Journal of Learning for Development – JL4D
ISSN: 2311-1550
2021, Vol. 8, No. 3, pp. 516-531

Barriers to the Quality of Emergency Online Pedagogies in Higher Education during the COVID-19 Pandemic: A Case Study from the University of Namibia

Ngepathimo Kadhila and John Nyambe

University of Namibia

Abstract: Using the TIPEC framework, this study undertook a critical literature analysis, and student survey to explore challenges experienced by higher education institutions during emergency online pedagogies because of disruptions from the COVID-19 outbreak. The study revealed that most higher education institutions are still grappling with getting technicalities in place such as reliable network connectivity, IT capacity, clear navigation to learning content, timetabling, and session scheduling, and reliable hardware and software required to access online learning platforms to keep teaching and learning afloat. However, little attention is placed on the provision of quality online learning. Therefore, there is a need to move towards enabling epistemological access through the use of online tools in a pedagogically sound and inclusive manner to enable students to develop critical thinking skills. The current quality assurance practices also need to transform to effectively respond to the learning needs of the new normal. Students also need to be equipped with skills that will empower them to effectively use the online system.

Keywords: barriers, emergency online pedagogies, COVID-19 pandemic, higher education institutions, quality assurance, University of Namibia.

Introduction

Worldwide, the higher education landscape has been undergoing unprecedented changes since the beginning of 2020 due to the disruptions caused by the outbreak of the Coronavirus (COVID-19) pandemic. Countries throughout the world have been forced to take drastic measures such as the declaration of a state of emergency to halt the spread of the disease. However, some of the measures adopted by countries have been antithetical to learning and teaching, especially since teaching and learning is a social activity. These measures have included total lockdowns in either parts of a country or an entire country to curtail movement and to force people to stay at home, as well as maintaining social distancing and isolation.

Given the lockdown and social distancing measures taken, higher education institutions around the world had no choice but to close their doors in line with the lockdown measures intended to contain the spread of the coronavirus pandemic. As a result, COVID-19 has created a broad-based crisis for higher education on a global scale (Altbach & De Wit, 2020). Despite their very strong sense of place and/or a strong physical presence in the form of a campus to which students go to learn, higher education institutions were in fact abandoned by both students and academics. This phenomenon caught many institutions of higher learning, including in Africa, off-guard because of the speed with which everything happened. Against this backdrop, higher education institutions world-wide have been forced to abruptly abandon traditional face-to-face pedagogies and to move to 100% online

pedagogies (Altbach & De Wit, 2020). Against this backdrop, using the University of Namibia as a case study, this paper aims at exploring barriers to quality of emergency online pedagogies in higher education during the COVID-19 pandemic.

Background

Prior to the pandemic, although online pedagogies had been widely adopted across the entire education spectrum throughout the world, institutions were, nevertheless, facing a complex combination of barriers that was limiting the long-term success of online learning solutions (Ali, Uppal & Gulliver, 2018). According to Mohamedbhai (2020), in the face of the global pandemic, African countries have had no choice but to resort to the use of information and communications technology (ICT) solutions to deliver their programmes online and at a distance to the students enrolled at their institutions. However, the process has highlighted the digital divide on the African continent between those countries with a better ICT infrastructure than others; between higher education institutions in the same country, with some being far better equipped and experienced than others; and between students at the same institution, namely, the wealthy students who live in urban areas and the poor students in rural areas who are barely able to afford Internet access, when and if it is available (Mohamedbhai, 2020).

Furthermore, between 2020 and 2021, most higher education institutions in the world have reported a drop in new and ongoing student enrolment, linked to the COVID-19 pandemic's impact on families' economic circumstances and on students' mental health (Kakuchi, 2021). Alongside financial difficulties, lack of access to online learning platforms and lack of support offered for students were the biggest reasons cited by students for dropping out.

Just like other parts of the world, higher education institutions in Namibia also took drastic decisions to put in place measures to ensure that learning continued to take place by moving all their courses online. While there was already online infrastructure in place at these institutions as they had been implementing online pedagogies on a smaller scale, it was, nevertheless, reasonable to assume that the mass migration of face-to-face students to online pedagogies could constrain the capacity of the existing infrastructure and other resources available, thus, posing a threat to the quality of learning and teaching. Hence, a study was conducted through a survey administered to students at the University of Namibia with the purpose to determine the range of barriers impacting on the success and quality of online pedagogies during the COVID-19 outbreak.

The study sought to answer the following questions:

1. How are higher education institutions utilising technology to support learning during the COVID-19 pandemic?
2. How are higher education institutions ensuring quality of online learning during the COVID-19 pandemic?
3. How are students experiencing online learning environments during the COVID-19 pandemic?
4. How can the quality of online leaning be enhanced during and after the COVID-19 pandemic?

Literature Review

The use of electronic systems and applications to facilitate learning and teaching in higher education has gained momentum over the past few decades. With the "e-storm" (Kim & Bonk, 2006) associated with the unprecedented revolution in ICT, online pedagogies have increasingly come to be used in conjunction with traditional, face-to-face pedagogies in higher education with online pedagogies often being referred to as a rival of traditional face-to-face pedagogies. Also termed e-learning or remote learning, online pedagogies manifest in the global higher education landscape in the following three main modes (Abaidoo, 2015; Kim & Bonk, 2006), namely, i) the computer-assisted mode, where the use of computers through programmed learning supplements traditional methods when needed; ii) the blended learning mode, where face-to-face classroom teaching and learning takes place in conjunction with online teaching; and, iii) the completely online mode, which involves the exclusive use of a network to facilitate learning and teaching and which is completely devoid of the traditional, face-to-face method.

Conceptualising Online Pedagogies

Online pedagogy has generally been conceptualised as teaching and learning that involves the use of information and communication technologies to enable access to learning; learning that is enabled electronically; learning that is empowered using multimedia technologies and/or any learning that is Internet enabled or Web based (Abaidoo, 2015; Thomas, 2014). Online pedagogies relate to the use of electronic systems and applications within learning processes whereby learning content is delivered remotely via an electronic solution, for example, the Internet, satellite TV, radio, CD-ROM, among others (Ali et al, 2018). To provide scaffolding for the further understanding of the concept, Bates (2015) offers a distinction between technology and media although there is a very thin line between the two. Technology encompasses tools that support learning and teaching, for example, computers, software programmes, learning management systems and communication networks (Bates, 2015).

It is also important to note that, the communicative learning environment are affordances in terms of the time and space dimensions. In such a case, Abaidoo (2015) distinguishes between synchronous and asynchronous dimensions. Synchronous online pedagogy refers to the type of online pedagogies and teaching whereby the lecturer and students are communicating in real time, as if they were in the same physical space, thus offering the advantage of instantaneous feedback. Thus, synchronous online pedagogies provide live or transient learning opportunities which are more face-to-face, for example, lectures, seminars, and one-on-one tutorials (Andersson & Grönlund, 2009). On the other hand, asynchronous online pedagogy refers to online teaching and learning whereby the lecturer and student are not communicating in real time through platforms such as discussion forums, emails, social media, and pre-recorded lessons (Abaidoo, 2015; Bates, 2015).

Theories Underpinning Online Pedagogies

It is important in the context of this study to note that the choice or design of an online learning environment is never a neutral one but is, instead, fundamentally influenced by our views and beliefs about reality (ontology), knowledge and ways of knowing (epistemology). Kim and Bonk (2006) argue that an online learning environment, underpinned by a constructivist orientation, will be designed in a manner that is highly supportive of the constructivist tenets of learning such as interaction, peer to peer collaboration, project-based learning, critical and creative thinking and active student participation and involvement in knowledge construction. An online pedagogies system that is

underpinned by the constructivist philosophy of learning will, therefore, include features that promote independent and self-directed learning, critical reflection, hands on performances, interactive laboratories, data analysis and scientific simulations (Blackburn, Villa-Marcos, & Williams, 2019; Kim & Bonk, 2006; Thomas, 2014).

Accordingly, given its underlying ontological and epistemological orientations, the online learning environment may either tend towards a broadcast orientation, which is a one-way transmission orientation, or it may tend towards a communicative orientation, which is a two-way or multiple communication orientation. However, it is not unusual to find both orientations co-existing, depending on the purpose or objective of the learning and teaching in question. Bates (2015) observes that, in a broadcast environment, learning tends to be transmission oriented, with one central figure (usually the teacher) communicating to several students. The communicative environment, on the other hand, fosters interaction and collaborative learning, with lecturer to students and student-to-student interaction.

While, in the broadcast environment, the teacher or lecturer constitutes the locus of power, in the communicative system power is decentralised with students being able to actively participate in learning and being able to contribute to, or change, the message, that is being transmitted. However, as indicated earlier, the two environments may be used in a manner where they augment one another, depending on the specific purpose being pursued. Bates (2015) argues for the placement of the two designs on a continuum instead of viewing them in dichotomous terms. Broadcast media or one-way communication media include, among others, television, radio, institutional websites, and print media, where the end users or recipients have no power to change the message being transmitted. On the other hand, communicative media, where all users can communicate and interact with each other include, among others, the telephone, videoconferencing, email, online discussion forums, blogs, wikis, most social media, and the Internet (Thomas, 2014).

Advantages and Disadvantages of Online Pedagogies

Often, online learning has been criticised for not being able to engage students amply, although myriads of research have proved that it is an action- and student-oriented model which, when applied effectively, has the potential to achieve optimal education and learning outcomes. The literature highlights several advantages and disadvantages of online pedagogies. The advantages include, among others, flexibility in terms of time and space, ease of access to huge volumes of information, collaborative opportunities, individualised learning, self-pacing of learning and promotion of independence among the students (Kakuchi, 2021). In addition, the benefits of online learning, if exploited effectively, can help to mitigate the effects of deferment and conventionalism in these institutions, and promote the critical thinking skills development of students as would be expected in conventional residential practices (Larbi-Apau, 2021).

The disadvantages, on the other hand, include, among others, the limited personal interactions, negative impact on the students' communicative skills and the likelihood of piracy, plagiarism, cheating and copying and pasting (Kakuchi, 2021). In addition, the socialisation of the student may be negatively impacted upon, leading to isolation and a lack of social connectedness in learning and teaching. The sole use of online pedagogies may also pose a challenge in the scientific fields where hands-on and practical experiences may be required, for example, in the engineering and medical fields while simulations may also not adequately address the need for practical experience. In the

context of the developing nations, with their resource constraints, online pedagogies may pose a challenge to some of the national goals of education such as access, equity, and quality while some students may be denied access to education due to the challenges of accessing it online (Mohamedbhai, 2020).

Use of Online Pedagogies during the COVID-19 Pandemic

A critical literature analysis pointed out that COVID-19 has created havoc and contributed to a social panic that has led to a temporary closure of most campuses across the world. It has become impossible to meet face-to-face for on-campus course delivery and in-person interactions and to use the universities' physical setting for intellectual and academic pursuits (Amemado, 2020). According to Amemado (2020), UNESCO statistics, as of March 23, 2020, showed that about 1.7 billion students and learners around the world were unable to attend either school or university. This figure accounts for 90% of the world's student population. Online learning has become the new normal in many places of learning, with the key purpose of averting the effects of the COVID-19 pandemic (Larbi-Apau, 2021). Online pedagogy has been seen as a tool for mitigating the unprecedented disruption caused by the COVID-19 outbreak. Given the outbreak, higher education institutions were left with no option but to resort to the use of digital platforms to deliver their programmes online and at a distance to the students enrolled at such institutions (Mohamedbhai, 2020). Online pedagogies facilitate the potential for remote interaction between students and lecturers (Ali et al, 2018). However, it has been argued that online pedagogies differ from conventional classroom pedagogies (Kirwan & Roumell, n.d.).

It is self-evident that there are numerous challenges associated with online pedagogies and that it is imperative that institutions, which have had to abruptly implement online pedagogies in response to COVID-19, understand all these challenges and address them to ensure the quality of the online student learning experience. This is particularly important considering that the consequences of the COVID-19 outbreak are serious and the fact that it may permanently affect pedagogy going forward with online pedagogies becoming an essential component of higher education.

In the wake of this situation, a consequence of the COVID-19 outbreak, most higher education institutions in the world, including in Namibia, have been compelled to abruptly replace face-to-face learning with online pedagogies as it was not possible for lecturers and students alike to physically attend classes. As part of the preparation for such online pedagogies, lecturers at the University of Namibia were given approximately one week to prepare their lessons and learning materials, and to upload them online. Some institutions also managed to bargain with Internet service providers to supply Internet devices, including data, to staff and students at an affordable price. However, the literature analysis established that both staff and students had, nevertheless, experienced challenges during the rollout of online pedagogies (Amemado, 2020; Mohamedbhai, 2020; Tamrat & Teferra, 2020). On the student side particularly, alongside financial difficulties due to the economic downturn linked to the coronavirus, lack of access to online learning platform and lack of support offered for students were the major reasons cited by students for dropping out (Kakuchi, 2021).

Methods

Conceptual Framework

This study adopted the TIPEC framework [Technology (T), Individual (I), Pedagogy (P), and Enabling Conditions (EC)], which highlights the key concepts hindering online pedagogies. Using this as a conceptual framework, the study undertook an in-depth analysis of barriers facing higher education institutions when implementing online pedagogies using Namibia as a case study. This framework was developed by researchers from the University of Reading who reviewed online learning research from 1990 to 2016 to identify barriers to implementing online pedagogies. The authors identified barriers and grouped these into a proposed TIPEC framework of technological, individual, pedagogical, and enabling categories (Ali, Uppal & Gulliver, 2018). Figure 1 represents TIPEC's conceptual framework, highlighting online learning implementation barriers which are grouped into four main categories, namely, Technology, Individual, Pedagogical, and Enabling Conditions.

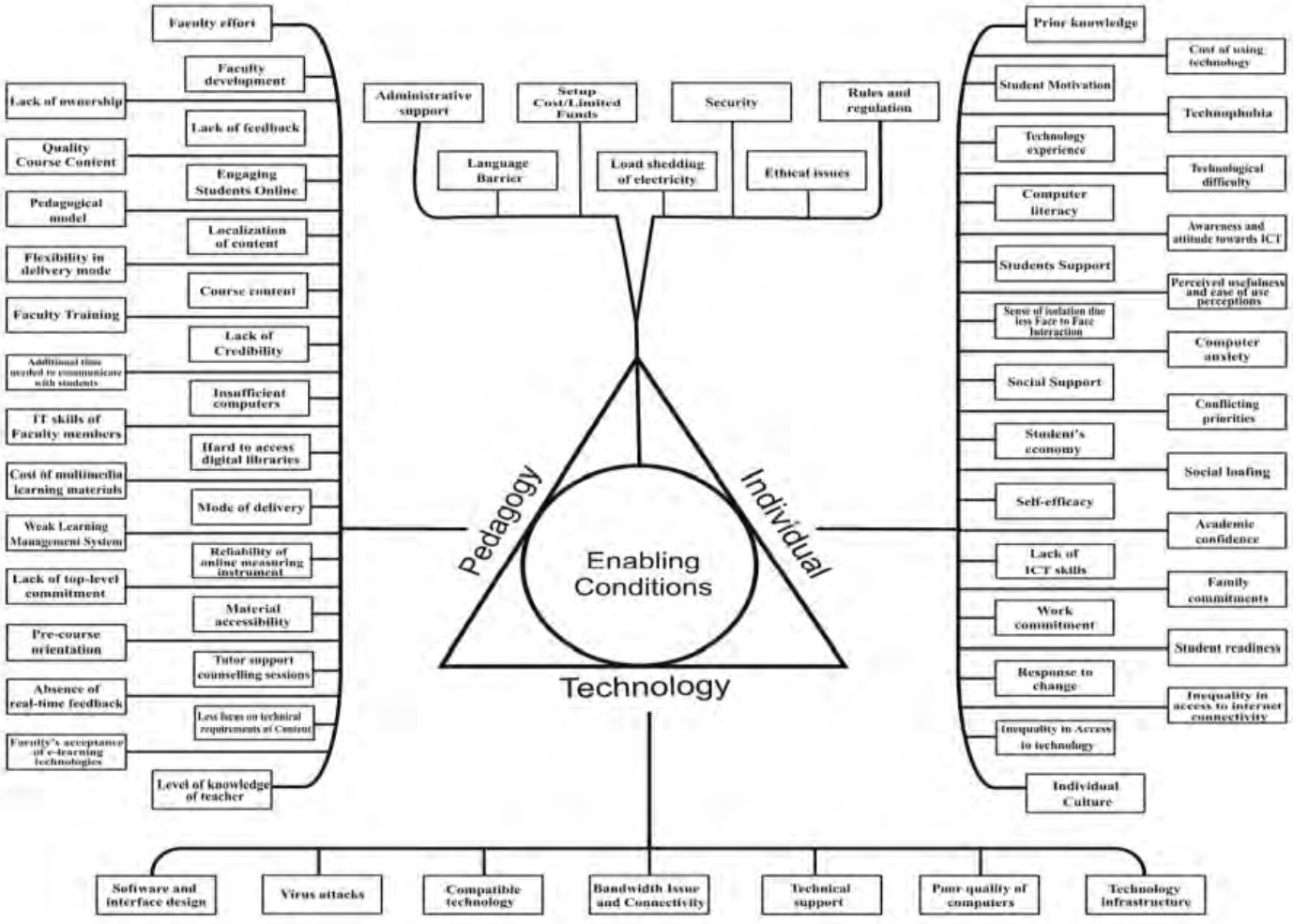

Figure 1: A conceptual framework highlighting online learning implementation barriers

Source: Ali et al (2018, p. 165)

The conceptual framework presented above identifies 30 implementation barriers hindering the effectiveness of online pedagogies, potentially impacting adversely on the quality of the teaching and learning in higher education institutions. These barriers are grouped into four main categories, namely, challenges pertaining to individual characteristics (both students and lecturers); technological challenges (access, cost); course challenges (different support functions, the course itself with its pedagogy and activities); and contextual challenges (the institutional management and organisation as well as the surrounding society with its values and regulations).

Methodology

Using the TIPEC framework, this paper is based on a case study of a student survey which was administered to students at the University of Namibia (UNAM) studying online during emergency online remote learning, across all programmes, years and modes of study, between March and April 2020 during the first wave of the COVID-19 pandemic. The University of Namibia is a public higher education institutions with twelve (12) standalone campuses across the country. The ICT situation in Namibia is such that the network connectivity is concentrated largely in major towns within a radius of 10K. Most of the network towers across the country are 2G and 3G, with the main towns and cities covered by 4G. Most of the rural areas are still not covered by network connectivity. The purpose was to explore how the university has responded to the pandemic and challenges experienced by students in terms of online pedagogies; and to establish the types of devices students were using, their connectivity status and their geographical location.

Tools Used

The survey tool was sent out to students through the online student portal as well as through mobile texting messages. The online survey questionnaire asked questions around the kind of Internet connectivity and types of devices students had at home; student experiences with online remote learning; and the learning needs that students had. This questionnaire was widely disseminated to students via various media such as mobile text messages, emails and the student portal.

Sample

Of a student population of approximately 30,000, a total of 11,920 students (about 40%) responded to the survey. The response rate was overwhelming as this was a very sizeable response. As Lindemann (2019) points out, the average survey response rate is 33%. It is interesting to note that, of the students who participated in the survey, 22% were able to respond through the online portal while the majority (78%) responded through text messaging using their mobile phones.

Data Collection and Analysis

Data from the student survey were sorted using a Microsoft Excel sheet. The information gathered from this process necessitated the use of quantitative data analysis procedures. Hence, descriptive statistics which included frequencies and percentages were used.

Findings

The findings from this study revealed that the COVID-19 pandemic has resulted in temporary physical closures of the University of Namibia since the 2020 academic year. This state of affairs has left decision makers within the institution with unprecedented challenges such as to opt to safely reopen the University, or to move to remote online learning while making sure that disadvantaged students are not left behind. The university was left with no option but to choose to continue with its

pedagogical activities through its existing structures dedicated to online teaching. By and large, the pandemic has transformed the way teaching took place, accelerating transformation that was already taking place in the form of online learning and teaching. However, technological, pedagogical and individual barriers identified by Ali et al (2018) were reported as presenting potential inequalities in access and participation in higher education at the University of Namibia.

Technological Barriers

Although the university already had an existing online learning platform (i.e., Moodle) for its blended learning and online programmes, this infrastructure had limited capacity as they were not designed for large-scale online learning. Furthermore, the university provided some sort of support to the teaching and learning process in the form of distribution of 4G modems and data to teaching staff and students at a low cost which was negotiated with a local mobile telecommunication provider as an intervention in response to the effect of COVID-19. However, these were found not to be working effectively, particularly in areas with weak or no network reception. Therefore, technology access challenges for both teaching staff and students remained a challenge. Of the students who responded through text messaging, 33% indicated they had availability of Internet connectivity and access to information technology (IT) devices. It may, therefore, be assumed that these students were able to participate in online pedagogies. However, 67% indicated no connectivity. It appeared that most of the students who participated via text messaging were those students who were residing in the rural areas during the lockdown period. Figure 2 depicts the proportion of rural-based students who had connectivity as compared to the proportion with no connectivity.

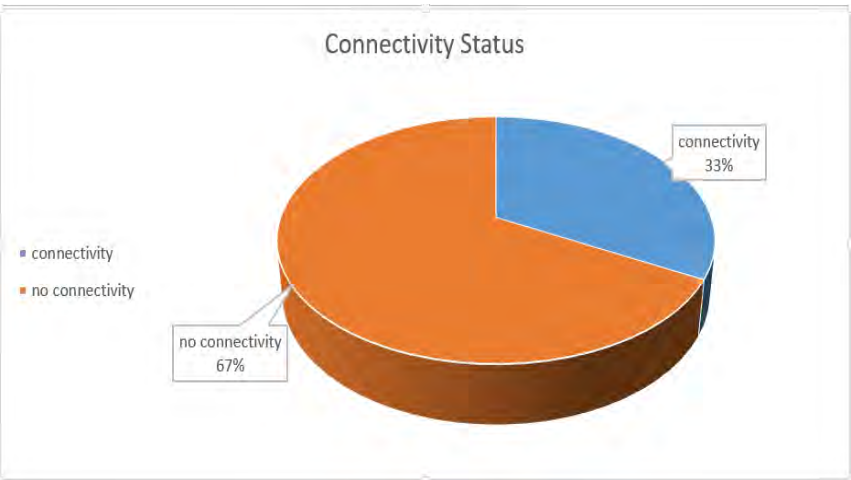

Figure 2: Connectivity status – data gathered through text messaging

It may, therefore, be concluded, in line with Ali et al's (2018) categories of barriers to the effective implementation of online pedagogies, that technological challenges, especially those in relation to connectivity, constituted a challenge for many students. Although some of the students indicated that they owned smartphones (see Figure 3) and, while the institution in question had distributed 4G devices to all the students, nevertheless, most students still indicated that they either did not have Internet connectivity at all, had weak/low speed or unreliable connectivity, and/or gadgets which meant that they were unable to access online pedagogies. Accordingly, despite the countrywide deployment of 4G modems to students, connectivity remained a challenge for many students,

especially in the remote rural areas where there is no network coverage to support Internet connectivity, or where students may not have the devices required for Internet connectivity. Figure 3 shows devices owned by the students in Namibia as per the data sourced through text messaging.

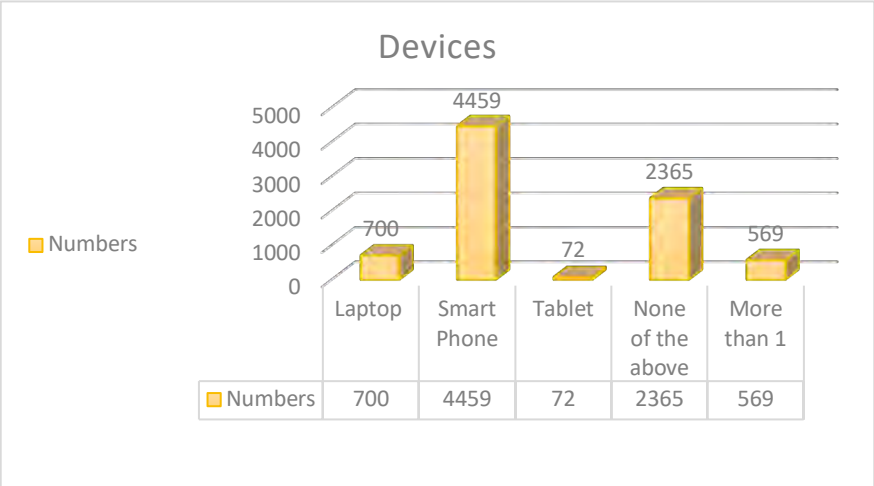

Figure 3: Devices owned by the students – data sourced through text messaging

As indicated in Figure 3, most of the students (42%) who participated in the survey through mobile text messages indicated that they owned smartphones, 7% of the students (approximately 700) owned laptops while 5% (569 students) indicated that they owned more than one of the devices which could be used for online pedagogies. However, what is of concern in the data is the fact that 22% of the students (2,365) indicated that they did not own any of the devices that were referred to in the survey. It appeared that most of the students lacked equipment such as computers, laptops, tablets, smartphones necessary to participate in the emergency remote online learning process as the majority of them come from families that are not well-off financially. Furthermore, it turned out that most students simply owned a cheap version of mobile phones that can be used to make calls and send text messages only. Therefore, the 4G modems and data received from the institution were of no use in the absence of compatible IT devices. However, even those who owned smartphones indicated that they were experiencing connectivity challenges. It was, therefore, evident that online pedagogies were not without problems. Nevertheless, this study did take note of the fact that the institution in question had devised a creative and innovative "credit recovery strategy" to address the issue of students who may have been unable to utilise various online pedagogies for learning purposes during the lockdown period due to connectivity challenges.

Furthermore, it is incumbent on higher education institutions to invest in IT infrastructure more than ever before to enable them to effectively support technology enhanced learning on a large scale as a longer-term solution, particularly because it is uncertain as to whether this situation will last for a short period only or whether it will have a lasting impact. There are many ways in which providers may ensure that any disadvantage to students is limited, including the development of 'no detriment' policies. According to the Quality Assurance Agency for Higher Education, UK (QAA, 2020), a 'no detriment' policy seeks to mitigate against the impact of a set of circumstances by ensuring that the individuals affected are not unfairly disadvantaged by a requirement to change assessment rules or regulations. In practice, for many higher education providers, 'no detriment' means students are

guaranteed that their final grade will be no lower than their average academic performance prior to the pandemic (QAA, 2020).

Pedagogical Barriers

Mohamedbhai (2020) states that the process of migrating to the use of information and communications technology (ICT) to deliver programmes online at a distance from the students enrolled has exposed the digital divide within the African continent. This development has also exposed inequities in the system that must be addressed to ensure the provision of equitable access to quality online higher education. Amemado (2020) states that almost all higher education institutions around the world attempted to implement online education, albeit at different paces, ranging from the off-line, drop-and-go model to highly intensive, well-structured, and fully online programmes. In the case of the University of Namibia, teaching staff were given two weeks to adapt their teaching material developed for face-to-face teaching to online formats. This implies that most of the teaching staff were not ready for the switch to emergency remote online teaching pedagogies. Therefore, the university faced problems with its capacity to effectively and efficiently deliver online pedagogies in terms of technological tools and knowhow. Furthermore, although the institution provided some sort of support to the teaching and learning process in the form of training and technical support for the teaching staff and students, this was not adequate as it was underrepresented just to keep learning afloat. As a result, student assessment and academic integrity in the context of online learning remained an area of greatest concern.

Experience has shown that, for online pedagogies to be at all successful, the teaching materials must be prepared by professional instructional designers, lecturers must be pedagogically trained for developing and delivering online programmes, and students must be exposed to the dynamics of online learning. According to Mohamedbhai (2020), unprepared online pedagogy has a negative impact on the quality of the programmes offered. According to Mohamedbhai (2020), it is a delusion to believe that online pedagogies may be effective by merely posting a lecturer's notes online or making a video recording of a lecture. However, this was what was generally happening at the time of this study.

Mohamedbhai (2020) points out that the worst affected programmes will be science and technology as students will be unable to access laboratories for their practicals. However, governments regard science and technology programmes as playing a key role in Africa's development. Thus, higher education institutions are faced with a dilemma in finding alternative approaches to using laboratories and in how to mitigate the consequences of poor-quality programmes because of unplanned online delivery. Accordingly, with the increasing demand for online pedagogies due to the COVID-19 outbreak, it is incumbent on higher education institutions to find scientifically grounded guidelines, measures, and instruments to monitor all important quality aspects, to improve the quality of the learning and teaching in the online setting and to support sustainable online education programmes.

Quality assurance in online pedagogies has been identified as a critical component of the success of online pedagogies. Accordingly, the success factors in relation to online pedagogies depend on the ability of higher education institutions to position quality at the core of all their online educational activities in the interests of the needs of their students (Blieck et al, 2017). Blieck et al (2017) stress that, if the quality of education after the implementation of online pedagogies is not equivalent to, or better

than, the quality before implementation, then all efforts have been in vain. Nevertheless, students at African universities have experienced challenges such as connectivity issues, the lack of infrastructure and the cost of data (Amemado, 2020). This is in line with Mohamedbhai (2020) who points out, it is a fallacy to believe that online pedagogies may be effective by merely posting a lecturer's notes online or making a video recording of the lecture. However, it appeared that this was, in fact, the case at the time of this study.

At the University of Namibia, the teaching staff faced the challenge of unprecedented adaption of their curricula and methods to online teaching; effectively supporting students in online learning; adapting assessment strategies that ensure safeguarding of quality standards and academic integrity in the context of online learning; and adapting reliable quality assurance strategies for online delivery. As a result, there was an overwhelming perception (92%) that students' workload increased during emergency online teaching and lack of real-time interaction with teaching staff, posing the risk of disengagement and drop-out of students who face difficulties in the online environment.

It appears that the University of Namibia faces the challenge of developing new policies that can balance between dealing with the pandemic while providing a stimulating academic experience, including better online teaching that can bring students together (Kakuchi, 2021). It is, therefore, suggested that higher education institutions put in place quality assurance measures that respond effectively to the prevailing online pedagogies demands. In addition, together with the need to ensure that students are not disadvantaged, it is essential that the bodies awarding qualifications are also confident — and are able to demonstrate — that graduates in 2020 have not been disadvantaged compared to their peers from previous years; and, that they will not be disadvantaged in future years by being known as the 'COVID-19 generation', whose degree classifications are not deemed to be reliable (QAA, 2020). Furthermore, most higher education institutions seem to have spent most of their resources trying to get the basics right in terms of putting technological logistics in place such as reliable network connectivity, IT capacity, clear navigation to learning content, timetabling, and session scheduling, and reliable hardware and software required to access online learning platforms (University World News, 2021). However, little attention was placed on ensuring the quality of emergency online pedagogies. Accordingly, it should be noted that physical access to online learning platforms does not automatically translate to access to knowledge, although this is the stage where most African higher education institutions spend most of their energy (Mohamedbhai, 2020). Therefore, higher education institutions need to move towards enabling epistemological access, or access to knowledge through online learning platforms. This could be achieved through initiatives such as making online learning sessions more interactive; training and supporting lecturers to use online tools in a pedagogically sound and inclusive manner; and thinking about the pace of delivery.

In line with the arguments above, there is a need for continuous intellectual debates and discussion within higher education institutions on reconceptualising online and blended pedagogies, including assessment methods, through activities such as presentations and workshops. For example, teaching students to develop critical thinking skills will require augmented knowledge, not only in the subject matter but also knowledge in the dynamics of online learning including context, influential theories, and application of germane instructional strategies, among others. Using multimedia resources such as audios, animations, videos, infographics, images, simulations, and texts provides the opportunity to make meaning of an otherwise passive learning environment. Group collaboration, inquiry-based

learning, presentations, seminars, reflective assignments, and student-led discussions can promote active online learning and internalisation of critical thinking skill development through a plethora of digital communication and collaboration tools and resources (Larbi-Apau, 2021).

It is clear from the findings of the student survey, that the COVID-19 pandemic has posed several challenges to the University of Namibia. However, there is always opportunity in every crisis and this pandemic has also provided opportunities for all higher education institutions to speedily improve and maximise their ICT operations. Therefore, despite the many challenges facing the University of Namibia in the implementation of online remote pedagogies, the COVID-19 pandemic has presented the university with the opportunity to rethink and reconceptualise the nature and methods of teaching and learning in a higher education institution of the future where online learning becomes the new normal. Therefore, the university needs to rethink how the pandemic will affect it in the longer term post-pandemic in terms of technological capacities; staff pedagogical training and support; and student recruitment and retention, achievement of learning outcomes and graduate employability. In addition, all indications are pointing to the fact that, even if the coronavirus pandemic were to come to an end soon, the higher education landscape will never again be the same. Higher education institutions all over the world have recognised the importance of online pedagogies with the crisis presenting them with a range of opportunities for fast-forwarding their digital transition. Accordingly, this study suggests that it is essential that higher education institutions in Africa, including Namibia, adapt to the new realities. Together with investment in IT capacity, higher education institutions must transform their existing quality assurance practices to ensure that they are able to respond to the new challenges posed by the rolling out of full-scale online pedagogies.

As was the case with the students, given the sudden arrival of the pandemic, there were no specific professional development arrangements made for academics prior to the mass migration to online pedagogies. Although professional development had been offered prior to the pandemic, not all academics had been sufficiently committed to the development activities offered, as it appeared that they had not required such skills at the time, when face-to-face teaching opportunities were available to them. It is possible that many lecturers were struggling to migrate so suddenly to online teaching. This challenge was highlighted in the context of online assessment. The provision of professional development started after the migration to online teaching was underway. It is possible that the various affordances that online pedagogies offer could not be fully exploited. For example, the various possibilities that online pedagogies offer under constructivist learning and teaching such as peer-to-peer collaboration, interactive learning, creative and critical thinking, among others, may not have been fully explored, given the technological challenges being experienced by both students and academics.

Individual Barriers

The literature review has revealed that, despite opportunities for all higher education institutions to speedily improve and maximise their ICT operations, the COVID-19 pandemic is posing several challenges to many higher education institutions, particularly in Africa. There are technological and quality related challenges experienced during emergency online pedagogies because of disruptions from the COVID-19 outbreak (Andersson & Grönlund, 2009). It may be concluded that the provision of online pedagogies in higher education institutions all over the world, particularly in Africa, was faced by technological challenges which were compounded by, among others, bandwidth and

connectivity problems, lack of technical support to students, problems associated with technology infrastructure, technological difficulties, and a lack of technological experience. The fact that conflicting priorities may have impacted on online pedagogies must also not be ruled out. For example, the students' time may have been divided between online pedagogies, self-isolation if they were sick from the virus, and tending to sick family members who may have contracted the virus (Tamrat & Teferra, 2020).

From the University of Namibia student perspective, the survey results revealed that a significant proportion of students encountered serious challenges in their learning. At least 67% of students indicated that their academic performance changed for the worse since face-to-face classes were ended abruptly, and more than half of the students surveyed reported having a larger workload since the transition to online teaching. Internet connectivity remains a challenge for most students, particularly those who migrated to rural areas. The level of digital literacy was also reported (55%) to be one of the challenges. Furthermore, more students have reported experiencing psychological and emotional problems due to anxiety and frustration from learning online during the COVID-19 pandemic, lack of support, and/or losing a close relative to the pandemic. It is important to note that, because of the abrupt way they had had to vacate campus at the onset of the COVID-19 pandemic, the students had received no preparation from the institution in question to empower them with the skills required to use the online system.

In addition to challenges of access to equipment and to a reliable Internet connection, obstacles related to studying conditions such as access to a quiet place to study, access to course study materials, and confidence in using online platforms) were also reported (75%). Furthermore, some students experienced challenges related to funding and difficulties in meeting their studies' financial obligations and living costs as their guardians suffered loss of employment/income to the impact of the pandemic on the economy. These findings echo Tamrat and Teferra (2020) who state that students in higher education institutions in Africa face a challenge in accessing digital platforms. Amid the COVID-19 pandemic, higher education institutions across Africa have been urged to move their teaching and learning online to counter the disruption to learners caused by the nationwide lockdowns of institutions (Perris & Mohee, 2020). This is in line with TIPEC 4 categories of barriers to the effective implementation of online pedagogies, namely, challenges related to the individuals' characteristics (both students and lecturers); technological challenges (access and cost); course challenges (different support functions, the course itself with its pedagogy and activities); and contextual challenges (the institutional management and organisation as well as the surrounding society with its values and regulations) (Ali et al, 2018). This study established that similar challenges were experienced by students and lecturers alike during the mass migration to online pedagogies.

Issues relating to inequality in relation to access to technology across the student body, given the diverse socio-economic backgrounds, predominantly emerged from the student survey. These findings are in line with Bassett (2020) who points out that students, particularly those at African higher education institutions, are protesting about the equity disparity that is exacerbated by a lack of access to online learning technology for students who are without either access to or the resources to afford the technology being left behind. In addition, students with learning challenges are also being left behind, like those students with disabilities. Students who rely on the institutions where they are studying for housing, food, and healthcare are finding themselves uprooted and uncertain about their

options, while students who work on campus or receive scholarships as their main source of income are faced with a crisis of earnings. Institutions away from the urban centres, often without robust infrastructure, are also being left behind, as are institutions whose mission it is to teach those who are the most likely to fall out of the education pipeline (Bassett, 2020).

Conclusion

The COVID-19 pandemic has threatened higher education and resulted in traditional face-to-face pedagogies in higher education institutions across the world coming to an abrupt halt and an unprecedented shift to online pedagogies. However, just like other higher education institutions, particularly in Africa, the University of Namibia has experienced several online learning implementation barriers similar to those identified in the TIPEC conceptual framework as already mentioned in the foregoing discussions. Nevertheless, although higher education institutions including the University of Namibia have experienced several challenges during the mass migration to online pedagogies, this crisis has also provided an opportunity for African governments and higher education institutions to rethink and prioritise investing in robust ICT and Internet services more than ever before to improve and maximise ICT operations and build the capacity required to fully deliver entire programmes online. So it seems that online pedagogies are the way of the future, particularly as all indications are pointing to the fact that, even if the coronavirus pandemic were to come to an end soon, the higher education landscape will never be the same again. Remote learning is set to expand in the longer term beyond the COVID-19 outbreak with virtual events becoming more common than was the case before. This requires that higher education institutions adapt to the new realities with the concomitant quality assurance implications.

Furthermore, it appeared that, during mass migration to emergency online pedagogies, the University of Namibia did not have adequate technological and technical capacity for online learning, which is why they simply transmitted lecture notes and videos of lectures, etc., and this is where quality is most at risk. Therefore, the University of Namibia, and any other higher education institution which is down the road of advancement towards technology enhanced learning needs to re-imagine and re-orient its quality assurance measures to ensure that it is suited to the new normal of the digitalised higher education space. Higher education institutions need to develop new procedures, guidelines and protocols on online pedagogies and assessment, including academic integrity to ensure that the academic standards of the qualifications awarded remain intact, while also recognising the challenging circumstances of the students concerned. Open universities, including in Africa, have done this and traditional face-to-face higher education institutions could learn from them. Furthermore, the teaching staff must be pedagogically reskilled to ensure that they have the capacity to develop and deliver online programmes in a pedagogically sound manner. Students must also be equally equipped with skills that will empower them to effectively use the online learning platforms.

References

Abaidoo, N. (2015). The role of e-learning, advantages, and disadvantages of its adoption in higher education. *International Journal of Instructional Technology and Distance Learning*, *12*(1), 29-42. http://itdl.org/Journal/Jan_15/Jan15.pdf#page=33

Ali, S. M., Uppal, A., & Gulliver, S. R. (2018). A conceptual framework highlighting e-learning implementation barriers. *Information Technology and People, 31*(1), 156-180.

Altbach, P. G., & De Wit, H. (2020). *Postpandemic outlook for higher education is bleakest for the poorest. International higher education*. The Boston College Center for International Higher Education.

Amemado, D. (2020). *COVID-19: An unexpected and unusual driver to online education*. *International higher education*. The Boston College Center for International Higher Education.

Andersson, A., & Grönlund, Å. (2009). A conceptual framework for e-learning in developing countries: A critical review of research challenges. *Electronic Journal of Information Systems in Developing Countries, 38*(8), 1-16.

Bassett, R. M. (2020). *Sustaining the values of tertiary education during the COVID-19 crisis*. The Boston College Center for International Higher Education.

Bates, A. W. (2015). *Teaching in a digital age: Guidelines for designing teaching and learning*. Tony Bates Associates Ltd. https://opentextbc.ca/teachinginadigitalage/

Blackburn, R. A., Villa-Marcos, B., & Williams, D. P. (2019). Preparing students for practical sessions using laboratory simulation software. *Journal of Chemical Education,* 96, 153-158.

Blieck, Y., Ooghe, I., Zhu, C., Depryck, K., Struyven, K., Pynoo, B., & Van Laer, H. (2017). Validation of a conceptual quality framework for online and blended learning with success factors and indicators in adult education: A qualitative study. *The Turkish Online Journal of Educational Technology, 16*(3), 162-183.

Kakuchi, S. (2021). Student dropout rate on the rise due to pandemic impact. *World University News*. https://www.universityworldnews.com/post.php?story=2021031006383627

Kim, K. J., & Bonk, C. J. (2006). The future of online teaching and learning in higher education. *Educause Quarterly, 29*(4), 22-30. http://faculty.weber.edu/eamsel/Research%20Groups/On-line%20Learning/Bonk%20(2006).pdf

Kirwan, J. R., & Roumell, E. A. (n.d.). *Building a conceptual framework for online educator dispositions.* https://files.eric.ed.gov/fulltext/EJ1051036.pdf

Larbi-Apau, J. A. (2021). E-learning could develop students' critical thinking skills. *University World News: Africa Edition.* https://www.universityworldnews.com/post.php?story=20210525120017579

Lindemann, N. (2019). *What's the average survey response rate? 2019 Benchmark.* https://surveyanyplace.com/blog/average-survey-response-rate/

Mohamedbhai, G. (2020). COVID-19: What consequences for higher education? *University World News: Africa Edition.* https://www.universityworldnews.com/post.php?story=20200407064850279

Perris, K., & Mohee, R. (2020). Quality assurance is key to sustainable blended learning. *University World News.* https://www.universityworldnews.com/post.php?story=20200618085512381

Quality Assurance Agency for Higher Education (QAA). (2020). *'No detriment' policies: An overview*. www.qaa.ac.uk/covid-19

Tamrat, W., & Teferra, D. (2020). *COVID-19 threat to higher education: Africa's challenges, responses, and apprehensions.* https://www.internationalhighereducation.net/api-v1/article/!/action/getPdfOfArticle/articleID/2921/productID/29/filename/article-id-2921.pdf

Thomas, P. Y. (2014). *The potential for eLearning in Botswana*. University of Botswana: Gaborone.

University World News. (2021). *Most students pleased with their digital learning – Survey.* https://www.universityworldnews.com/post.php?story=20210310140820973

Authors:

Ngepathimo Kadhila is a Director of Quality Assurance at the University of Namibia. He holds a PhD in Higher Education with a focus on Quality Assurance from the University of the Free State, South Africa; a Master's in

Education and Bachelor's in Education from the University of Namibia; as well as a Postgraduate Diploma in Higher Education from Rhodes University in South Africa. His research interests include academic development, curriculum development in higher education, teaching and learning in higher education including assessment, and quality assurance. Email: nkadhila@unam.na

John Nyambe is the Associate Dean of the School of Education at the University of Namibia. Dr Nyambe's research interest are in the areas of higher education, covering learning and teaching, curriculum development, assessment and quality assurance. Dr Nyambe also does research in teacher education and educational reform. He has held various leadership positions in higher education. Email: jnyambe@unam.na

Cite this paper as: Kadhila, N., & Nyambe, J. (2021). Barriers to the quality of emergency online pedagogies in higher education during the COVID-19 pandemic: A case study from the University of Namibia. *Journal of Learning for Development*, *8*(3), 516-531.