Experiences first year physical education university students faced with online learning during Coronavirus Disease 2019 pandemic

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Abstract

The purpose of the study was to investigate the experiences first year university students face with online learning during Coronavirus Disease 2019 (COVID-19) pandemic. This study was framed and informed by Kolb's (1984) experiential learning theory. This theory emphasises that knowledge is created through the transformation of experience. The application of the experiential learning theory to the current study allowed the researchers to gain in-depth information and meaningful insights into challenges and experiences students encountered with online learning. This study was conducted with first year physical education university students in Zambezi Region of Namibia. A total of 185 students comprising 85 (46%) males and 100 (54%) female students, all education students majoring in upper primary education. The questionnaire used to collect data from the participants consisted of 16 (yes/no) questions and 3 (happy, neutral and unhappy questions), which covered the study questions and were circulated among participants using the WhatsApp platform during COVID-19. The gathered data were analysed using SPSS v21 statistics software. The study results revealed that 166 (90%) of the students did not have their own personal computer or laptop at the peak of COVID-19 pandemic and only 18 (10%) had their own computers or laptop to use. The Zoom platform was used for conducting online virtual classes by 29% of the respondents; the second alternative platform was WhatsApp with 38%. Emails were used for communication between lecturers and students by 19%. While, Text Messages were used by 8% and other platforms such as Skype, Google and Microsoft platforms were used by 3%. A total of 153 (82%) of the respondents were unhappy with online virtual learning, whereas, 13 (7%) were neutral with their feelings and experiences on how they felt about online virtual learning, 19 (10.2%) of the respondents were happy with online virtual learning. This study recommends that universities need to come up with an initiative that gives all first year students laptops prior to class commencement. Alternatively, universities should create a policy that impose all new students must have laptops by their sides the day they start classes at any institution of higher learning. Moreover, the Ministry of Education should introduce computer literacy as a compulsory subject in all high schools from Grade 8–12. The Ministry of Education and telecommunication companies should boost internet speed and give free data bundles to students to make it easier for them to engage in their studies.

Keywords: *experiences, first year students, physical education, online learning, COVID-19, pandemic*

Introduction

This study was conducted on first year physical education university students in Katima Mulilo of the Zambezi Region, Namibia. The 2020 academic year was hard hit by the novel coronavirus disease (COVID-19) which forced the whole world to take precautionary measures by enforcing lockdown to all non-essential workers with non-essential work places including institutions of higher learning such as colleges and universities with a rationale to keep-up with social distancing (UNESCO, 2021). Since the discovery of COVID-19 plague two years ago, the pandemic has disturbed the education systems worldwide, distressing the most vulnerable students the hardest. It has amplified differences and worsened a pre-existing education predicament (UNESCO, 2021). According to the Commonwealth Secretariat (2021) report, which emphasises that one main outcome that was constantly underlined in its report was that of the mode of delivery in education and access to good quality education. The report further established that these and other prevailing educational differences were further worsened by nationwide lockdowns which resulted in communities that were already deprived and left out from suitable resources and support prior to the pandemic in a more poorer position, leading to the decrease of school performance and learning chances (Commonwealth Secretariat, 2021). Mahyoob (2020) found that with the switch from face to

face to online teaching and learning, most of the schools in the developing countries were not ready for this transition as most were using traditional methods of teaching and learning. In Saudi Arabia, Mahyoob (2020) found and reported that all institutions of higher learning such as universities used traditional blackboard tools for all their distance education and taught some of their elective and general courses, which made it difficult to migrate to online teaching and learning during the COVID-19 pandemic.

There are some benefits and shortcomings of online learning; the user-friendliness of online education, time saving, money and effort saving are some of the benefits of online learning. In lecturing, the lecturer's recording is one benefit of online learning when students request lecturers to record the lessons, the lecturers find more time to evaluate and review the recording's strength and weakness , of the teaching approach and technique used (Mahyoob, 2020). Copeland et al. (2021) as cited by Barrot et al. (2021) recount that the COVID-19 pandemic unhelpfully affected students' social behavior and emotional operational skills, mainly kindness and overt problems (attitude and wellness behaviors), which were mainly caused by solitude, economic/well-being effects, and stress. The effects of COVID-19 mentioned prior by Copeland et al. (2021) led the researchers to find that there are some academic associated problems where recommendations can be helpful to mitigate the challenges.

Problem statement
Online teaching and learning is a newly adopted mode, which requires the use of internet, technological gadgets such as computers, laptops and supportive software that are compatible and user friendly. In December 2019, the pandemic, COVID-19 was discovered in Wuhan in China and it spread quickly globally within a short time. COVID-19 is a communicable and transferable disease caused by a new strain of coronavirus that blocks the breathing respiratory system (World Health Organization, 2020). Research has found that as of January 2021, COVID-19 infected 94 million people and caused 2 million deaths in 191 countries and territories (John Hopkins University, 2021). COVID-19 pandemic created an enormous distraction of the educational systems with over 1.5 billion students affected globally. Governments were forced to cancel national and international examinations and the schools were closed temporarily. Face-to-face classroom instructions were cancelled and strict measures such as mandatory of using face masks were to be observed to control the spread of the virus. Physical and social distancing were implemented. Under these circumstances, stakeholders in teaching and learning experienced problems. For this reason, the present study examines experiences first year Physical Education University students faced with online learning during COVID-19 pandemic at Katima Mulilo campus. To understand their experiences the following research question was used.

Research question
The research question for this study was:

1. What are the experiences of first year Physical Education University students faced at one university campus in the Zambezi Region with online learning during COVID-19 pandemic?

The emphasis of this study was based on the technical challenges, academic challenges and communication challenges students faced during the coronavirus pandemic period.

Literature review
Online distance learning allows students to access and participate well in their subject content, all from the relaxation and comfort of their homes. On the divergent point, the computer-online education industry was estimated to be worth \$171 billion in the year 2019. That estimate was before the coronavirus outbreak and is likely to grow by 10.85% by the year 2025 (PR Newswire, 2020).

Basic abilities to use computers during Covid 19 pandemic
School doors all over the world shut down for a number of months to curb the spread of COVID-19. During the period of this catastrophe, we have seen an unbelievable volume of huge-scale efforts to use technological gadgets in support of virtual learning. At the same time, COVID-19 has opened wide the challenges and experiences for technology in teaching and learning, with a lot of inequalities beginning with the lack of access to computers and the internet (G-STIC, 2020). According to Johnson et al. (2016) the use of technological gadgets in classroom

lessons is perhaps the strongest aspect influencing education today. Many universities around the world show full support for amplified levels of technology in the classroom by providing hardware such as tablets and computers, increasing internet connectivity, and fulfilling programs intended to increase computer literacy for lecturers and students. Even though lecturers generally appreciate the value and benefits of educational technologies, they often find current incorporation of new educational technologies perplexing. During COVID-19 the acquisition of new technology apparatus to adaptation to syllabuses and teaching skills to incorporate new educational implements, technology incorporation presented substantial challenges to lecturers at each level of school structures (Johnson et al., 2016). Although this was first observed with lecturers, students were not spared, hence the need to investigate their experiences.

According to the literature review, one of the challenges faced by first year students during the COVID-19 pandemic was their inability to use the computer (Ministry of Education, 2021). Most students who finish matriculation in Namibian schools lack standard computer literacy skills (Ministry of Education, 2021). Most of the students in developing nations were disadvantaged with online learning in 2020 and 2021 academic year due to lack of computer skills and inability to buy computers. Research shows that only 1 out 5 (20%) can afford a computer or a laptop in some countries in sub-Saharan Africa (Ministry of Education, 2021). As the use of technology in virtual learning spreads over developed and develping countries in the world at a fast rate during COVID-19 , less developed and developing nations lagged behind. Technology companies such as Google Microsoft and Apple only provided to big markets in India, China, Australia, United States and Europe. As such only, 14% of the population in sub-Saharan Africa could afford to buy a basic mobile phone or a smart mobile phone, typically they cannot access these types of technological gadgets (The Borgen Project, 2021). Lack of technological gadgets such as smart phones, tablets, and laptops made it difficult for students to access online virtual class sessions, with over 65% failing to use online services such as BigBlueButon, Moodle and Portal (UNESCO, 2021). According to Onkokamwa and Gillwald (2021) prior to the COVID 19 pandemic, a considerable number of households in developing countries did not have internet connectivity, while even a larger number of young people do not have internet browsing or surfing skills relevant for the 21st century living.

In the following section we discuss different technological gadgets which were at the students' disposal; these were namely: WhatsApp, Zoom, Email, Text messages and Data bundles. The section concludes by looking into what Onkokamwa et al. (2021) say about anxiety and educational technology.

WhatsApp
According to Munir et al. (2021) WhatsApp is one of the messaging applications, which lecturers frequently used for fast texting communication purposes at the peak of the COVID - 19 pandemic. WhatsApp is a message application, which has numerous features such as group, text message, audio message, video call, and others. However, during the COVID-19 pandemic, many lecturers used WhatsApp as the application for organising virtual classroom meetings with students. The use of WhatsApp to organise teaching lessons was centered on numerous reasons: (a) easy to use; (b) use less data and (c) have several valuable features such as group, video message, audio message, voice note and video calls.

Zoom
Zoom cloud meetings are very useful alternative application for online meeting to facilitate communication with numerous individuals without making direct contact and be able to support learning needs in today's digital era (Pratiwi et al., 2019). This application is used for video conference instead of direct meeting in the classroom. Moreover, studies have found Zoom to be compatible and can be installed easily with devices such as laptops, computers, smart phones and androids. Studies further show that for the students who cannot afford purchasing laptops or desk tops, they can still use their tablets or smart phones to take part in online lessons (Shadat et al., 2017). The zoom application supports interaction of students remotely; all lecturers' clarifications can be conveyed straight to students without having to meet them physically. The previous research on the use of zoom cloud meeting by Shadat et al. (2017) found that using zoom for online learning and teaching was found by the majority of students to be more interactive, created happiness and provided constructive

experiences in learning approach. Besides Zoom and WhatsApp, there are Emails, which can be used.

Emails

Barnes (2020) suggests that emails are used for virtual teaching in the following ways. Emails are valuable for setting up appointments with students. Students who want to see lecturers know that the easiest and most positive way of contacting students/lecturers is through Email. More than 75% of lecturers got email communications sent to them from students during the COVID-19 pandemic. This shows how vital this mode of communication is in virtual learning. Like G-STC (2020), we consider Emails as specifically decent if you are trying to organize class sessions between several students.

During the COVID-19 pandemic peak emails were useful in answering the more ordinary sorts of questions that rose: queries about readings, assignments, difficulties with ideas or practical work, many of which were dealt with in a direct short message in return. Emails were used to send a message to the whole groups of students, set schoolwork assignments in both theory and practical courses; and students sent their homework to lecturers through Emails. According to the Ministry of Education (2021), about 57% of schoolwork feedback and standard replies or corrections in Namibian institutions of higher learning were sent to students through emails during the COVID-19 pandemic. Email played a major role in correspondence with lecturers and students at the peak of COVID-19 as they were used for discussions between lecturers and students and student by student. On account of Emails not always available and on account of internet connectivity, some resorted to text messages.

Text messeges and other platforms

Research has shown that more than 57% of people use text messages on a daily basis for communication purposes (World Texting Statistics, 2017). During the COVID-19 pandemic students used text messages 4 times more than they did prior to the pandemic outbreak (World Health Organization, 2020). According to the World Texting Statistics (2017), it was found that the figures of monthly texts sent increased more than 7,700% over the last 10 years, above 560 billion texts are sent monthly globally. Disadvantage of text message is that it can only be used when you

have money to recharge one's cellphone. However, to alleviate this, institutions of higher learning bought data bundles.

Expensive data bundles

During COVID-19, most institutions of higher learning worldwide came up with different initiatives to try to help students to cope with virtual learning (Ministry of Education, 2021). One of the initiatives was to subsidise data bundles for students to which Namibian students were given 10 GB of monthly data initiated by universities in agreement with the telecommunication giant Telecom Namibia. According to the University of Namibia Student Representative Council (SRC)'s vice president, the data bundles given are just a drop in an ocean as compared to 8 hours of our online classes daily. Such scenarios emerged in certain conditions for students as discussed below.

Anxiety, stress and depression on students during COVID - 19 pandemic

The COVID-19 pandemic was a revelation to the world of academics on how face to face class orientation should be blended with online learning. Studies have shown that anxiety, stress and depression among university students escalated like never before. According to Mridul et al. (2021) students were not happy with online teaching and learning as it caused the majority of students to experience moderate depression (16.98%), anxiety (16.98%) and stress (14.46%) due to online classes' challenges such as; poor home internet connectivity, internet speed, expensive data bundles, lack of orientation on online university portal and moodle. Therefore, these academic challenges linked to online learning can be decreased in the future if only institutions of teaching and learning are well vested and oriented using online learning.

Utilising online educational technology (Edu-Tech)

Researchers have found that, utilizing online educational technology just for the reason that communication often happens on the internet does not mean teaching and learning cannot happen at the same time. There are immeasurable tools several of them free for usage to assist students and lecturers connect in real-time. For instance, video conferencing software can be used to have live streaming discussions with students, either individually or in clustering environment. This provides

students with an opportunity to pester the lecturer with some questions, raise their complaints, and work through challenging module materials more effectively. Moreover, to add to video conferencing software such as Moodle, BigBlueButton. Zoom; GO TO meeting, Google meet, Google Hangouts, FaceTime and Skype, instant direct messaging apps for students who prefer to communicate via text (National University, 2022) could be used.

Research methods

This research is quantitative by nature as it gathered numerical data from the participants. The purpose of the current study was to find out the experiences of first year physical education University students faced with online learning during COVID-19 pandemic. The World Health Organisation (2020) defines experiences as concrete contact with reality and observation of truths or events.

Participants

The participants were purposively selected. These were undergraduate physical education first year university students, who took physical education as their core module of study. The sample comprised 185 students (85 (46%) males and 100 (54%) females) in all Bachelor of Education honours degrees in upper primary. The majority of the students did not have any prior experience in computer literacy and online learning as most of them were directly from high school. The study shows that there were more female participants than males. Such a representation of the participants allowed us to come up with the following data generating tools. These are discussed in detail below.

Data generating methods

This study's data were collected with a 16 items questionnaire that the researchers

designed. The objective was to investigate students' experiences with online learning during the COVID-19 pandemic. The questionnaire consisted of 19 questions altogether (16 items on yes/no questions and three items on happy, neutral and unhappy), which address the study's research question and it was circulated among participants using the WhatsApp platform. The questionnaire consisted of the demographic information of participants as well as questions addressing challenges and experiences of students with online learning. The data generated were analysed using the data analysis method explained below.

Data analysis

Data were analysed using SPSS v21 statistics software, and presented in tables and graphs. Descriptive statistical results were interpreted in percentages. The results are presented below.

Results

This study used descriptive research approaches in order to analysis the generated data, and its outcomes centred on four main aspects: These were as follows.

- Basic abilities to use the computer (computer literacy).
- The different technological communication applications used during online learning,
- The challenges and experiences faced during online physical education learning classes.
- Physical Education students' satisfaction with online virtual learning during COVID-19 pandemic.

The first item of the questionnaire investigated whether students had their own personal computer or laptop that they used for online lessons.

Table 1: Virtual online experiences

Item	Online experiences (%)		Total
	(yes) n	(no) n	
▪ *Computer or Laptop Ownership*	(19) 10%	(166) 90%	100%
▪ *Computer Literacy*	(45) 24%	(140) 76%	100%
▪ *Moodle Usage and Orientation*	(30) 16%	(155) 84%	100%
▪ *Internet Home Connectivity*	(5) 3%	(179) 97%	100%
▪ *Login Accessibility frequency*	(74) 40%	(111) 60%	100%

The outcomes revealed that 166 (90%) of the students did not have their own personal computer or laptop at the peak of COVID-19 pandemic and only 19 (10%) had their own computer or laptop to use.

The second item explored the students' computer usage (computer literacy) skills. The study revealed that 140 (76%) of the students did not know how to use the computer during the COVID-19 outbreak and only 45 (24%) were computer literate. The third item investigated the usage and orientation of Moodle (portal) for students. The study revealed that 155 (84%) did not know how to use Moodle, neither were they fully oriented on how to use the portal and only 30 (16%) knew how to use the Moodle/Portal. The fourth item that was looked at was home internet accessibility to which 179 (97%) of the students indicated that they did not have access to internet at home while 5 (3%) agreed to have such access at home. The fifth item looked at how frequent the students logged in for their classes during the COVID-19 virtual classes. Results showed that 111 (60%) did not frequently manage to log-in whereas 74 (40%) managed to log in frequently during online virtual class sessions. The second item looked at the communication internet applications used by physical education students when they failed to use Moodle or the portal.

Table 2: Communication application used for virtual online learning

Item	Application usage (%)
▪ *Zoom*	29%
▪ *WhatsApp*	38%
▪ *Emails*	19%
▪ *Text messages*	8%
▪ *Other platforms*	6%
Total	**100**

The Zoom platform was used for conducting online virtual classes by 29%, the second alternative platform was WhatsApp with 38%. Emails were used for communication between lecturers and students by 19%. While, text messages were used by 8% and other platforms such as skype, google and Microsoft platforms were used by 6%. Table 3 lists the online learning-related challenges and experiences faced by students during the peak of COVID - 19 pandemic.

Table 3: Virtual online learning challenges

Item	Students challenges and experiences (%)
▪ *Internet expensive data bundles*	45
▪ *Internet speed slow*	22
▪ *Poor internet connectivity*	17
▪ *No challenges with virtual online virtual learning*	10
▪ *Difficulties accessing online virtual assignments tests and exams*	6
▪ *No PE practical classes during COVID - 19*	0
Total	**100**

The third item scrutinized was challenges and experiences of students with online learning during the COVID-19 pandemic. The initial problem was with internet expensive data bundles, where 45% of students indicated that data bundles were too expensive. The second item looked at internet speed, where approximately 22% of the students indicated that they found the internet very slow most of the times. Furthermore, roughly 17% of the students complained of poor internet connectivity, whilst only 10% of students did not face any challenges with online learning. Six percent (6%) of the students indicated that they faced challenges with online access to tests, assignments, examinations and poor internet connectivity. Moreover, the results showed that there was (100%) no physical education virtual practical sessions during the peak of COVID-19 pandemic. The last item focused on students' happiness with online virtual learning at the peak of COVID-19 pandemic.

Table 4: Student level of satisfactions with online virtual learning		
Item	**Participants (n)**	**Percentage**
▪ *Very happy with online teaching.*	19	10%
▪ *Neutral*	13	7%
▪ *Unhappy with online teaching.*	153	83%
	185	**100**

About 83% (153) respondents were satisfied with online virtual learning, whereas, 13 (7%) expressed neutral feelings and experiences on how they felt about online virtual learning, while 19 (10%) of the respondents were happy with online virtual learning.

Discussion

The current study was envisaged to probe into the online education issues faced by first year physical education students during the COVID-19 pandemic at the UNAM Katima Mulilo campus. Most of the experiences, challenges encountered by students with online virtual learning were associated with poor communication and technological gadgets challenges. This study found that 90% of the students did not have their own personal computer or laptop at the peak of COVID-19 pandemic. These findings align with those by G-STIC (2020) that reported that during the period of COVID-19 pandemic, an unbelievable volume of efforts to use technological gadgets in support of virtual learning were recorded. At the same time, the pandemic opened wide the challenges and experiences regarding the use of technology in teaching and learning. It revealed a lot of inequalities among the students including the lack of access to computers and the internet (G-STIC, 2020).

Moreover, the study further revealed that 76% of the students did not know how to use the computer during the COVID-19 outbreak and only 24% were computer literate. These results support those by the Ministry of Education (2021), which reported that most students who finish matric in Namibian schools lack standard computer literacy skills. This study also discovered that 84% of the students did not know how to use Moodle neither were they fully oriented on how to use the portal, and only 16% knew how to use Moodle or the portal. These findings concur with UNESCO's (2021) findings which showed that the lack of technological gadgets such as smart phones, tablets, and laptops made it difficult for students to access online virtual class sessions.

The study further showed that 97% of the students indicated that they did not have access to the internet at home while 3% said they had. These results support those by Onkokamwa and Gillwald (2021) who found that prior to the COVID-19 pandemic, a considerable number of households in developing countries did not have internet connectivity, while a larger number of young people did not have internet browsing or surfing skills that are needed for living in the 21st century. Additionally, 60% of the students did not frequently manage to log-on onto the system, whereas 40% managed to log on frequently during online virtual class sessions. These results are in agreement with The Borgen Project (2021) results that found that 14% of the population in sub-Saharan Africa have limited accessibility to the internet and hardly login to any technological system at any given time.

During COVID-19 pandemic numerous applications were used for communication and virtual teaching and learning. Barnes (2020) found that emails were valuable and used for virtual teaching by setting up appointments with students. Students who want to see lecturers know that the easiest and most positive way of contacting lecturers is through Email.

During COVID-19 pandemic it was very hard for most of the students at the University of Namibia, Katima Mulilo campus to cope with the transition from face to face to virtual learning. This study found that 82% of respondents were unhappy with online teaching and learning. These results support those by Mridul et al. (2021) who found that students were unhappy with online teaching and learning as it caused the majority of students to experience moderate depression (16.98%) anxiety (16.98%) and stress (14.46%) due to online classes challenges. In view of these we offer below some recommendations to alleviate these challenges students experienced.

Conclusion

This study investigated the experiences of first

year physical education university students with online learning during COVID-19 pandemic. The findings of this study show that 82% of students were unsatisfied with online teaching and learning as it caused stress anxiety and depression. Therefore this study concludes that:

- There was lack of gargets such personal computers and laptops making it difficult for students to engage in virtual learning.
- Computer literacy was one of the major aspects identified by the respondents, as a barrier to fully utilizing technology in the teaching and learning environment.
- Students were not fully oriented to use Moodle and the Portal.
- Most homes had no internet connectivity to make it easier for students to learn virtually.
- Students could not login frequently online due to numerous technological challenges.
- Data internet bundles were very expensive for students despite the little subsidy from telecommunication companies.
- Slow internet speed was a common problem, as students could not quickly fully utilize the system.
- Communication applications such as zoom, WhatsApp, emails, text messages, and other platforms played a major role during the pandemic.

Recommendations
Based on the results of this study, these recommendations are suggested with the intention to inform universities, policy makers, ministries of higher education, lecturers, students and parents to be ready for virtual teaching and learning when need arose.

Universities need to come up with an initiative that gives all first year students a laptop prior to class commencement. Alternatively, universities should create a policy that any new student must have a laptop by his/her side the day s/he starts classes at any institution of higher learning. This initiative will ensure that all students have a technological advantage not to be left out. Moreover, the Ministry of Education should introduce computer literacy as a compulsory subject to be taught in all high schools from Grade 8 – 12. Universities or institutions of higher learning should fully orientate students (One week orientation) on how to engage with online academic systems to benefit students. Homes in developing world should start with home internet connectivity to benefit children

academically. The Ministry of Education and telecommunication companies should boost internet speed and give free data bundles to students to make it easier for them to engage in their studies.

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