that exists in our society, particularly with regards to education. The pandemic forced universities to quickly adapt to online learning, which highlighted the inequities in access to technology and the internet. One of the key lessons that participants from this study learnt during the pandemic was the importance of ensuring that all students have access to the technology and internet needed for remote learning. The participants learnt the importance of prioritizing student well-being and mental health during times of stress and uncertainty. The pandemic created a great deal of stress and anxiety for students, and lecturers had to find ways to support their mental health and well-being while also ensuring that they could continue their studies.

### **Theme 1: Lessons on creating online interactive content and teaching modalities.**

Emergency remote teaching (ERT), as with contact classroom, requires interaction with content, interaction with lecturer and interaction among students. It is therefore important that lectures adapt or develop their skills to the ERT environment. The findings reveal that academics encounter serious challenges in adapting their traditional contact curriculum content to virtual curriculum content. The findings further reveal that the ERT merely is mainly characterised by depositing PowerPoint slides, assignments, reading material, and occasional video's in a learning management system (LMS) Moodle. In support of the finding, Participant A had this to say, "*I provided notes and sent them to the School Representative Council's email to distribute to other students through WhatsApp*". Participant E confirmed that they use of LMS mainly to relay messages to students and posting learning materials for them. She had the following to say:

*I used WhatsApp to communicate with students and MOODLE e-learning platform as a messaging platform to communicate with students for all notes, slides, extra relevant teaching, and learning documentation to be uploaded to the module. Multiple Choice Questions to be loaded as practice exercises to encourage students to read the notes and practice assessment tasks in preparation for continuous assessment tasks.*

The findings also revealed that academics needed the training to create an online interactive curriculum. Participant F confirms by saying, "*I do not want to lie I was aware that we are supposed to have online discussions with students and foster their own discussions as well, but I did not know how to... I just used Moodle as a storage*".

This ERT experience taught the participants several important lessons about creating effective online content and teaching modalities. First, the best online teaching experiences are interactive and engaging although the participants did not have adequate knowledge to plan for these activities. This means that online content should include interactive elements, such as quizzes, discussion boards, and collaborative projects, that encourage students to actively participate in their learning. Secondly, the participants highlighted that they knew that online content and teaching modalities should be designed with accessibility in mind. This means ensuring that content is available in multiple formats (e.g., video, audio, text), that it is compatible with assistive technologies, and that it meets accessibility standards.

**Theme 3: Lessons on proficiency with the technology and training.**

Understanding the tools involved in online learning, such as the learning management system (LMS) Moodle, web and video conferencing systems, and various learning apps, can challenge even technologically well-informed academics and students. If academics and students are not comfortable using the technology, it becomes difficult to deliver ERT successfully. Participant D described the situation as follows, “*E-technologies and E- learning are still conversations that most lecturers still grapple with. We need to continue with these conversations as much as possible with staff and students*”. The university may have the adequate technological infrastructure to conduct classes online but faces some difficulties with academics who do not have experience with virtual teaching and students who do not have access to the necessary technology. Participant B had the following concern:

*The move to online learning fully, created considerable anxiety among staff and students because this is new and unexpected, and because some of staff and students are living in circumstances that will make it difficult to study and work online at home. We are dealt with all these issues to ensure that our students are not disadvantaged during the lockdown period, we adapted to teaching remotely online. For the future, it becomes important that lecturers and students are prepared for such eventualities.*

This means that the need to university supports and provide both academics and students with training and on-demand resources to help them navigate online learning technologies on a continuous basis not as an emergency response. This support and training need to be available throughout the year and not only when there is a crisis or emergency.

**Theme 4: Lessons on catering for vulnerable and at-risk students.**

The findings reveal that students who were not academically strong, from underprivileged backgrounds and those that may have specific disabilities may find it difficult to fully benefit from online learning as their peculiar needs were not catered for. The participants highlighted that some students were at a disadvantage because they could not afford online mediums or modems to enable them to access online. Students with disabilities were not considered in developing the ERT strategy in this university. Participant E registers her concern as follows:

*I fully concur that online learning is the future of post schooling education. During the COVID-19 period we momentarily forgot about disadvantaged communities and the different abled students. Even today, we still have not addressed most of the challenges that our vulnerable and different abled student highlighted... it's sad.*

The pandemic has highlighted the significant digital divide that exists in many communities and universities and how this situation is further exacerbated among the vulnerable and different abled student. As a result, the participants in this study call for the prioritization of providing technology, internet access, and support to students who lack these resources post Covid-19. Importantly, the Covid-19 era reaffirmed the need for the centrality of individualized student support. Vulnerable and at-risk students have unique needs that require individualized support that was not catered for during the Covid-19 era and still attracts minimal attention.

**Theme 5: Lessons on community and university cultural aspects that shape ERT online teaching.**

The participants indicated that student resilience, their sense of community has clearly come out because of the use of online ERT. They explained that students directed their own learning using cooperative online learning activities and experiences. One participant noted that:

*Most of our students come from rural areas where there was limited internet connectivity. These students come from areas where working together is valued. They pulled resources and used WhatsApp groups to supplement their learning. We did not set these structures up, but the students recognised the benefits of group learning and ended up directing not only their learning but that of their peers.*

The academics at the University studied presented a cultural explanation of the concept of collaborative learning as an enabler in the implementation of the ERT online programme used in their university. Although the academics did not develop this social cooperative and problem-solving process to support student learning, their own sense of agency and community assets allowed them to direct their knowledge construction. It will appear that the students drew from their individual, collective and community assets to bring strengths to an otherwise hopeless situation created by the pandemic in a resource-constrained learning environment.

The emergency presented by the advent of the COVID-19 offered opportunities for a coordinated approach for lecturer agency to develop as they responded and addressed problematic instructional situations. The lecturers as agents of change were active in transforming, contributing, and shaping the work environment for the overall quality learning purposes (Vlachopoulos 2022; Brown, White and Kelly 2021). The lecturers through an interplay of personal and collaborative practices acted with purpose to constructively direct learning and contribute to ERT (Biesta, Priestley & Robinson, 2015).

This ecological understanding of university lecturers as creative and innovative as opposed to disciplinary dogmas is both an acknowledgement that they acted with a sense of agency to set up ERT structures while negotiating, disrupting, and confronting the university structural conditions that inhibited student access to learning (Fu and Clarke 2021). The contextualized and synergised nature of ERT shaped an empathetic narrative and orientation from the lecturers in supporting their students access and proficiency with technology. This ecological orientation to ERT is rooted in pragmatic philosophy of Dewey (Biesta, Priestley & Robinson 2015), which is concerned with how professionals shape their practice in the face of problematic situations. Defined in this way, the lecturer's agency is seen as both personal and collaborative engagement with context specific actions that respond to problematic situations such as developing structures for ERT (Vlachopoulos 2022; Priestley and Drew 2019).

### **What then, were the lessons that participant in this study learnt?**

First, a university claiming to provide equal opportunities for all students must reinforce its ideals with concrete actions to support disadvantaged students. Moving to online learning is a necessary step in, universities must nevertheless do more to help vulnerable students to access and navigate online learning. Secondly, the inequalities in internet access are mainly linked to geographical location and income disparities in society. Universities working with the government need to ensure that students have internet access outside of the university and create equitable learning environments. Thirdly, LMS must be scalable and be able to change and adapt to the changing needs of online curriculum delivery. Moving from one LMS to the other because of new features may be costly for an institution, which is why any LMS adopted by an institution must be flexible enough to accommodate new online teaching innovations. Lastly, there is a need to cater for diverse students learning experiences, learning experiences that cater to students. Academics need to recognise that they teach students with mixed abilities, who have different strengths and weaknesses and develop at different rates. Therefore, have different preferences for learning and in displaying their work. Every student would have their own unique learning style, they may visual preferring videos and pictures; some are auditory and prefer to listening; others may prefer note taking; while some may learn best when work is given incrementally given overtime. The LMS should therefore be able to accommodate these learning preferences.

The COVID-19 pandemic has significantly disrupted traditional modes of education delivery, forcing universities and other educational institutions to quickly pivot to virtual learning to ensure continuity of teaching and learning. From this period, the university that was the research site learned several lessons about virtual learning. First, the pandemic has highlighted the importance of flexibility in delivering virtual learning. Universities need to be adaptable to changes in circumstances and be able to respond quickly to unexpected challenges. Secondly, the pandemic has accelerated the adoption of technology in education, with universities investing in new hardware and software to support virtual learning. The successful delivery of virtual learning requires reliable and effective technology infrastructure. While the university learnt that TEL could present challenges in terms of keeping students



engaged and motivated. To overcome this university developed innovative teaching approaches, such as using interactive tools, gamification, and online forums to promote student engagement. Important as a South African university, the pandemic has highlighted existing disparities in access to technology and the internet, which can be a barrier to technology-enhanced learning for some students. The findings highlight that the learnt that they need to ensure equitable access to technology and support for all students. Lastly, from the findings, virtual learning requires collaboration between faculty members, instructional designers, and IT professionals. Successful virtual learning requires a multidisciplinary team approach to create effective learning experiences. Overall, this historical black university, universities learnt that virtual learning can be an effective mode of education delivery, but it requires careful planning, investment, and ongoing evaluation to ensure its success.

### **Discussion.**

The participants converged on the fact that several students did not have digital access, which meant lack of access to reliable internet connectivity and lack of access to tools and technologies (computers, tablets, smartphones), which did not allow them to fully participate in online learning, while they are away from campus. The digital divide continued to persist in higher education and this impact negatively on the successful implementation of online learning post-Covid 19. Both academics and students have limited access to digital devices and internet connectivity. This is in line with the studies (Sung et al. 2016), who argue that effective use of TEL is only possible when staff and students have unlimited access to technological devices and internet access. Moore, Vitale, and Stawinoga (2018) warn that the “digital divide” which is the gap between people who have sufficient knowledge of and access to technology and those who do not, can perpetuate and even worsen socioeconomic and other disparities for already underserved groups.

Academics encountered severe challenges in adapting their traditional face-to-face curriculum content to ERT content, and they merely deposit study materials of the Learning Management System. Online learning as with traditional face-to-face classroom, requires interaction with content, interaction with lecturer and interaction among students. The findings reveal that academics were not proficient with the use of the Learning Management System. It is therefore essential that lectures adapt or develop their skills to the online learning environment. According to Brady et al. (2010), learning is a social process and, therefore, Social Presence (SP), and this makes it essential as a predictor of perceived learning and promotes a sense of community in online courses. They argue that SP leads to a decrease in feelings of isolation and encourages learner interaction and participation.

The relationship between SP and online participation is that learners with more SP are more involved and engaged in online conversions. According to Dabbagh and Bannan-Ritland (2005) any TEL must have four significant features name: *content*: ability to upload or and download content; *assessment*: ability to implement a variety of assessments; *communication*: the ability to foster student academic and student-student interaction; and lastly *administration*: the ability to monitor and manage students, academics, courses, and grades. Academics therefore need training to be able to create an online interactive curriculum that cater for all the critical elements as proposed by Dabbagh and Bannan-Ritland (2005). Online learning goals are the same as face-to-face classes, but the delivery of teaching and learning differs, and academics need to adapt to online learning methodologies.

Training and Support in ICT usage are necessary, and academics and students experience challenges in using the LMS due to inadequate ICT skills. There is a need for ICT personnel support at institutions. The study reveals that both academics and students are not comfortable using the Learning Management System (LMS) technology, making it difficult to deliver online learning successfully. Findings from the study revealed that the main barriers to the use of LMSs were inadequate technical support by the universities, negative attitude toward technology, and inadequate training on the LMS platforms. Smith and Abouammoh (2013) attribute the main challenges of LMSs in universities to lack of or inadequate training and support, software issues that disrupt teaching and learning. This is in line with the study by Alenezi (2018) which reveals that the main barriers to the use of LMSs were inadequate technical support by the universities, negative attitude toward technology, and inadequate training on the LMS platforms. On-going training programmes on the use of LMS are necessary if we rely on online learning, especially in times of crisis such as the corona virus as we are experiencing it.

The findings highlight that some students were disadvantaged because they could not afford online mediums or modems to enable them to access online. The current debates on access and success

in education focuses on disadvantaged students who may not have access to higher education and their participation may be hindered. McKenna (2012) and Boughey (2012) identify two aspects about disadvantaged students and access to higher education in South Africa, namely: access for success, and access for participation. A number of students are at a disadvantage because they cannot afford a computer or a modem to get online. Some live in very rural areas and lack the technology necessary to use for online learning. Network connections remain poor in some parts of rural areas, and students report they do not have access to the internet at home. Institutions need to realise that they become vulnerable and at-risk failing in their studies unless they are accommodated somehow. Inequality in education will lead to unequal access to high-quality educational experiences (Li et al. 2013; Song and Burgard 2011).

Some features of the LMS are compatible with certain technologies; they can only be accessed through a computer or laptop. The utilisation of handheld devices marks the existence of mobile learning (M-Learning) which evolved from e-learning as students now learn by using smaller and more manageable and transportable devices (Kee and Samsudin 2014). Students will not be coerced to use technology, but the use comes naturally, as they are acquainted on technology use in other facets of life. It is further observed that the presence of handheld devices has “changed the learning methods and learning strategies of today’s teenagers” (Kee and Samsudin 2014). According to World Bank (2012) while access to computers and the internet is still a challenge in many institutions in sub-Saharan Africa, the emergence of mobile devices brings new hope.

### **Conclusion.**

The study provides findings from a relatively small case study that is context specific; however, the description of the participants’ experiences has useful benefits that could provide insights in other contexts. Several reasons may enable or constrain the successful adoption of online learning in higher education institutions. The study reveals that universities may have been caught by surprise by the lock down and were not better prepared to go move curriculum delivery fully online. The university already uses a LMS to deliver education online; however, the LMS is mainly limited to uploading and downloading content and still lacks the features for student engagement, administration, and assessment. Carefully implemented, online learning can make university education more accessible, affordable, interactive, and student-centred.

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