Investigating the E-Learning Challenges Faced by Students during Covid-19 in Namibia

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Abstract

Over the past two decades, e-learning has become an increasingly important field of study that has attracted scholarly and policy makers' attention. Many developing nations have embraced e-learning as a tool to enhance accessibility and affordability of higher education. During the COVID-19 lockdown period, many universities across the world were forced to embrace online teaching and learning to circumvent lockdowns, social distancing and other public health interventions put in place to contain the spread of the novel coronavirus. Consequently, this study sought to establish students' experiences with the e-learning mode during the COVID-19 lockdown in Namibia. The paper discusses the results of an online survey of 137 undergraduate students about their experiences using e-learning technologies during the COVID-19-induced university closures. An online survey instrument was created on Google forms and a link distributed to students through WhatsApp class groups. Quantitative data were presented through frequency tables and figures, whilst we adopted thematic content analysis to analyse qualitative data. The results of the survey indicate that mobile devices remained the primary computing device used to access academic information. An analysis of the study results led to the emergence of five themes, viz, e-learning system accessibility, e-learning platform layout, resources to access Internet and network, isolation and home environment that captured student challenges with online classes. This paper argues that e-learning is still faced by a myriad of challenges that need to be addressed if it is to be a success. Furthermore, we advance the argument for mobile learning as a viable option for Africa due to the ubiquity of mobile devices.

Keywords: e-learning, Namibia, COVID-19, challenges, students, Africa, higher education, universities

1. Introduction

Since the outbreak of the coronavirus (COVID-19) in China in December 2019, the pandemic has had an unprecedented disruptive influence on people's lives across the globe, perhaps the greatest socio-economic disruption since the Second World War (WW11). The pandemic has had a detrimental effect on educational systems worldwide, leading to the widespread closure of institutions of learning in almost all the countries in the world. As of July 08, 2020, the United Nations Educational, Scientific and Cultural Organization (UNESCO) estimated that 1,184,126,508 learners had been affected by school closures globally (UNESCO, 2020). As a result of the suspension of face-to-face classes, many institutions of higher education migrated classes to online platforms.

Historically, many institutions of learning have paid significant attention to Information and Communication Technologies (ICTs), as they are regarded as influential tools in increasing access, managing knowledge and increasing engagement (Gunga & Ricketts, 2007, Mohammadi, 2015). ICTs have long been celebrated for their transformative power on various facets of life (Rambe and Bere, 2013), oftentimes with a degree of utopian bliss (Mare, 2013). The purported transformative power of ICTs has also found an eager audience in the learning domain, with its proponents arguing that the permeation of ICT in education is an inevitable development (Clegg, Hudson & Steel, 2003). As a result, the idea of appropriating ICTs for learning purposes is both popular and seductive to many. Inevitably, the COVID-19 pandemic has shone the spotlight on the purported benefits of learning technologies, or e-learning. E-learning is defined as the usage of ICTs in the delivery of instruction, information, and learning content (Bhuasiri, Xaymoungkhoun, Zo, Rho & Ciganek (2012).

E-learning has been embraced by an enthusiastic audience in Africa, chiefly owing to its perceived potential to

accommodate learners in varying circumstances (Zongozzi, 2020). Proponents of e-learning argue that it improves the quality of education, students' performance and engagement levels (Shen & Ho, 2020). However, despite the widespread enthusiasm towards e-learning, its use remains in an embryonic stage (Barteit et al. 2019; Eke, 2010; Liu, Han & Li, 2010). Notwithstanding, the COVID-19 pandemic has once more provoked renewed interest on the utility of ICTs to access learning information, thrusting e-learning back on the mainstream. As with their global counterparts, universities in Namibia have adopted e-learning to ensure that learning activities continue in the midst of the COVID-19 pandemic. In a country that is regarded as one of the most unequal societies in the world (Pauli & Dawids, 2017), the rollout of e-learning has been received with both optimism and trepidation.

The purpose of this paper is to report on the challenges faced by undergraduate students when accessing learning resources at the Namibia University of Science and Technology (NUST) during the COVID-19 lockdown measures. Student perceptions are an important aspect of e-learning success, yet there is a paucity of studies on challenges faced by these key stakeholders when using e-learning in the Namibian higher education context (Woyo, Rukanda and Nyamapanda, 2020), particularly in the unusual environment created by the COVID-19 pandemic. E-learning has historically tended to be too technologically centered, with the inevitable consequence of institutions of learning overemphasizing the technologies to the detriment of other factors (Kibuku, Ochieng & Wausi, 2020). It is axiomatic that e-learning success is more than just access to the technology.

The rest of this paper is structured as follows: Section 2 is the literature review, which provides a historical overview of e-learning, its reported benefits, challenges, and the arguments advanced by e-learning pessimists. Section 3 outlines the methodology section and justifies the various methodological choices made. This is followed by section 4, which is a presentation of the results, then a discussion in section 5, and finally conclusion and recommendations are made in section 7.

2. Literature Review

There is no agreement on when ICTs where initially introduced into the education sector, with equally as many answers as there are attempts at answering this question (Alkharang & Ghinea, 2013; Bagarukoyo & Kalema, 2015; Hubackova, 2015). For example, Alkharang and Ghinea (2013) argue that the appropriation of ICTs for teaching and learning started in the 1960s, whilst Hubackova (2015) points out that the cornerstone of modern e-learning was set in the late 1980's, with the term e-learning first used in 1999. Similarly, Bagarukayo and Kalema (2015) state that in the South African Higher Education context, e-learning emerged in 1990s. Whilst the term e-learning might be relatively new, ICT appropriation in education is not. With new technological developments, scholars and practitioners across the world are still interested in harnessing computing power for enhancing access to academic knowledge.

Similar to global trends, a number of African countries have adopted e-learning to extend the reach of education in their territories. The growing student numbers in African universities, coupled with a declining number of qualified faculty, have catalyzed the demand for e-learning (Gunga & Ricketts, 2007; Jaycoba & Ilonga, 2019; Lwoga, 2012), with some universities making the adoption of e-learning platforms mandatory (Mpungose, 2020). Some of the reported benefits of e-learning include a reduction in costs, the provision of convenient and flexible learning, less environmental impact, as well as access to quality education (Alkharang and Ghinea, 2013). With many resource-constrained African countries struggling with limited infrastructure that cannot accommodate all prospective higher education students (Lwoga, 2012), the promised benefits of e-learning may explain the widespread enthusiasm around e-learning in Africa.

Whilst e-learning has been promoted an equaliser that can enhance access equity (Awidi & Cooper, 2015), there are a number of scholars who urge caution and reflection when embracing e-learning. In their article outlining various myths around e-learning, Njenga and Fourie (2010, p. 202) question whether e-learning does indeed improve teaching or merely embraced as a "virtual fashion". They further opine that some policy makers are misinformed or misguided on aspects of embracing electronic technologies. The authors argue that the technology as a panacea mindset has led to the adoption of inferior innovations, in some instances, doing so whilst rejecting superior ones. In a similar vein, Clegg et al. (2003) argue that e-learning is shaped by technological determinism and warn against what they regard as passive acceptance of e-learning driven by the neoliberal globalisation paradigm.

Munro (2018, p. 15) provides a fierce polemic against the threat of neoliberalisation and marketisation of higher education. The author questions the implementation of e-learning in the United Kingdom (UK), labelling it as "rather more banal". She argues that e-learning technologies are held as essential tools necessary for opening and extending the reach of UK institutions into new markets. She also warns against the potentially pedestrian, inequitable and pedagogically harmful implementation of digital technologies, owing to the neoliberal ideology and its efforts at the marketisation of higher education. Munro (2016) analysed various e-learning policy documents published over a 10

year period in the UK and concluded that the promises of e-learning were exaggerated, unsubstantiated, duplicitous and sometimes justified through contentious claims. Consequently, it is apparent that doubts regarding the promises of e-learning are not limited to Africa, but transcend continental boundaries.

In Africa, there is a paucity of evidence highlighting e-learning success stories, with literature awash with the promises of e-learning as opposed to actual success stories. Awidi and Cooper (2015) report that a leading Ghanaian university that played a pioneering role in the adoption of e-learning at the turn of the century, had made very little progress a decade later, in spite of the significant investments in ICT infrastructure. Among the problems faced by the university was the lack of a clear corporate e-learning strategy and policy. This is consistent with the observations made by Eke (2010), who noted that lack of vision and implementation frameworks contributed to e-learning failure. E-learning initiatives in Africa are often fragmented and not well planned, seemingly based on a "anything is better than nothing" strategy (Barteit et al. 2019).

Whilst it is important not to throw away the baby with the bathwater, it is critical that African scholars and policymakers hold robust debates on critical success factors that are necessary for e-learning to thrive in the African context. In Namibia, there have been concerted efforts by policymakers to make ICTs an integral teaching tool at all levels of education. The Namibian government's education ICT policy is aimed at capacitating learners, teachers and the community for the modern economy (Gunga & Ricketts, 2007; Paledi & Alexander, 2018). Woyo et al. (2020) noted that whilst the Namibian government developed its ICT for education policy in 2005, research on the perceptions of higher education students regarding e-learning remains limited. They observed that the bulk of the extant literature in Namibia has focused on high schools, thus leaving a gap in knowledge that is yet to be adequately addressed.

The utopian promises of ICT continue to be contradicted by the extant evidence (Rambe & Bere, 2013). The tangible and sustainable success of e-learning systems is a concern shared by universities, governments and scholars (Stepanyan, Littlejohn & Margaryan, 2013). As a result, there is renewed interest among stakeholders in finding answers to a myriad of questions that still surround e-learning. E-learning continues to be punctuated by uncritical celebrations of its benefits (Rambe & Bere, 2013), and a paucity of the necessary critical appraisals (Munro, 2018). Thus this paper adds to literature by reporting on the practical experiences with e-learning in Namibia during the COVID-19 induced lockdown.

3. Method

A case study approach was employed to explore the experiences and perceptions of students who had enrolled for e-learning lessons during the COVID-19 induced lessons. An online survey instrument was created on Google forms and distributed through WhatsApp class groups. This was necessitated by the prevailing social distancing regulations that had to be observed due to the national lockdown. Furthermore, due to the vast distance and sparse distribution of the students, an online survey instrument was deemed as the most effective instrument at reaching the population. A mixed method approach with qualitative dominance was adopted. Questionnaires that included both closed and open-ended questions were randomly distributed to students enrolled for the Business and Information Administration (BIA) programme. University statistics indicate that the BIA programme has a student population of 279 students enrolled for the academic year 2020. The link to the survey questionnaire was distributed through WhatsApp groups, inviting students to share their experiences using the various e-learning tools used by educators. WhatsApp was used because it is the most popular form of electronic communication in Namibia (Nuuyoma, Mhlope & Chihururu, 2020). In fact one telecommunications company indicated that WhatsApp accounted for 98% of instant messages sent through its network (Amukeshe, 2018).

Quantitative data were analysed and presented through frequency tables, whilst thematic content analysis was used to analyse the qualitative data.

4. Results

4.1 Demographic data

A total of 137 undergraduate students responded to the online survey, representing 49% of the BIA student population. Online survey's generally attract a lower response rate (Nulty, 2008), which could be as much as 20% lower than paper surveys (Shih & Fan, 2009). Therefore we believe that the reponse rate for this study was satisfactory. The demographic details are outlined Table 1.

Table 1. Participant demographic data

Variable	Percentage of Respondents	
Gender	Female	79%
	Male	21%
Age Range	<21	26%
	21-25	36%
	26-30	22%
	31-35	7%
	36+	10%
Level of Study	1st year	61%
	2nd year	33%
	3rd year	5%
Mode of Study	Fulltime	55%
	Part-time	37%
	Distance	8%

It is noteworthy that the majority of the respondents were first year students (61%). This could have an influence on the findings in this study. For instance, most of these students were relatively new in the university systems, and getting familiarized with the environment. Fulltime and part-time students normally receive instruction primarily through the face-to-face mode. Hence the need to non-volitionally adopt e-learning might have been more of a novelty to this student demographic. The demographics also reveal that the majority of students were what has to be known in contemporary literature as Generation Z. According to Turner (2015), Generation Z is a generation that was born between 1993 and 2005. Turner (2015) argues that Generation Z has demonstrated the highest levels of proficiency with technology at the earliest age. This generation is regarded as digital natives, and they have not experienced life before the Internet, and have thus grown accustomed to living in an interconnected world. However, it is worth noting that Namibian circumstances may be different, hence the foregoing needs to be viewed with a degree of caution.

The study sought to establish the challenges experienced by university learners when using e-learning, and the following major themes emerged, as captured in Table 2.

Firstly, we sought to establish which Internet enabled devices were used by students to access online study materials during the COVID-19 lock down. Those students with multiple devices were asked to indicate the various devices they used, as reflected in figure 1.
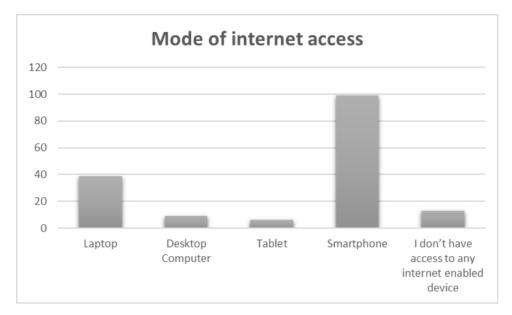
Figure 1. Devices used to access the internet

The majority of the respondents accessed learning material through various mobile devices, with mobile phones being the primary device used. This is unsurprising, given that some scholars such as Donner and Gitau (2009) predicted that the future of Africa is mobile-centric. True to this prediction, mobile device (particularly mobile phones) adoption rates in Africa are the highest in the world (Rumanyika, Tedre, Mikko & Mramba, 2019) and projected to remain so till at least 2025 (GSMA, 2019). The emergence of mobile devices as a primary information access tool necessitates an increased focus on the potential role of mobile devices in enhancing access to learning material.

Next, we sought to establish the type of internet connections used by the respondents, as reflected in figure 2. This was motivated by the fact that previous scholars (e.g. Ilonga, Ashipala & Tomas, 2020) have reported that poor internet connectivity continues to be detrimental to e-learning efforts in Namibia.
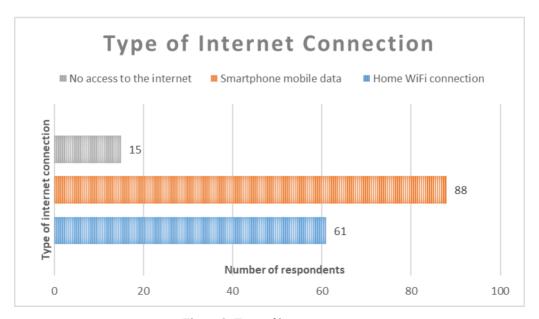

Figure 2. Type of internet access

Just as most of the respondents used smartphones to access the internet, we established that of the 134 respondents who answered this question, most respondents (66%) used mobile data packages to connect to the internet, 31% of respondents indicated that they had a home WiFi connection, and 11% indicated that they had no access to the internet,

and thus missed out on participating in online classes.

Next we sought to establish the challenges faced by students when using e-learning. Verbatim quotes were categorized under various themes, leading to the emergence of 5 themes as reflected in Table 2.

Table 2. Emergent themes and underlying verbatim quotes

Theme	Verbatim quotes
1. E-learning System Accessibility	"I have a challenge to log in with MOODLE"
	"I'm experiencing problems to login sometimes"
	"Struggling to register on MOODLE"
	"It takes an average of 20 to 40 or might not open the platform"
	"Internet is sometimes so slow that you end up leaving the work you were doing"
	"Network is so terrible"
2. E-learning Platform Layout	"When I login into e-learning I find it hard to find the information I'm searching for"
	"Still finding it quite challenging to adjust to the new user interface of the e-learning platform"
	"Don't understand the MOODLE platform"
	"I click on one course, and somehow I find myself on another course"
3. Resources to Access to Internet and Network	"I have insufficient data"
	"The problem that I will face is internet connection, because I don't have enough money to buy airtime"
	"my parents are not working to buy a device for accessing internet"
4. Isolation	"I feel being left out when lectures only consider MOODLE"
	"We feel lost in this quarantine"
5. Home Environment	"Some of us stay in noisy places…"
	"…not finding a quiet place"
	"The facilities I have access to are shared so my time online is very limited"

These accounts suggest that the use of formal e-learning in the Namibian context still faces a myriad of challenges, some of which are not unique to Namibia. In the discussion below, we expound on the themes identified above. The challenges below are critical factors that policy makers should take cognizance of when rolling out e-learning initiatives.

4.2 Theme 1 - E-learning System Accessibility

Students reported experiencing challenges when attempting to access the e-learning platform. This could potentially be attributed to the unusually high volume of user traffic on the e-learning platform. Furthermore, internet network coverage is poor in most areas in Namibia (Taruvinga, Chikohora, Jere & van den Dool, 2020) which could have contributed to accessibility challenges. Nevertheless, this would have significantly affected students' experience e-learning as accessibility is an important variable that influences students' perceptions of e-learning (Alshehri, Rutter & Smith, 2019). A study by Ilonga et al. (2020) among university students in Namibia established that students had to invest in faster internet devices and data so as to mitigate against the effects of slow loading pages.

4.3 Theme 2 - E-learning Platform Layout

The layout of the e-learning platform, which made navigation difficult, was flagged as one of the challenges faced by students. A number of scholars (e.g. Alshehri et al, 2019; Chopra, Madan, Jaisingh, 2019; Uppal, Ali & Gulliver, 2018; Ramayah, Ahmad & Lo, 2010) have identified ease of navigation as an important e-learning success factor. In their study among university students in Saudi Arabia, Alshehri et al. (2019) established that navigation is the second most important (after information quality) predictor of e-learning success.

4.4 Theme 3 - Resources to Access to Internet and Network

A number of students reported experiencing challenges with data costs, which impeded their ability to access the university e-learning platform. This was compounded by the fact that sometimes the e-learning system loads too slow, leading to some students aborting their attempts to use it. The issue of costs has been identified as a major factor impeding successful e-learning implementation in developing countries (Kibuku et al. 2020), including in Namibia (Ilonga et al. 2020). Similarly, Aboagye, Yawson and Appiah (2020) identified accessibility as the most important challenge facing students in Ghana during the Covid-19 pandemic. Naturally, incurring data costs trying to access an unresponsive system created unfavourable perceptions.

4.5 Theme 4 - Isolation

Students expressed a feeling of isolation, which is consistent with some arguments in literature (see Summers, Waigandt & Whittaker, 2005). When discussing what they termed "social issues", Aboagye et al (2020) identified isolation as one of the challenges that faced students when learning through e-learning in Ghana. It is therefore pertinent that e-learning offerings deliberately cultivate a culture of collaboration amongst e-learning students. In collectivistic societies, isolation may be more pronounced than in individualistic societies. African societies are characterized by the tenets of the concept of "ubuntu", a strong sense of community where people live in mutually supportive communities (Nafukho, Onguko, Jepchumba & Gaceri, 2013), which helps learners to collaborate and learn from each other. Whilst technology may never fully replace all aspects of face-to-face socialisation (Njenga & Fourie, 2010), collaborative e-learning systems may mitigate against the feelings of isolation. Ahmed (2020) and Mpungose (2020) proposed the use of social media platforms like WhatsApp for academic purposes, as students could discuss both academic and non-academic activities without being constrained by space and time. Furthermore, Ahmed (2020) argues that the ubiquity brought about by social media may improve information acquisition and retention.

4.6 Theme 5 - Home Environment

The challenges faced by e-learning users were not only technology related, but also social factors had an impact on how they experienced e-learning. Some respondents indicated that their home environments were not conducive for learning. Namibia remains one of the most unequal societies in the world (Pauli and Dawids, 2020), and a number of students enrolled for higher education domicile in crowded high-density locations. It is therefore unsurprising that some home conditions may not be conducive for learning.

4. Discussion

The findings from this study reveal that the appropriation of e-learning still faces a number of challenges within the Namibian context. In spite of the utopian views of e-learning, there is more that needs to be done before e-learning may be regarded as a tool that could enhance access to education and inclusive learning for university students in Namibia. Due to a myriad of challenges, many scholars (e.g. Alkharang & Ghinea, 2013; Hedberg, 2006) in various countries posit that e-learning has failed to live up to its promised benefits. The challenges identified in this study, namely, lack of accessibility of e-learning resources, feelings of isolation, poor performing system, system layout, and home environment, are not unique to Namibia, but symptomatic of e-learning in many developing countries (see Alkharang & Ghinea, 2013; Kaliisa & Picard, 2017).

The various challenges identified highlight the veracity of Bates' ACTIONS (an acronym for Access, Costs, Teaching and learning, Interactivity, Organisational isues, Novelty, Speed) and its updated version the SECTIONS (an acronym which stands for Students, Ease of use and reliability, Costs, Teaching and learning, Interactivity, Organizational issues, Novelty, Speed) models. These models highlight the critical questions that should be problematized when implementing e-learning initiatives. Bates (2003) has provided a comprehensive discussion of the aforementioned frameworks.

Failure to address the various challenges facing e-learning could ultimately lead to increased failure of e-learning initiatives. Some studies (e.g. Njenga & Fourie, 2010; Uppal et al. 2018) have argued that the student attrition rate is higher in e-learning as opposed to traditional modes of accessing education. This makes the assertion that e-learning

information accessible to a wider audience questionable. Accessibility has been found to be an important priority for students in Namibia (Kaupa & Mang'unyi, 2020).

The widespread use of mobile devices to access learning materials demonstrates the veracity of Donner and Gitau's (2009) position that the future of Africa is mobile-centric. Similarly, Asabere (2013) states that mobile devices are the future of learning in Africa, particularly in deprived and sparsely populated regions. Nevertheless, mobile learning is still a nascent field with underdeveloped theories and frameworks (Aguayo, Cochrane & Narayan, 2017; Liu et al. 2010), although it is developing as a distinct discipline divorced from the broader concept of e-learning. Thus, understanding the socio-cultural and economic context of mobile learning remains a virgin territory that needs further exploration.

6. Conclusion and Recommendations

The COVID-19 pandemic has renewed interest in e-learning globally. Whilst many universities have already invested in e-learning platforms such as MOODLE, it is evident that such platforms do not fully address the needs of learners (Mpungose, 2020). Gunga and Ricketts (2007) argued that, "the problem in Africa is generally not just the near absence of e-learning programmes but also the inability of students to gain access even to the few that do exist" (p. 899). Today, that observation is just as valid, with accessibility challenges exacerbated by relatively exorbitant data costs, poor network performance and devices that are not user-friendly when accessing online resources.

Questions around the sustainability of e-learning remain. The advent of the dot.com era around the turn the century, and Massive Open Online Courses around 2012, led to predictions that traditional universities were on borrowed time (Ziguras, 2018). Based on our findings, the demise of the traditional universities seems a rather far-fetched notion. Currently, e-learning in the Namibian context seems to be more of an avocation than an integral part of disseminating educational information. This is not a unique situation, as studies such as Shurville, Browne and Whitaker (2010) have established that in some instances management may publicly show support for e-learning, whilst privately resistant to any significant IT overhaul.

The study is not without its limitations. The respondents were all enrolled for one programme, and the majority of respondents were first year students. It is possible that some students had yet to be fully socialised into the university systems, thus magnifying the perceived ill functionalities of the e-learning system.

Future studies may consider purposively targeting respondents who have reached a certain level of familiarity with resident e-learning platforms. Scholars may also undertake studies profiling students who drop out of e-learning programmes, as well as their reasons for doing so. Whilst the results of this study may not be generalisable, they provide a novel perspective as they report on perspectives of respondents who did not adopt e-learning volitionally nor opted for such a mode, but rather were compelled by the circumstances around COVID-19. More research is needed focusing on how the various challenges experienced by learners can be mitigated especially in the African context. Furthermore, there is a need for research on the critical success factors for mobile learning, due the widespread use of mobile devices in accessing learning resources.

The promises of the transformative power of ICTs in various domains are yet to materialize, particularly with regards to e-learning in Africa. As we seek to make emerging technologies in learning work in Africa, it is worth noting that the appropriation of such technologies is also influenced by local cultural, political and economic conditions, hence the importation of foreign implementation frameworks is unlikely to yield the desired results.

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