



Adopting eLearning in Universities: A Challenge of Technology Factors

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Abstract

The use of eLearning has yielded a positive outcome in Universities in developed countries. However, in developing countries, it partially yields good results i.e for those Universities that attempted to implement it. Virtually the teaching and learning in Nigerian Universities is still done in its traditional way.

The issue of the Coronavirus has affected education negatively in Nigeria. It led to the shutting down of schools across the country. Fewer Universities (private Universities) attempted to use eLearning for teaching and learning as an alternative to the normal conventional theatre lectures. This has resulted in a kind of discrimination between the less privileged Universities and those that are opportune to have access to technological infrastructure. Moreover, those Universities that attempted to use eLearning were not able to leverage positive outcomes.

This study examines the technological challenges in adapting eLearning in some Nigerian universities. The study was based on the extended Information System Success Model (ISS) of Delone and Mclean. A descriptive design approach was be adapted. The findings of the study revealed the following technological factors that affect the adaptation of eLearning in universities such as; inadequate technological infrastructure, digital divide, and unwise selection of eLearning platforms. However, under the current COVID-19 pandemic, emphasis has been made on the cost of data subscriptions and ICT gadgets.

Keywords: eLearning, ISS Model, ICT facilities, Course Content Quality, Service Quality.

1.0 Introduction

According to Li and Lalani (2020), even before COVID-19, there was already high growth and adoption of education technology with global edtech investments reaching the US \$18.66 Billion in 2019 and the overall market for online education projected to reach \$350 Billion by 2025. Many countries around the world are using one or more forms of eLearning platforms to overcome the challenges brought by COVID-19 in the education sector. Countries like Japan had deployed online-class delivery, video conferences, groupware-based instructions (World Bank, 2020). Egypt is not an exception, they used the Egyptian Knowledge Bank for their students. The site features multimedia (videos, images, documentary film) to

help explain the various lessons and numerous full-text books including dictionaries.

Conventional classroom or face-to-face learning is one of the victims of the COVID-19 pandemic after the Nigerian government had announced the shutdown of all educational institutions on the 19th of March, 2020. Many academic institutions that were earlier reluctant to change their traditional pedagogical approach had no option but to shift entirely to online teaching-learning. The educational sector globally is seen to be shifting towards e-Learning to cushion the effect of pandemics (Itunuoluwa, Ayobami, and Ariyo, 2020). They added that developing countries' evidence from Nigerian experience is posed with the challenge of shifting from traditional teaching and learning methods to e-learning during the pandemic. The challenges

arise as a result of the varying degree of preparedness of the institutions, lack of infrastructures, paucity of funds, and policies issue in the Nigerian education sector (Idris, 2020; Itunuoluwa, Ayobami, and Ariyo, 2020). Presently, educational institutions have been closed for about 5-to-6 months and yet, there is no clear evidence of when these institutions will be reopened. Recently, secondary schools were allowed to open for only SSCE students to sit for their SSCE exams. But, that is not the case with universities, they are still closed. This had disrupted the academic session significantly. The remedy for this critical situation for our universities and other educational institutions is to adopt an eLearning system in their respective institutions.

The current situation of educational institutions (universities) in Nigeria has pressed the need for switching to digital learning. According to Idris (2020) switching to digital learning had happened for some private universities in Nigeria. But the government-owned universities had shown no digital learning is happening and there are no strong efforts to adopt such solutions.

The term e-learning defines technology-mediated and digitally empowered learning that utilizes hardware (e.g., PCs, tablets, printer, digital camera, digital videos, scanner, overhead projector; OHP, and OHP screen), software (operating systems, cloud technologies, applications (apps), writing, editing, MS Office) and (CD textbooks that fall in the category of courseware, OERS, e-content) and others (e.g., USB drives, CD-ROM), whether from a distance or face-to-face classroom setting (PC helped to learn), to empower the teacher to student interactions (Eze et al., 2018). Kyari et al. (2018) also define eLearning as simply a kind of learning that is enabled by electronic technology. It could be web-based learning, computer-based learning, or virtual classrooms and content delivery is done via e-networks, audio or videotape, satellite TV, video conferencing, CD-ROM, I-pods, email, wireless and mobile technology. It allows learners to broaden their knowledge because they can learn on their own and it increases learners' level of confidence and independence. E-learning refers to the use of ICTs to enhance and support the teaching and learning process (Oye, Salleh, and Iahad, 2011).

1.1 Problem statement

Nigerian education sector had received a significant drawback as a result of the COVID-19 pandemic. Educational institutions (universities) have been shut down for more than 4 months and yet, no clear evidence to show when these universities will be open for studies to continue. This situation had a great effect on students' performance as well as the development of the country at large. E-learning has become the mandatory component of all educational institutions like schools, colleges, and universities around the world due to the pandemic crisis of COVID-19 (Radha, Mahalakshmi, Kumar, and Saravanakumar, 2020).

1.2 Objectives of the study

- To determine the technological factors that affect eLearning adoption in Nigerian Universities.
- To examine the challenges that manifested for those Universities that switched to digital learning.

2.0 Literature Review

2.1 Theoretical review

Several theoretical frameworks have been used in studies related to the adoption of eLearning. In this study, we adopted the extended Information System Success Model (ISSM) because it had received greater attention and usage in studies associated with adapting eLearning.

2.2 Related works

Oye, Salleh, and Iahad (2011) stated that the mass unawareness, low computer literacy level, and cost of identified as critical factors affecting the acceptance of eLearning by students and lecturers of Nigerian Universities. They added that inequality of access to technology is the challenge of the digital divide existing among students. Furthermore, the challenge of internet connectivity, energy-related problems, and limited expertise are also factors that affect the adoption of eLearning in Universities.

Idris (2020) found that the challenges of adapting eLearning at the tertiary level are associated with regulatory issues as National University Commission (NUC) regulations do not allow Universities to fully provide learning remotely. Idris added that the American University of Nigeria had some of the technological infrastructures that will enable it to transit to digital learning since its establishment. But, they were unable to realize the potentials of eLearning until the COVID-19 pandemic. However, the restructuring in the University had led to some staff being laid off.

Other Universities were faced with their unique challenges and they are using different platforms. Like Covenant University, they are using ZOOM for real-time learning and they have organized students into Whatsapp and Telegram groups.

Akintoye (2020) stated that the high poverty level in the country will make this type of learning unaffordable for the common man. Data, laptops, desktop, etc all comes at a great cost. On the other hand, the obstacle of the use of ICT was infrastructure deficiencies; the students lamented that Nigerian Universities do not have adequate eLearning library domain, online seminars, or discussion with lecturers, online examination, and limited bandwidth.

The limitations of online-based learning that schools and edtech startups face are the internet cost and barrier in access among middle-class households. He added that Nigeria is rooted in the bottom quarter of global broadband speed rankings for 2019 by UK analytics firm cable (Kazeem, 2020).

3.0 Methodology

In this study, we used a descriptive design approach to determine the technological factors that affect eLearning adoption in Universities as well as to examine the challenges that manifested for those universities that switched to digital learning.

4.0 Result and Conclusion

Considering related works, this study was able to articulate the technological factors that affect adapting eLearning in Universities as follows;

1. Inadequate technological infrastructure
2. The impact of regulatory bodies
3. Unstable power supply
4. Cost of data subscription and ICT gadgets
5. Unreliable networks service
6. Digital divide
7. Unwise selection of eLearning platform

These challenges are not all in adapting eLearning in Universities. Future research can explore more of these factors that hinder the use of eLearning in our University. Studies have revealed that government-owned Universities have shown no sign of digital learning that is going on. There are about 256 Universities and Colleges in Nigeria only 79 of them are private (Bolaji, 2020). And only a few among the 79 were able to use eLearning. Coming to the government-owned Universities, which have the highest number, no digital learning is taken place. This is a serious challenge for the Nigerian government because children of the common man are far lagging.

Considering the various platform used by the private Universities, they are associated with some common challenges. The first challenge that manifested was the issue of network connectivity, distractions by pop-up messages from other groups and friends using the same platform.

4.1 Network connectivity

The problem with network/internet connectivity is not new to almost all Nigerians who are using one or more ICT devices. During the COVID-19 pandemic, data subscription was subsidized where an individual can buy a data bundle of 1.5GB at the rate of ₦ 300, but the effectiveness and efficiency of the connectivity had become troublesome. This will not allow the smooth running of digital learning.

Looking at the other side, conventional Universities, most of the learners in these Universities are from middle-income or poor family and some of them are living in a remote areas where there is poor or no network/internet connectivity. And even if there is, they may not be able to cope with the cost of a data subscription. The implication of data being consumed per week is a big challenge to parents (Akintoye, 2020).

4.2 Course Content Quality

The content delivered on these platforms is mostly videos, audio or textual content. Under the current network/internet instability varying from location to location in the country, this challenge will not make it feasible to adapt e-learning in Nigerian Universities. Students reported limited attention span and resource-intensive nature of online learning as a limitation Mukhtar, Javed, Arooj, and Sethi (2020).

4.3 Distraction by pop-up messages

Using ZOOM, Whatsapp, and Telegrams as an eLearning platform may not give a significant outcome as a distraction from friends and other groups will arise. This shows the need for Universities to make a wise selection of eLearning platforms to be deployed in their various Universities. ZOOM, Whatsapp, and Telegram possessed some of the features of a good eLearning platform but there are other features they lack which will seriously affect the quality of the course content.

5.0 Recommendations

Knowledge is the key to the success of every nation. If a nation did not invest a lot in its educational sector and implement good policies that will govern teaching and learning, that nation is bound to fail. A lot of criminal activities will be manifesting now and then.

Even though there are inadequate ICT facilities, providing them in abundance alone will not help in leveraging fully from the facilities. There is a need for creating awareness among staff and students on benefits that can be gained from the proper utilization of ICT facilities such as eLearning. Training of staffs that can serve as a desk office also needs. Regular maintenance of the facilities will enhance long-term usage and benefit.

An adequate and reliable source of power can lead to adapting eLearning in Universities. There is a need for regulatory bodies to discharge their responsibilities accordingly.

For eLearning to be adopted fully in Universities, the cost of data subscription has to be subsidized as well as the cost of ICT gadgets. Reliability of network/internet service is of great importance in adapting and smooth running of digital learning.

The digital divide is a technological factor to be considered in adopting eLearning in universities as the learners in these Universities are from middle-income or poor family and some of them are living in remote areas where there is poor or no network/internet connectivity. So, to take them all along, the issue of the digital divide needs to be address

There is a specific platform that is mainly designed for eLearning such as moodle which is free and it's open-source. Choosing the right platform will contribute

intensively to adapting eLearning in Universities as there will be less distraction by pop-up messages when compared to WhatsApp or Telegrams.

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