Higher Education and Programme Delivery in the Context of COVID-19 and Institutional Closures: Student Responses to the Adoption of e-Learning at a Public University in Zambia

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Abstract

Using the example of a public university in Zambia, the chapter explores how students responded to new modes of programme delivery in the context of Higher Education institutional closures and COVID-19. It draws on the technology acceptance theoretical framework and an interpretative case study, which was informed by the thematic analysis of documents and interviews with selected university students as end users of e-learning. The chapter shows that while the students' responses were characterised by both reluctance and acceptance of e-learning, the students did not express misgivings about e-learning, except for barriers to accessing it (some of which were beyond institutional control, but situated in the wider context in Higher Education provision in the country). It concludes that the student responses were driven by the perceived ease of use of e-learning platforms on the one hand, and the perceived benefits of e-learning on the other, and recommends that specific contextual realties of students as end users for the effective implementation of e-learning should be taken into account. It therefore contributes to emerging global discourses on the impact of COVID-19 on Higher Education systems and provides insights for enabling institutions to evaluate their responses in programme delivery during pandemics.

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1.0 Introduction

The following research question is explored in this chapter, 'How did students as end-users of e-learning respond to the adoption of e-learning at a public university in the context of shifting programme delivery modes in response to institutional closures occasioned by the COVID-19 pandemic?'

First reported on 31 December 2019 in a wet market in Wuhan, China, the Ministry of Health (MoH) confirmed its first two cases of COVID-19 in Zambia on 18 March 2020 (MoH, Press Statement, Zambia National Broadcasting Corporation [ZNBC]). The outbreak of COVID-19 affected various sectors differently. For the field of education, the Government of the Republic of Zambia (GRZ) announced the closure of all schools, colleges, and universities to enhance the prevention of the spread of COVID-19 in the country. Consequently, all educational institutions closed on 20 March 2020 and institutions of Higher Education soon passed statements of migrating from physical face-to-face teaching and learning to digital platforms. For example, in a press statement, the University of Zambia (UNZA) announced that at its senate meeting held on 18 March 2020, the UNZA Senate resolved that the institution would close on 20 March, following the directive and guidance from the MoH and that during the closure, learning would continue through e-learning platforms such as Moodle and Astria (Wamudila 2020). Similarly, other institutions of higher learning migrated to e-learning.

Despite these shifts in programme delivery in Zambian Higher Education, there was limited scholarly attention to the learning experiences of end-users. The inquiry into how students responded to the adoption of e-learning in the context of a public university was thus ignited by lapses in discourses about the pandemic in Higher Education in the country. For example, while scholarship on the COVID-19 global pandemic and digital learning was on the increase in 2020 in places like China and Australia (Iwai 2020; Agnoletto & Queiroz 2020, among others), in the Zambian context, discourses of COVID-19 and education, and Higher Education in particular continued to attract media attention, but without scholarly engagement relating to students' responses to

programme delivery modes in the context of COVID-19. The interaction of the pandemic and education was also concentrated on the lower levels of education in which studies such as those by Sintema (2020), and Mulenga and Marbán (2020) focus on the effect of the pandemic on the performance of Grade 12 learners with reference to STEM subjects and COVID-19, respectively, as a gateway for digital learning in Mathematics education.

The inquiry also sought to complement emerging international scholarship on COVID-19 and Higher Education (Murphy 2020; Naciri *et al*. 2020; Sahu 2020; Toquero 2020; Zhang *et al.* 2020). For example, Bao (2020) explored the online teaching experiences for university instructors using a case study of Peking University in China. He advocates five principles for online education (high relevance between online instructional design and student learning; effective delivery on online instructional information; adequate support provided by faculty and teaching assistants to students; high-quality participation to improve the breadth and depth of students' learning; and a contingency plan to deal with unexpected incidents of online education platforms). Murphy (2020) focuses on COVID-19 and emergency e-learning with reference to the consequences of the securitisation of Higher Education for post-pandemic pedagogy by analysing 25 declarations of emergency e-Learning at American universities and argued that the desecuritisation of face-to-face schooling was imperative for the future possibility of emancipatory pedagogy, whether face-to-face or online. Additionally, Toquero (2020) analysed the challenges and opportunities for HEd amid the COVID-19 pandemic using the Philippine context. Toquero (2020) not only recommends studies to proliferate and document the impact of the pandemic to the education system, but also calls for strengthening practices in the curriculum, making it more responsive to the e-learning needs of the students beyond the conventional classrooms.

The chapter therefore takes the view that understanding students' responses to the adoption of e-learning programme delivery modes amid COVID-19 pandemic is essential, not only to the teaching staff, but also to institutional leadership for developing practices that are adapted to local Higher Education contexts and aligned to global best practices. The chapter unfolds by providing a brief context of Higher Education and e-learning in Zambia and the methodological and theoretical orientation, before exploring how students responded to changes in programme delivery during institutional closures in the context of the COVID-19 pandemic at a public university.

2.0 Context of Public Higher Education and e-Learning in Zambia

The provision of Higher Education has been documented ably by scholars who have addressed aspects such as: Financing (Seshamani & Shalumba 2011; Menon 2012); and current provision (Masaiti & Mwale 2017; Masaiti & Simuyaba 2018; Mwale & Simuchimba 2019). As of 2017, the country has 68 universities (of which 7 are public and 61 are private), 304 Technical Education, Vocational and Entrepreneurship Training (TEVET) Colleges (of which 25 are public and 278 are private) (Higher Education Authority 2017).

With reference to the conclusions made by scholars such as Sy Habib (2003), Damtew and Altbach (2004), and Sichone (2006), the challenges of African Higher Education institutions include: a shortage of faculty and poor faculty development; poor and unstable governance, leadership and management; problems with quality and relevance; weak research and innovation capacities and facilities; financial austerity and an incapacity to diversify funding resources; poor physical facilities and infrastructure; and low access and equity. Zambia's Higher Education is characterised by a myriad of challenges similar to those outlined above. For example, Nkanza (2019) observes that the major challenges of the sector continue to be: improving educational and learner support infrastructure; design, testing, and implementation of new curricula and academic programmes; recruitment, retention, and motivation and the development of a well-trained faculty; increasing access for disadvantaged populations; and conducting both basic and applied research. Research funding continues to remain low in ways that do not sustain basic and innovative research (Masaiti & Mwale 2017). All these challenges have implications for the changes in the programme delivery within the context of COVID-19.

2.1 e-Learning Context in Zambian Higher Education

The chapter is also situated within the e-learning and higher education landscape in Zambia. The initiatives of e-learning in higher education were not new, but closely linked to the introduction of the National Research and Education Networks (NRENs) and the Zambia Educational and Research Network (ZAMREN), which sought to provide opportunities relating to increased access to internet bandwidth, resources through e-libraries and

research collaboration. In the case of NRENs, a federated identity service was provided to member institutions through education roaming (EDUROAM) and high-performance computing, coupled with cloud computing (Chembe *et al.* 2014). This facilitated connectivity to the internet, where the service was deployed for every user registered with the member institution, both within and outside the country. Besides the availability of NRENs, three public universities (UNZA, Copperbelt University and Mulungushi University) collaborated in setting up ZAMREN, a non-profit association with the intent to provide inter-institutional connectivity and collaboration among Zambian researchers and educational institutions. It initially became operational with these three public universities in 2012, and by 2016, it had been rolled out to other 78 institutions (ZAMREN 2016).

Despite these initiatives, the uptake of e-learning was slow, owing to numerous factors. For example, Kunda, Chembe and Mukupa (2018), in their study on the factors that influence Zambian Higher Education lecturers' attitudes towards integrating ICTs in teaching and research, they conclude that lack of adequate internet bandwidth, hardware (in terms of computers for both lecturers and students), and appropriate ICT infrastructure are the major barriers to assimilating ICTs in research and teaching in Zambian Higher Education. Although not providing the basis for adopting e-learning, the findings by Kunda *et al.* (2018) are closely related to the e-learning context provided by Chitumbo and Chewe (2012) at UNZA, in their study on the potentials and challenges of adopting the Moodle e-learning software. The duo conclude that the majority of the UNZA community expressed willingness to support its adoption. The challenges identified are that the adoption of Moodle would be impeded by:

> Poor or limited connectivity; that is, slow internet connectivity due to small bandwidth; limited number of computers provided by the University for the purpose of internet access by students; students' lack of personal computers; poor and limited internet facilities in terms of infrastructure and internet access points; apathy or poor attitude towards ICT use by some people and rigidity to change (especially old staff); computer illiteracy (Poor ICT skills) among some users (students & lecturers); poor funding to enable connectivity improvements; and lack of awareness (Chitumbo & Chewe 2012:7).

Akakadelwa and Mkulama (2017) also explored students' acceptance, experiences, and satisfaction of online learning using the case of Library and Information Science students at UNZA who were taught a compulsory second-year course using Moodle at the end of their academic year. They observed that the perceptions of the students were positive, while the major challenges encountered in the use of the platform included poor and slow Internet connectivity, restricted access to Moodle, lack of timely feedback from lecturers, difficulties in uploading assignments, login problems, frequent failure of the Moodle server, inadequate training in the use of Moodle, and lack of technical support.

The foregoing studies show that challenges surrounding e-learning in the Zambian Higher Education context are constant and hence considered significant for shaping student responses to the adoption of e-learning modes of programme delivery during the COVID-19 pandemic.

2.2 E-Learning as a Higher Education Response to Institutional Closure in Zambian Higher Education

In the wake of the closure of various institutions in Zambia owing to COVID-19, institutions of higher learning responded by adopting alternative means of learning through e-learning platforms such as Moodle and Astria. UNZA, like other tertiary institutions, responded by adopting e-learning in the delivery of its programmes. This move accelerated the already existing plans for e-learning as envisioned in institutional strategic directives (UNZA Strategic Plan 2017:24). This migration came with conditions such as those relating to access of the platforms. This means that only registered students would be able to access the e-learning materials and other online services, and registration remained open to enable students to pay their fees (UNZA Press Release 19 March 2020). This went hand in hand with the creation of links for more e-resources to the already existing e-libraries in institutions.

To enhance universal access to the internet, negotiations took place with Internet service providers, and the result was the zero-rated deal with MTN as a mobile service provider. In this regard, MTN Zambia collaborated with the UNZA, Copperbelt University and Mulungushi Universities to provide free access to online learning platforms in order to enable students to study from home during the COVID-19 pandemic.

In view of the constant challenges surrounding the uptake of e-learning before the outbreak of COVID-19 in Zambian Higher Education and institutional full implementation of e-learning during the pandemic, it became imperative to understand how students responded to the adoption of e-learning.

3.0 Research Design and Methods

The chapter is informed by insights that were drawn from an interpretative case study. Barker *et al.* (2002) suggest that exploratory questions are suitable as the basis for qualitative inquiry and are used when little is known in a particular research area. Consistent with aspects typical of data collection in interpretive case studies, as provided by Miles and Huberman (1994), data collection was driven by the specific research questions centred on exploring the responses and experiences of students to the adoption of new modes of programme delivery during institutional closures in the context of COVID-19 at a public university in Zambia.

The primary method of data collection was interviews supplemented by document reviews, which included institutional reports on institutional websites and newspaper articles. Given that the inquiry was undertaken during institutional closures and lockdowns characterised by physical distancing, telephone interviews were used to collect data from the participants. Consistent with recommendations for interpretative case studies that non-probability sampling is more appropriate in interpretive case studies (Kothari 2004: 56), the selection of participants and the higher education institution was purposively done. The participants included 20 (10 females and 10 males) students drawn from one of the old public universities, using the inclusion criteria of those representative in any first-, second-, third-, and fourth-year course and falling in the age bracket between 17 and 30 years old.

Access to the participants was facilitated through telephone communication. The participants' geographical locations were not a factor, although the categorisation of students based on their residence later showed that the selected participants were largely drawn from the Copperbelt, Eastern, Lusaka, North-Western, Southern and Western Provinces. Using student associations' representatives as gatekeepers, the researchers were able to engage with 20 different students whose details were shared by the first contact. The selection of 20 participants was not for purposes of generalisation, but for providing depth into how the institutional programme delivery was experienced by the

end users. The focus was also on students, because they were considered as end users of digital learning. As observed by Ozkan and Koseler (2009), the stakeholders of e-learning include learners, faculty, administrative and technical staff and employers. Thus, it was assumed that their responses to the adoption of e-learning and experiences of e-learning during COVID-19 would provide insights enabling institutions to evaluate their responses in programme delivery during pandemics in the Zambian context.

Data were analysed inductively using the general framework for interpretive qualitative research suggested by Barker *et al.* (1994). The data were therefore thematically analysed through a search for common themes that transcended the data alongside an interpretation of the themes. This is similar to the method suggested by Braun and Clarke (2006: 77-101), which involves the generation and application of codes to the data, and the identification, analysis and report of patterns (themes). Ethical considerations stressed by scholars such as Bryman (2004) relating to confidentiality, informed consent and anonymity were kept in check. Pseudonyms are used to represent the voices of the participants.

4.0 Theoretical Framework

The chapter employs the technology acceptance model, an information technology framework for understanding users' adoption and use of emerging technologies as a theoretical framework to explore student's responses to an institution's adoption of e-learning during the COVID -19 pandemic at a public university in Zambia.

The Technology Acceptance Model (TAM) is an adaption of Theory of Reasoned Action (TRA) that is tailored for modelling user acceptance of information systems (Davis *et al*. 1989: 985). The Reasoned Action (TRA) theory advanced by Fishbein and Ajzen (1975) from social psychology is concerned with the determinants of consciously intended behaviours. Accordingly, a person's performance of a specified behaviour is determined by his or her behavioural intention to perform the behaviour. The behavioural intention is jointly determined by the person's attitude and subjective norm concerning the behaviour in question (Fishbein & Ajzen 1975).

As a framework, TAM is anchored on two fundamental constructs, namely perceived ease of use (PEOU) and perceived usefulness (PU). According to Davis (1989), perceived ease of use is the degree to which a

person believes that using a particular system would be free of effort and perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her job performance. The perceived ease of use and perceived usefulness are also driven by system design and features and effort decreasing (Moore 2012), respectively. Based on this, perceived usefulness and perceived ease of use jointly explain the attitudes towards using technology. Similarly, perceived usefulness is linked to the user's behavioural intention in using technology while intention to use also determines the actual use of technology. Accordingly, it posits that a person's intent to use (acceptance of technology) and usage behaviour (actual use) of a technology are predicted by the person's perceptions of the specific technology's usefulness (benefit from using the technology) and ease of use (Portz *et al.* 2019). Perceptions of usefulness and ease of use are mediated by external factors such as individual differences, system characteristics, social influences, and facilitating conditions.

TAM is considered one of the popular models related to technology acceptance and use and, according to Park (2009), it has shown great potential in explaining and predicting user behaviour of information technology. Notwithstanding its limitations such as those relating to the difficulty of measuring behaviour, as hidden personality traits often motivate behaviour (Ajibade 2018), the TAM has been used, because it aids the explanation of use of ICTs by end users. As observed by Ajibabe (2018), TAM is suitable or practically applicable for individual use and the adoption of technology. It was also used because of the interconnectedness of e-learning and ICTs. In this regard, while e-learning is often understood as any learning that involves using the internet or intranet (Fee 2005), this chapter approaches the concept of e-learning from the perspective that the 'e' in e-learning should not stand for electronic; but is rather an abbreviation for evolving, enhanced, everywhere, every time and everybody (Li & Masters 2009). It is acknowledged that e-learning has been driven rapidly by the increasing availability of computer hardware and the internet (Kirkpatrick 2001).

5.0 End Users' Responses and Experiences of E-Learning as an Emergency Response during COVDID-19 Pandemic

The full implementation of e-learning as facilitated by institutional closures amid the COVID-19 pandemic was experienced differently by different end

users. These experiences were clouded by the perceived challenges and future prospects for efficient delivery of programmes, which revealed the student's willingness on the one hand, and reluctance on the other hand, to embrace the new modes of programme delivery during the pandemic. This signified that experiences of the adoption of new modes of programme delivery were largely shaped by the end users' context.

5.1 Reluctance to Embrace E-Learning

The broader theme on reluctance to embrace e-learning was characterised by concerns on access to e-learning platforms; lack of ICT hardware, connectivity and power outages; and unpreparedness for e-learning.

5.1.1 Access only to Registered Students

While access to e-learning was only offered to registered students as a condition, it was a topical theme that formed part of the student responses and experiences in the initial full implementation phase. In a context where most students were able to attend lectures even without registration in the face-to-face delivery mode, the institutional safeguards of only making e-learning accessible to registered students entailed that not all students would access lessons.

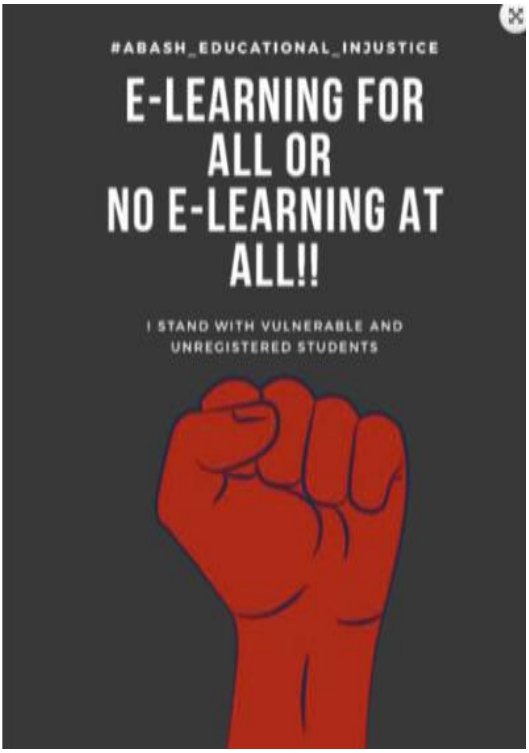
The immediate reaction to the adoption of e-learning was met with resistance from the students' body, who staged a campaign against the adoption of e-learning as captured in the campaign message. In their submission to the Ministry of Higher Education, the Student Union observed that:

> e-Learning is not feasible, as many factors hinder the success of this provision because the University is a pro-poor institution ... many students are not yet registered, which defeats the purpose of the provision, as only registered students will be able to access the E-learning platform (*Lusaka Star* 2020).

Other student participants noted the following:

> It is not fair for only a small percentage of students to access the e-learning platforms, while others suffer due to circumstances beyond

their control (Mwalye & Simichimba 2019).



Source: *Lusaka Star*, 12 April 2020

The Counter argument was:

E-learning is good, because we are left with no option. The only thing is that it is not accessible to everyone …. For example, not all students have registered. I am one of the students who are not on a government sponsorship and I did not manage to pay. Due to COVID-19, my parents were laid off, because the company has sent some of its workers away, meaning my dad is not working now. We do not know when the lockdown will be lifted and whether he will resume work. So, I have not paid my university fees and I cannot access e-learning. How I wish it were possible that e-learning could just be as normal lectures where everyone is included (Kala).

And,

> E-learning is a useful tool in times like these, but I am not registered. If it were possible, e-learning could be just as normal as lectures [physical or face to face] where everyone is included, whether registered or not (Wizo).

It is such narratives of students who were not registered and could therefore not access e-learning that explain the student union's arguments as captured in a daily tabloid:

> e-Learning will only serve its intended purpose if it is inclusive by being readily accessible to all students and in the process leaving no one behind (*Lusaka Star* 2020).

Other sentiments surrounding reluctance to embrace e-learning were also centred on solidarity, with others as expressed in the following.

> Not everyone can access e-learning platforms, only those who have paid. So like myself, I am registered and in most times, friends who have not paid their fees often ask that I share information with them. So I am sure many others are left behind (Tasha).

> e-learning is not inclusive in our context. There are people in rural areas even in urban areas who do not have smart phones … how will such people access it (Lasa).

> It was going to be a good idea if everyone or almost everyone had registered but since others are still struggling with where to get the money to pay … I am having second thoughts about e-learning at our university. Some students are poor and cannot afford to settle their fees. By the time they will be paying their fees, they would have been left behind (Bupa).

Similarly, the national student body known as the Zambian National Students Unions (ZANAZU), after their online student survey, reported in the daily tabloid that the popular view among students was that the use of e-platforms has only been an advantage to a few students, while the majority are left behind (*Lusaka Times* 2020). While these experiences and reactions are justified and raise social justice issues, it is also true that in the wake of public financing challenges, especially of higher education in the country, student fees remained a key source of funding.

The students' reaction to the adoption of e-learning characterised by reluctance owing to the perceived limited access to the e-learning platforms, affirms the principles of the TAM in which users are perceived to accept technology based on their perceived ease of use. Given that the use of e-learning was perceived to be impeded by one's status as a registered student or

not, not all student participants expressed willingness to embrace e-learning, owing to perceived limited access to the platforms. This also agrees with TAM that one of the main mechanisms underlying perceived ease of use is system design and features (Moore 2012), in which case, the restrictions based on a student's registration status as tied to the design of the platform was closely associated with student willingness and acceptance of e-learning. This scenario agrees with the conclusion by Pituch and Lee (2006) that system characteristics have bearing on e-learning system use.

While online learning was being touted as the only and best possible solution to the problem of access to quality higher education in Sub-Saharan Africa in existing literature (Asunka 2008) and tied to offering a greater access to learning resources (Sener & Stover 2000), the insights drawn in this study point to the need to link access to Higher Education and e-learning to notions of equity and social justice. Existing literature also indicates that, depending on the context, students have different levels of access to various e-learning technologies, for example, it can be from home, workplace, university, or other places (Bates 1994; Hoven 2000).

5.1.2 Lack of ICT Hardware, Connectivity and Power Outages

Other responses to the adoption of e-learning aligned to reluctance to embrace e-learning were related to lack of ICT hardware, poor connectivity and power outages affecting the student's effective use of e-learning platforms. In this regard, the student participants' responses to e-learning and experiences of e-learning were firstly shaped by limited and non-availability of ICT hardware. For example, some participants expressed the following:

> Not everyone has a smart phone, worse still a laptop. This means not everyone will be able to learn. On campus, it is easy because we use institutional computers or even borrow from our friends. Now with this lockdown, it means if one has no gadget, they cannot learn (Wizo).

> For me, I do not have a laptop and when on campus, I usually use the school laptop or laptops of friends. So being home, accessing e-learning resources will be difficult because I do not have a smart phone too (Zano).

As shown in previous studies such as by Kunda *et al*. (2018), lack of

adequate internet bandwidth, hardware (in terms of computers for both lecturers and students) remained significant in accounting for the manner in which students responded to the adoption of e-learning during the COVID-19 pandemic. These insights support the argument raised by Fisser (2001) that for successful e-learning implementation at institutions of higher education, institutions must ensure that appropriate technologies are available for all instructors and students and that there should be enough facilities and sufficient access to these facilities. While this could easily be done, the COVID-19 context which prompted institutional closures called for rethinking in the ways in which ICT hardware could be provided to students while they studied at home.

Besides ICT hardware-related factors, some students expressed reluctance to embrace e-learning, owing to limited internet connectivity. Some students also recounted:

> I live in an unelectrified area and the Internet is weak here and this makes it difficult to access e-learning platforms (Muse).

> Where I live, internet connectivity can only be accessed in the *Boma* area, so I need to find resources to enable me to travel from my village to the *Boma* for the internet. So, I only travel once in a while to connect and access learning materials. I am lucky that I am only in search of internet connectivity, I have friends who do not even have smartphones or laptops (Tina).

> Poor internet is a big challenge. Sometimes phones are off due to lack of power while lessons are being conducted or work is being posted on various online (Vika).

> Network connection for some of us is very poor, it makes learning a dream. A lot of people are missing out (Zano).

Sentiments related to power outages were expressed through the following:

> The current electricity issues we are facing as a country is making e-learning difficult (Janza).

> Load shedding is an issue especially that we are used to having no power outages on campus. Power goes for a long time, sometimes for 10 to 15 hours a day, so it's really a challenge but we try to make up for the time though it's not easy (Buna).

> We have load shedding for long hours each day and this means that our phones and laptops are off most times. This causes delays in writing assignments and even attending online lecturers (Tamu).

These sentiments show that the success and uptake of e-learning were shaped by the context. For example, Mubanga (2017) affirms that for developing countries like Zambia, the low application of ICT, low internet access, inadequate skills (for both learners and instructors) and poor technological infrastructure, particularly in the rural areas, remain huge challenges in the provision of e-learning for many institutions. This entails that the experiences of the end users of e-learning platforms are largely shaped by their context, especially that they did not express misgivings about e-learning except for barriers to accessing it, some of which are beyond institutional control, but situated in the wider context within which higher education is provided in the country and the realities that confront the system. As observed in existing literature, developing countries face barriers in the implementation of e-learning in infrastructure, resources and information access (Raab *et al.* 2002), including cultural, political and economic concerns (Alshare *et al.* 2003) which cannot be detached from end users' positive and negative attitudes towards e-learning.

The insights into limited access to ICT hardware, connectivity and power outages also reveal the interconnectedness of the availability of ICT and an enabling environment (connectivity and electric power) to students' perceived ease of use of e-learning and consequent acceptance of e-learning during the pandemic. Additionally, the responses and experiences centred on limited access to ICTs hardware relate to the digital divide in which access to digital platforms varies from place to place. As observed by David *et al.* (2020), the reality is that online learning will be easier for those with access [to the internet] and will exclude large groups of disadvantaged learners, is affirmed in the narratives of the students who pointed to limited access to internet, electricity and mobile phones.

5.1.3 Lack of Preparedness for e-Learning

Additionally, some students reported unpreparedness to embrace e-learning and limited skills. For example, some students remarked that:

> We needed more time to learn how to go about this e-learning. I hope we will be provided with more lessons on how to use the platform as days go by. So far, we are able to use the platform, which has the advantage of taking charge of the learning process. For example, I choose when and where to log on, it's just that I would want to be taught more on how to perform a lot of more other functions within Moodle (Lisu).

> Personally, I am not ready for e-learning and I have been unable to use the platforms. I am registered but I fail to use the platform because I do not know how to use the platform. I am not good at internet; I do not know how people like me will be helped (Mosa).

Preparedness was also tied to students' multiple roles at home and the nature of the education provision that had been characterised largely by face-to-face learning, as expressed in the following:

> For me who is a mother, wife, student, and entrepreneur, it is really hectic, especially in this time when people have to work from home. I have to attend to my school and home related chores (Busa).

> In our education system, I think we learn well interacting with our lecturer around. At home, we have so much work to do, and it becomes difficult to divide time for studies and home related chores (Kawa).

Linked to the ease of use theoretical position as a basis for accepting ICT, the sentiments (as expressed above) reveal the wider narrative of slow uptake of ICT and the need for ICT integration into the lower levels of the education system, including the socio-cultural attributes of students. The preparedness linked to ICT skills is in line with conclusions that have linked computer skills and perceived ease to use e-learning platforms such as those drawn by Siritongthaworm *et al.* (2006) that respondents with poor computer skills perceive e-learning technology use as difficult, compared to those with

comparatively good computer skills, indicating that intensive training programmes for using necessary technology facilities and methods of online instruction would help ease the use of ICTs.

Similarly, the expressions of difficulty to learn as individuals because of being used to learning as a group in the traditional face-to-face programme delivery also reveal the cultural orientation that could not be detached from the student experiences of digital delivery of programmes. This closely resonates with studies that have documented that students' reported distress with online learning attributed to the general feeling of 'disconnect' due to the lack of face-to-face interaction (Stodel, Thompson & MacDonald 2006). Asunka (2008), with reference to the Ghanaian context, also established that the bulk of the students were not enthusiastic about learning independently, and this could be attributed to their being accustomed to the didactic teacher-led mode of instruction, having just come from high school.

5.2 Willingness to Embrace e-Learning

The broader theme on willingness to embrace e-learning was characterised by perceived benefits of e-learning among students, in which case e-learning was perceived as a timely response in the time of COVID-19.

5.2.1 e-Learning: A Timely Response in the Time of COVID-19

Despite the challenges associated with e-learning as expressed by the student participants, most participants in the study welcomed the new programme delivery mode as a timely response during the pandemic. The positive response to e-learning was largely driven by the perceived benefits of e-learning for the students as expressed by the following:

> e-Learning makes it possible for us to learn online through various platforms like Moodle, Zoom, WhatsApp et cetera in the comfort of our homes especially during the outbreak of COVID-19. One can learn at any time and place provided there is Internet connection (Pata).

> E-learning makes it possible to access notes and lecture slides any time anywhere … very convenient. It has helped me personally to plan the day as learning can be done anywhere (Luno).

> I may not yet be very conversant with Moodle but it's a welcome new way of learning because it will help us to maintain the school calendar and complete our studies in time. I can easily use my smart phone for learning purposes any time (Fazo).

The willingness to embrace e-learning based on the perceived benefits of e-learning and the consequent positive perception of e-learning could also be situated in the perceived long-term benefits for the students. The perceived benefits are also in line with those advanced by Bhuasiri *et al.* (2012), such as increased accessibility to information, personalised instruction, content standardisation, on-demand availability, self-pacing, confidence and increased convenience. Similarly, Smart and Cappel (2006) conclude that students feel that the flexibility and convenience of e-learning, such as the ability to access the lessons anywhere at any time, and to complete the units at one's own pace are very pleasant experiences with e-learning delivery. This shows that the students' response to e-learning is driven by the perceived usefulness that is linked to a person's belief that using a particular system would enhance his or her job performance (Davies 1989), in this case, their studies.

Most importantly, the fact that all students were in support of e-learning except for the associated challenges shows that in the absence of barriers to using e-learning such as universal access to e-learning platforms, availability of ICT hardware and sufficient skills to use different forms of e-learning, e-learning would be embraced based on both perceived ease of usefulness and perceived usefulness grounds. This further confirms the conclusions drawn by Akakadelwa and Mkuluma (2017) on the levels of satisfaction of students who had been exposed to e-learning.

The willingness to embrace e-learning, despite the challenging context, also points to COVID-19's potential to contribute to changes in attitudes towards e-learning and consequently motivates students to adapt to the new modes of programme delivery. This is because extrinsic motivation constructs had a significant effect on student learning, while both intrinsic and extrinsic motivation had a significantly positive effect on student self-efficacy (Law *et al.* 2010). Ultimately, although the responses of the students to the adoption of e-learning could be seen through TAM, it can also be stated that the overall willingness to embrace e-learning could also be understood within a context in which the end users had to abide by institutional available options on e-learning platforms. Nonetheless, TAM was considered significant in understanding the

attitudes and experiences surrounding the adoption of e-learning, which could contribute to accounting for the students' actual use of e-learning platforms.

6.0 Conclusion

This chapter explored how students as end users of e-learning respond to the adoption of e-learning at a public university in the context of shifting programme delivery modes in response to institutional closures occasioned by the COVID-19 pandemic. Based on the nature of the students' responses to the adoption of e-learning, the chapter concludes that student responses to the adoption to e-learning were characterised by both reluctance and acceptance of the e-learning mode of programme delivery. By this, students did not express misgivings about e-learning, but focused on barriers to accessing it, some of which were beyond institutional control but situated in the wider context within which Higher Education is provided in the country.

Given that the reluctance to accept e-learning during the pandemic was associated with concerns centred on access to e-learning platforms; lack of ICTs hardware, connectivity and power outages; and unpreparedness for e-learning, the chapter concludes that the students' responses were driven by the perceived ease of use of e-learning platforms, in which case the perceived difficulty of ease of use emerged as a barrier to immediately embracing e-learning during the pandemic.

It also concludes that the perceived benefits of e-learning, both in the short and long term, accounted for students' willingness to embrace e-learning during the pandemic, and that COVID-19 contributed to shifting student attitudes towards e-learning. As such, the chapter affirms that TAM remained a relevant framework that helps to explain user attitudes and acceptance of e-learning and also points to how the user's context contributes to shaping behaviour towards the use of ICTs in learning during a pandemic.

Based on students' reluctance to embrace e-learning anchored in perceived limitations on the ease of use, there was a need to take into account the specific contextual realities of students as end users for the effective implementation of e-learning especially in a context characterised by the digital divide. Similarly, given that students' willingness to embrace e-learning is based on the perceived benefits of e-learning as driven by perceived usefulness of e-learning, there was a need for integrating e-learning as a cross-cutting topic in Higher Education programmes.

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