E-Learning in the 'New Normal' on Students at Kwame Nkrumah University in Zambia: Inclusive or Exclusive

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Abstract:-The main purpose of this study was to establish the inclusiveness of e-learning amidst COVID-19 on undergraduate students on full-time and distance learning at Kwame Nkrumah University. The population for the study involved a total number of thirty-five students from Kwame Nkrumah University who provided complete information regarding the survey. A physical and an online descriptive survey were conducted on different social media platforms like student WhatsApp groups and Zoom from 10th May to 8 July 2020 to collect data. This research took a qualitative approach. Data were analysed using thematic analysis. An interview guide and semi-structured questionnaires were used to collect data. The main findings were that during the quarantine period, around 20% of learners were involved in e-learning. Most of the learners used android mobile phones for attending e-learning lessons. Further, the study revealed that students were facing various problems relating to failure to pay 50% of the fees as a condition to accessing online e-learning lectures, not having smartphones, lack of orientation on the part of the students, poor internet connectivity, and unfavorable study environment at home. Students from remote areas of Zambia and those with impairment were the most affected in terms of accessibility to the e-learning platform. As a result of the many challenges students were facing during this period, this study among other recommendations recommends to Kwame Nkrumah University management to devise a flexible education system that will be inclusive in terms of accessibility and will enforce the skill for employability and productivity.

Key Words: COVID-19; E-learning; Undergraduate; Inclusive; Exclusive

I. BACKGROUND AND CONTEXT

E-learning has been defined differently by different scholars. Going by the definition of Arkorful andAbaidoo (2014), e-learning is defined as the delivery of learning through technology and the internet. This means learning that is empowered by the use of digital technologies. In this study, a shift from the traditional way of learning to e-learning is considered an innovation. According to Rogers (2003) innovation is an idea, practice, or project that is perceived as new by an individual or other unit of adoption. Innovation may have been invented a long time ago, but if individuals perceive it as new, then it may still be an innovation for them. The question is: 'Has this innovation settled well with students at Kwame Nkrumah University?' 'Is it inclusive or Exclusive?' This study has to establish the facts.

The term 'New Normal' is new in Zambia and has emerged as a result of Covid-19 which has a new reality that has necessitated a rethinking of ways of doing business in the pandemic era. To this effect, technology has come into a sharp focus as an enabler to the new way of doing business.

A Study by UNESCO (2020) has indicated that more than 1 billion and 575 million students in approximately 188 countries around the world are reported to have been affected by the closure of schools and universities due to preventive measures taken by countries against the spread of COVID-19. Furthermore, a study by Duraku&Hoxha (2020) has observed that due to isolation, the use of technology has been considered the most appropriate (if not the only) alternative to keep educational systems functional in many parts of the world during this period. Despite the challenges in implementation especially in Africa, several advantages have been acknowledged in the need to shift to remote or online learning, among which stands out the opportunity for rapid progress in the field of digital education. Studies have also shown that the shift to e-learning format has also been assessed as a good opportunity for students to become stronger, more creative, and innovative. For instance, in 2016, Italy experienced three violent earthquakes which left The University of Camerino structures collapsed. This meant face to face instructions were not possible. The University had no choice but to switch to e-learning to keep the educational process in continuation. This was despite earlier perceptions that it was cumbersome. In this regard, Barboni (2019) does not downgrade face to face instruction methods but argues that e-learning can be used together with the traditional methods to bring in efficiency, effectiveness, and competitive edge over other competitors by imparting quality education.

Saxena (2020) in Dhawan (2020) observes that in India, many learning institutions were reluctant towards online teaching and learning. However, with the advent of Covid-19, every institution of higher learning has been introduced to e-learning. Dhawan observes that e-learning in India is done via Google Hangouts, Skype, Adobe Connect, Microsoft Teams, though ZOOM is proving to be the best. Essentially, Saxena (2020) postulates that online etiquettes were shared with lecturers and students and this has proved the e-learning

platform to be inclusive. Whether this is the case at Kwame Nkrumah University, this study has to establish.

A study by Kasse and Balunywa (2013) in Uganda observed a slow adoption of e-learning in Makerere University Kampala; Makerere University Business School; Kampala International University, and Islamic University in Uganda. They found out that e-learning was used mostly as a means of delivering learning material (80%), and minimally used to conduct discussions (12%) and assessment (2%). Infrastructural technical incompetence and attitudinal challenges (by lecturers and students) were identified as the major factors limiting the full-scale adoption of e-learning in these institutions. Though this study is not linked to the advent of Covic-19, it gives an insight into the challenges some African countries are facing with regards to the implementation of e-learning amidst the pandemic. This could be the case at Kwame Nkrumah University. This study has to establish.

A study by Sanga, Sife, and Lwoga (2007) in Mutisya andMakokha (2016) established some universities in Tanzania had a slow implementation of e-learning. Among the 10 universities studied, only one university had managed to use-learning software such as WebCT and Blackboard. Other universities had challenges with to do with ICT infrastructures such as Local Area Network (LAN), Internet, computers, CDs, and DVDs facilities that formed the basis for the establishment of an e-learning platform. This calls for investment in technology if e-learning activities have to be rolled out successfully. Has Kwame Nkrumah University fully invested in IT?

The spread of COVID-19 has also caused fear, anxiety, and various concerns among citizens around the world (Dhawan, 2020). This observation is also supported by Rogers (2003) who submits that innovation brings the newness in which some degree of uncertainty is involved in diffusion. However, it has been assumed that the level of concern observed during this period has also been influenced by factors other than COVID-19. In addition to the circumstances caused by social isolation and other personal factors, parents' concerns are assumed to have been influenced by their unpreparedness to assist their children in e-learning, lack of access to the necessary technology and the Internet, or the inadequacy of the technological formats used for children with special educational needs and economic difficulties (UNESCO 2020). On the other hand, the concerns of lecturers engaged in teaching processes have been observed to be related to their capacities of conducting remote/online learning due to the level of their knowledge and skills in the use of technology, their access to technology, and at-home isolation. Such concerns have been reported in particular by countries that declared an extremely low-level use of classroom technology before the current circumstances (UNESCO, 2020). However, according to Rogers (2003), if innovation is compatible with an individual's needs, then uncertainty will decrease and the rate of adoption of the innovation will increase. It appears Zambia is one such country that has seen significant

challenges in the implementation of e-learning amidst the COVID-19 pandemic.

In Zambia, due to restrictions imposed by the Ministry of Health as a result of the COVID-19 pandemic, nearly all higher learning institutions in Zambia have shifted to e-learning. To this end, most universities published press statements for immediate release to inform students of the increased awareness and adoption of technologies for e-learning. In line with the Ministry of Health guidelines, Kwame Nkrumah University (KNU) senate also resolved that in this closure, learning will proceed through e-learning platforms, Modular Object-Oriented Dynamic Learning Environment (MOODLE). Subsequently, the academic staff was requested to expeditiously secure learning support material for them to facilitate teaching and learning using the e-learning platforms. Similarly, students were also guided to make sure that they registered and got connected to the e-learning platforms to avoid missing out on learning but to only those that had paid at least 50% of the tuition fees. However, it is not clear how inclusive e-learning has been to students at Kwame Nkrumah University. It is from this background that this study was conducted to assess the inclusiveness of e-learning amidst COVID-19 on undergraduate students at Kwame Nkrumah University.

II. THEORETICAL FRAMEWORK

This study was guided by Innovation Diffusion Theory which was propounded by Rogers, E. M in 2003. Studies by Zhang, Zhang, Sun, Cai, Yang and Zhang (2014); Venkatesh, Morris, Davis and Davis (2003),and others have indicated that this theory is one of the popular theories for studying the adoption of Information Technology (IT) and understanding how IT innovations spread within and between countries. Apparently this study agrees with these scholars. According to Rogers (2003), there are four main determinants of the success of an IT innovation and these are; communication channels, the attributes of the innovation, the characteristics of the adopters, and the social system. The communication channels refer to the medium through which people obtain information about the innovation and perceive its usefulness. It involves both mass media and interpersonal communication. The attributes of innovation include five user-perceived qualities: relative advantage, compatibility, complexity, trialability, and observability. Relative advantage is the degree to which the user perceives benefits or improvements upon the existing technology by adopting an innovation. Compatibility captures the extent to which an innovation is consistent with the existing technical and social environment (Tornatzky& Klein, 1982). The more innovation can integrate or coexist with existing values, experience, and the needs of potential adopters, the greater its prospects for diffusion and adoption. Complexity measures the degree to which an innovation is perceived to be difficult to understand, implemented, or use. Less complex innovation is more likely to be rapidly accepted by end-users. Trialability is the ability of an innovation to be put on trial without total commitment and with minimal

investment. An innovation with higher trialability is more likely to be adopted by individuals. Finally, observability is the extent to which the benefits of an innovation are visible to potential adopters. Only when the results are perceived as beneficial, will innovation be adopted.

Contextualizing this theory into the current study one would argue that the four main determinants of success of IT are crucial if e-learning has to be inclusive at Kwame Nkrumah University. Therefore, the university management should invest heavily in IT. According to Winters (2013) in Chifuwe, Simui andMuleya (2020), an investment in education brings out the capacity in the investor to work and adapt to new life because education instills in the individuals the correct approach towards life. In this sense, to invest in IT means to equip the lecturers, students, and IT personnel with knowledge and skills on how best e-learning programmes can be rolled out.

III. METHODOLOGY AND DESIGN

The research took a qualitative approach to elicit in-depth and illustrative information from participants to comprehend the various dimensions of the problem. The research design was a descriptive survey. The population of this study included all students who are undergraduate at Kwame Nkrumah University. In this study, purposive and simple random sampling techniques were utilized to sample students. The researcher administered unstructured questionnaires and conducted interviews with students in lecture rooms and online via WhatsApp groups and Zoom. The study sample was one hundred participants (100). Eighty (80) students were given questionnaires, thus, Ten (10) full-time first years, Ten (10) first-year distance learning students, Ten (10) second-year full-time students, Ten (10) second-year distance learning students, Ten (10) third-year full-time students, Ten (10) third-year distance learning students, Ten (10) fourth-year full-time students and Ten (10) fourth-year distance learning students. Having issued the questionnaires, time was given to the participants to respond as required and the questionnaires were collected later. Interviews were conducted on 20 students, thus, five (5) representatives from each cohort and representing the School Humanities and Social Sciences, Natural Sciences, Business Studies, and Education. Data were analysed using thematic analysis.

IV. RESULTS AND DISCUSSION

The purpose of the present study was to assess the inclusiveness of e-learning amidst COVIC-19 on undergraduate students on full-time and distance learning at Kwame Nkrumah University. The data was analysed using thematic analysis and the following were the themes that emerged: Lack of orientation on the part of the students, limited access to MOODLE, limited options to e-learning platforms and poor internet connectivity.

Lack of orientation on the part of the students

The study revealed that despite introducing e-learning at Kwame Nkrumah University, students lacked knowledge on how to use e-learning platform. E-learning as a platform is an effective tool to improve the academic knowledge of students, however, the existence of the pandemic (Covid-19) has made it hard for students to learn how to use the platform effectively. Such a crisis brings a negative impact on the students (Bonk, 2005). This argument is also in line with Dhawan (2020) who observes that the difficulties and problems associated with e-learning are issues to do with installation, login problems, problems with audio and video, and so on.

When the students were asked to state the inclusiveness of e-learning during the time the University had closed as a measure to prevent the spread of COVID-19 in the first wave from March to July 2020, some students stated that they had no previous experience on how to go about e-learning. The use of technology was considered a problem for most students. The online technology would have helped the students to implement online lessons but it appeared it was not going to be. This is what a third-year student said:

> We closed and went home without any orientation on how to use 'MOODLE' (learning platform). So we did not know what to do. How did the university management expect us to use a system we don't know?

What emerged also from the study was that the challenge of using MOODLE did not only affect the students but also some lecturers. It seems some lecturers had problems with using the online e-learning platform rolled out by the institution as observed by the students. This is what one third-year student said:

> You see, out of the seven lecturers, only two lecturers were offering online lecturers. What more us ... there was a need to orient lecturers on the e-learning platform. During the lesson, the lecturer would mute

The above finding is in tandem with a study by Duraku andHoxha (2020) which enlisted certain challenges of online education which include, lack of online teaching skills in educators, online preparation of lesson plans as it is very time-consuming, poor network, lack of appropriate support from the technical teams, and congestion in online educational platforms. According to Magasu, Muleya and Mweemba (2020), meaningful teaching requires clear strategies, methods and resources taking into account specific requirements and contexts of groups of people to which teaching and learning process is intended.

Limited access to MOODLE

The study revealed that lecturers follow administrative directives which sometimes defeat the goodwill of e-learning. For instance, e-learning is used by the accounts department to collect tuition fees. This finding is in line with a study by Aldahdouh, Nokelainen and Korhonen (2020) who observed that sometimes unhealthy environments and technical issues are reasons behind the discontinued process of teaching-learning. Learners sometimes do not have the proper means to learn from the online medium. As most of the learners and educators are habituated with the traditional way of teaching-learning processes the outcome on E-learning is obtained comparatively low. Another issue that prevented the majority of the students from accessing MOODLE learning platform was the condition of 50% payment demanded by the institution. A third-year student complained that a condition that was attached to access the e-learning platform (MOODLE) denied most students access to e-learning. This is what was said:

> *We did not have access to 'MOODLE' because the management decided that only those who had paid 50% of the tuition fees were to access the e-learning platform.*

A second-year student mentioned that there was no interaction with our lecturers on MOODLE platform. Lecturers would just offload recordings and notes on the platform. This is what was said:

> *The challenge we had on 'MOODLE' was that there was no interaction with our lecturers because they only attached folders for notes and recordings. This made the system exclusive. We had no chance to ask our lecturers for clarifications on certain issues.*

As for lecturers who tried to use alternative online learning platform such as Zoom encountered the challenge to bring every student on board since Zoom is limited to a certain number of participants. A third-year student observed that:

> *Zoom was limited to only one hundred participants but we are about 500 students. So the other students were locked out despite meeting the threshold of paying 50% tuition fees.*

Another first-year student who was Visually Impaired mentioned that the e-learning platform did not favour them because the university management did not take into account the plight of the Visually Impaired. This is what he said:

> *Honestly, how did they expect me to use the e-learning platform when I do not have the gadget to use to access the e-learning platform? This is not fair and we all paid the tuition fees. Another issue was on load-*

> *shedding-you would want to charge your phone but no power.*

Some students were frustrated that they were not able to submit assignments online because they had no access to the learning platform. This was confirmed by all the lecturers who were interviewed. This is what one student said:

> *My lecturer has refused to get my assignment and insists that I submit it via MOODLE … but I have no access so I don't know what to do next. When I approached him to submit physically, he told me to wait until he gets the consent of the Dean. So I do not know what to do and maybe you can help me.*

Another third-year student noted that it appears the use of MOODLE had ill intentions in that it has been used by the university to settle scores. This is what was said:

> *I don't think the use of MOODLE had good intentions. The accounts department has taken advantage to collect out-standing tuition fees from students. Instead of helping students to access e-learning materials, they are busy talking about paying 50%. We know we have to pay but this time around things are not good economically.*

Further, the study established that some parents cannot raise funds for internet bundles. This view has been echoed by Sanford and Sandhu (2001) who have argued that some parents cannot raise funds and support their children to pay the required fees for them to have access to the e-learning platform.

Another first-year student indicated that she was not able to access the e-learning platform because she did not have internet bundles to go online. She pleaded that if there was a way, the internet services should be made available free of charge because some students cannot afford internet bundles.

This is what a third-year student said:

> *I had no money to buy bundles. I felt for my parents, they had to pay for my tuition fees, at least 50% and also, buy bundles for my online lessons.*

The above scenario exposed female students to vulnerability as men with financial muscle took advantage of them by buying them bundles in exchange for sexual favours. This ultimately graduated into what one may call transactional sex between vulnerable female students and financially sound men as one second-year female student observed:

> *As ladies we were vulnerable, we needed to attend class but we had no money. We could have sex to get money for internet bundles and we needed money every day. This is sad*

in the sense that we could not ask for this money from one person. A lot of the students are pregnant and who knows – we could have contracted diseases like HIV/AIDS.

Limited options to e-learning platforms

This study has established that MOODLE did not permit students to interact with students. Lecturers just offloaded materials on the platform. This finding was in line with a study by Iwai (2020) where it was observed that e-Learning methods currently tend to make participating students undergo contemplation and a lack of interaction. As a result, the students and teachers who inevitably spend much of their time online can start experiencing signs of social isolation, due to the lack of human communication in their lives. Social isolation coupled with a lack of communication often leads to several mental health issues such as heightened stress, anxiety, and negative thoughts. Further, Sintema (2020) argues that neglecting the communicational skills of the students will inevitably lead to many graduates who excel in theoretical knowledge, but who fail to pass their knowledge on to others. Thirdly, the Lack of self-motivation among students continues to be one of the primary reasons why students fail to complete online courses. In traditional classrooms, numerous factors constantly push students towards their learning goals. Face-to-face communication with professors, peer-to-peer activities, and strict schedules all work in unison to keep the students from falling off track during their studies.

Some students mentioned that there was a need to use a variety of alternatives to conduct online learning, including virtual learning (Google Meet, Zoom), task compilation, and placement of materials in Google Classroom. There was also a need to use Viber and WhatsApp to communicate with students. This was because lessons on the e-learning platform were not repeated.

Poor internet connectivity

This study has established that e-learning is not inclusive and has affected negatively some students in that some parts of the country where students come from, have a poor internet connection. There are, however, challenges to overcome. Some students without reliable internet access and/or technology struggle to participate in digital learning, this has made others remain behind because they do not have a computer and smartphones to use.

A first-year student mention that she failed to access the e-learning platform due to the poor network where she was coming from. This is what she said:

I had a challenge with a network where I come from. Amid the lesson, then the network would drop. This was frustrating. In Lupososhi (one of the remote towns), for example, the network is very bad.

However, they (students) suggested that, in order to advance online learning, the university management needs to raise the level of their knowledge and skills in technology, and the level of interactions with students should also increase throughout online learning. This is because there are panic and stress because of not having e-learning lectures. This is what one student said:

There is fear, panic, and anxiety in me because I felt left out in my studies compared to my fellow students who were able to log in on MOODLE. Sir, our friend committed suicide because she failed to handle the pressure arising from e-learning. Her last words were 'I am tired.'

Despite the challenges of e-learning at Kwame Nkrumah University, the findings have revealed that during the present pandemic crisis E-learning is a significant tool for effectively continuing the teaching-learning process during the lockdown. These findings are in agreement with Amin (2013) who noted that the web has become one of the important mediums of learning that opens the door for people around the world to access education easily at a free or lesser cost. However, it appears e-learning has fixed its root especially in the field of modern education. The need of modern learners is quite different and e-learning has been found beneficial for fulfilling their needs. The mediums of e-learning and principles of artificial intelligence are gradually gaining popularity in the world (Misko and Choy, 2004; Soni, 2020). By implication, e-learning is providing a solution to the learners who are unable to access the traditional means of education due to the present pandemic situation (Covid-19). However, in implementing e-learning there is a need to pilot the programme before it is implemented to avoid possible challenges. This is in line with Rogers' (2003) theory of innovation and educational technology where it is argued that innovation can only be adopted if it is in line with the needs of the recipients. By implication, the introduction of MOODLE at Kwame Nkrumah should have been done with the consultation of the stakeholders who include students. This is in line with Rogers's (2003) theory of diffusion where it is argued that to reduce the uncertainty of adopting the innovation, individuals should be informed about its advantages and disadvantages to make them aware of all its consequences.

It is envisaged that Kwame Nkrumah University will take advantage of well-known companies like Google, MOODLE, Microsoft, Zoom, and Slack who have offered many features of their products that could be beneficial in the field of education for free to the educational institutes. But the world still demands much more access to e-learning platforms. These findings agree with DurakuandHoxha (2020) who observed that globally there has been a huge and sudden change in the field of academia with the spread of the deadly COVID-19 virus. Further, DurakuandHoxha observed that the conventional classroom atmosphere has been replaced by

digital means to stop the spread of the virus and to ensure the safety of the educators and learners.

V. CONCLUSION

Despite the low numbers accessing the platform, this study has established that e-learning fulfills the needs of today's learners at their comfort and requirements although it has proven not to be fruitful because of various reasons at Kwame Nkrumah University. Further, the study has established that e-learning can be availed at any time at the learner's convenience by purchasing subscriptions of different platforms or logging in to access the courses. According to Zhang et al (2006), e-learning provides innovative and resilient solutions at the time of crisis such as the Covid-19 period to combat disruption and helps people to communicate and even work virtually without the need of face to face interaction.

E-learning is desirable but not conclusive at Kwame Nkrumah University. At the time this study was conducted, e-learning as a result of Covid-19 paused several challenges. Some of which included: lack of financial aid on the part of the students, poor network reception, and lack of proper orientation on the e-learning platform (MOODLE). This made e-Learning very ineffective especially that there was no lecturer student interaction. Despite the challenges in the implementation of e-learning at Kwame Nkrumah University, several advantages have been acknowledged in the need to shift to online learning, among which stands out the opportunity for rapid progress in the field of digital education especially that it is uncertain to get back to normal lecturing anytime soon. Therefore, the quality enhancement of online teaching-learning is crucial at this stage.

VI. THEORETICAL IMPLICATIONS OF THE FINDINGS

To make e-learning inclusive, there is a need to focus on the use of technology more efficiently. This means that the university management should focus on the use of technology that has minimum procurement and maintenance costs but can effectively facilitate the educational process. Before bringing in and adopting any e-learning tool, its advantages and disadvantages have to be weighed. This means that the institution should research before implementing an e-learning programme. Factors such as security features, internet speed, internet access, and digital literacy levels of the students and lecturers must be put into consideration. All things being, e-learning can provide inclusive education.

VII. RECOMMENDATIONS

Based on the findings, this study recommends the following to Kwame Nkrumah University management;

- To devise a flexible education system that will be inclusive in terms of accessibility and will enforce the skill for employability and productivity
- To invest heavily in technology that would enhance e-learning

- To consult widely all stakeholders when rolling out innovation
- Students should have free access to the service (MOODLE)
- The is a need to form unique partnerships with media house to broadcast lessons
- There is a need to integrate IT in all the courses at the University

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