

THE IMPORTANCE OF SYSTEMIC SUPPORT FOR STUDENT-DRIVEN SOCIAL MEDIA LEARNING ON CAMPUS IN NIGERIAN UNIVERSITIES.

Dr. Aderinsola E. Kayode

*Faculty of Management Science, Durban University of Technology, South Africa
Department of Educational Management, Faculty of Education, University of Ibadan, Nigeria
Correspondence author: +27655955714/ aderinsolaK@dut.ac.za or aderini2002@gmail.com

Dr. Linda Z. Linganiso

*Research & Postgraduate Support, Durban University of Technology, South Africa
Co-author: +27 736309281/researchdirector@dut.ac.za*

ABSTRACT

The use of social media during the COVID-19 pandemic has emerged as a critical factor for academic continuity on university campuses globally. This paper reviews the use of social media as a learning tool among a undergraduates sample of students from selected Nigerian universities during this pandemic challenges period. A set of online survey Google forms was self-designed and used to explore how undergraduate students learn and concentrates on their academic activities during this pandemic. A sample size of 450 was purposively selected from the three universities, but only 153 online survey responses were valid for the data analysis. Descriptive statistics of frequency, mean and standard deviation were used in analysing demographic variables and research questions. The research findings indicated that students were ready for the new change to digital learning with their academic performance. Researchers recommended that both the academic community and government should support building resilient social media networks on campus among students and lecturers, including skills development and ready access to devices and the internet.

Keywords: *social media in education, connectivism, WST model, higher education in Nigeria, blended learning, COVID-19*

INTRODUCTION

The term 'social media' is often used to refer to new forms of media that involve interactive participation (Manning, 2014). The internet provides a powerful medium for such interactive

participation and the dissemination of information through its social networking sites – Twitter, Yahoo Messenger, Facebook Messenger, Blackberry Messenger, WhatsApp Messenger, 2go Messenger, Skype, Google Messenger, Instagram, iPhone, and so on (Kausar & Awan 2019; Aba & Makinde, 2020). Educational research continues to explore the use of social media as it has become one of the most impactful Information and Communication Technologies; and has been shown to enhance academic performance and the educational environment (Kapoor et al., 2018; Kayode et al., 2019;).

Social media platform innovation continues to remove communication difficulties and introduce new digital tools to connect globally. Thus, social media has become an international trend in almost every sector, especially in the educational sector (Alonge, 2017; Aba & Makinde, 2020). Consequently, technology is considered an effective tool for educational change and reform; proficiency in digital tools is now regarded as important as basic reading and writing skills (Kayode et al., 2019).

Studies indicate that social media networks usually display strong user engagement and enhance communication between students (Alonge, 2017). Consequently, social media sites have improved collaboration on academic activities among students during the lockdown globally (Favale, et al., 2020). Additionally, social networking sites are becoming more and more popular among students, especially in developing countries (Adaja & Ayodele, 2013; Azizi et al., 2019). For example, Nigeria had 92.3-million internet users, which is projected to grow to 187.8-million internet users by 2023 (Akanni et al., 2020).

The way in which this technology was used among Nigerian students during lockdown was one of the concerns that led to the current study. Additionally, the question of how prepared Nigerian universities were for lockdown and digital learning was also of concern. Thus, this article reports on the findings of a study that investigated the use of social media during the COVID-19 lockdown among university students in selected campuses of Oyo State, Nigeria.

LITERATURE REVIEW

The empirical data supporting the benefits of digital learning can best be understood within various theoretical frameworks. According to Glăveanu, Ness, Wasson and Lubart (2019),

learning is a way of changing the performance or potential of a human being, and it involves characteristics that are variously associated with behaviourism, cognitivism and constructivism. Schmerbach (2016) explains these theories of learning as follows:

Behaviourist learning: This is learning that focuses on objectively observable behaviours and discounts any independent activities of the mind. It defines learning as no more than the acquisition of new behaviour based on environmental conditions.

Cognitivist learning: Here the focus is on trying to understand concepts like memory and decision-making using technology to process information. It concerns itself with behaviour that can be observed. Revealed actuality in interpretation and knowledge is negotiated through experience and thinking.

Constructivist learning: This suggests that humans construct knowledge and meaning from their experiences. It is not a specific pedagogy. However, constructivism has had a wide-ranging impact on education learning theories and teaching methods and is an underlying theme of many education reform movements.

Hallisey (2017) argues that technological tool use is constructivist in nature. Digital tools such as synchronous and asynchronous communication (WhatsApp, Skype, Twitter, google classroom, zoom, online.question, Kahoot, etc.) are constructivist ways to connect students in various groups, enabling them to get more information relating to their studies.

Adding an additional layer, collaboration in learning enables communities to practise as informal networks that support professional practitioners to develop shared meaning and engage in knowledge building among the members of the communities (Premo, Cavagnetto, Davis & Brickman, 2018), leading to the learning theory of connectives.

Connectivism: This occurs when acquiring knowledge through networking and getting information relevant to a learning environment through the internet. The knowledge can be reserved for future use. Milad (2019) explains that connectivism enables a person to seek out current information and opinions and to use this new information to formulate new concepts,

fields and ideas. These connections are a way that learners network themselves – such as Facebook, class video blog, etc. – and find new information to use in learning (Sharma, Joshi & Sharma, 2016; Liu, 2016).

Among these learning theories, connectivism best frames research into digital technology's impact on teaching and learning over the last 20 years. Building on constructivist ideas such as the co-construction of knowledge, connectivism focuses on the educational benefits of digital collaboration and networking (Al-Rahmi, Othman, Yusuf & Musa, 2015; Farley et al., 2015; Reese, 2015). These authors describe collaboration and connectivism with technology learning as a way learners communicate with one another, experience and become active with new skills and knowledge. They can interrelate, exchange views, understand and co-construct meaning and knowledge based on their needs, resulting in improved students' academic performance.

According to connectivism, knowledge is distributed across an information network and can be stored in various digital formats. Learning and knowledge are said to "rest in diversity of opinions" (Zhu, Yu & Riezebos, 2016; Ching, 2015). Mijumbi et al. (2016) suggest that instead of modelling our knowledge structures as hierarchical or flat, confined belief spaces, the view of networks enables the existence of contrasting elements selected based on particular research or learning activities.

Many researchers agree that connectivism and interactivity present a model of learning that acknowledges the tectonic shifts in society where learning is no longer an internal, individualistic activity. How people learn, work and function is altered when new tools are used. Students can connect by networking in acquiring new skills and knowledge, which students can use to become connected in their learning, enhancing their understanding of the relevance of their studies (Arkorful & Abaidoo, 2015; Ching Lam, 2015; Trust, Krutka & Carpenter, 2016; Zhu, Yu & Riezebos, 2016; AbdAlla, 2017; Elazhary, 2018).

Additionally, connectivism is driven by the understanding that decisions are based on rapidly altering foundations. New information is continually being acquired. The ability to draw distinctions between important and unimportant information is vital. The ability to recognise

when new information alters the landscape based on decisions made yesterday is also critical. (Goldie, 2016; Anshari et al., 2017)

This current study revealed that most students in Nigerian universities use their mobile and online forum webpage to connect to one another for urgent information relating to their learning. This reflects the view of Barak (2017) who found that most students are active when connected with the use of digital tools for their personal network. In the present study, the core skills most used to achieve this connectivity were keyboarding or general computer use, email, spreadsheet, PowerPoint, internet and synchronous and asynchronous chat.

Supported by strong empirical evidence from a range of global contexts, connectivism as a learning theory for digital education underpins this study's rationale. Data were interpreted according to the Will, Skill & Tools (WST) conceptual framework as discussed below.

CONCEPTUAL FRAMEWORK OF THE STUDY

The WST model (Knezek & Christensen, 2016; Ledbetter & Finn, 2016) was adopted for data interpretation. The WST conceptual framework can be used to describe Will (positive attitudes), Skill (competency in technology) and Tool (technological tools access), which are all crucial prerequisites for the use of technology in teaching and learning; as well as the impact of technology on students' academic performance (Knezek & Christensen, 2016; Niederhauser & Lindstrom, 2018).

The WST framework has been extensively used to study technology integration into teaching and learning (Knezek & Christensen, 2016; Niederhauser & Lindstrom, 2018). As applied in this study, will is the willingness of students to integrate technology into their academic activities, skill is the computer literacy skills that form the fundamental knowledge and basic ability to use CBT resources, while tools are the availability of CBT devices.

Previous research using the WST model strongly suggests that technology integration into the classroom impacts favourably on academic performance; and that the critical predictors of technology integration are: a positive attitude on the part of the learner and teacher towards the

use of technology in the classroom; good skills in operating the technological tools and its fields of application; and sufficient access to the devices or gadgets (Kayode et al., 2019).

The model was seen as appropriate for Nigerian institutions where blended learning is still facing challenges in terms of unstable electricity, lack of infrastructural facilities, inadequate computer hardware and software, underfunding and inadequate supply of modern technologies in the classroom. These and many other challenges are the major drawbacks in the development of CBT skills for student education in Nigerian universities (Ajadi, Salawu & Adeoye, 2008; Alonge 2017; Govender & Kayode, 2020).

In terms of a valid measure of WST, Petko (2012) and Bolarinwa (2015) argue that the validity of the model can be tested through the use of a questionnaire with relevant questions to ascertain the quality and quantity of ICT used – a recommendation followed in this study. The adapted questionnaire after Govender (2016) was used for the study.

RATIONALE FOR THE STUDY

Given the large body of international research in support of digital learning for the improvement of academic performance, it was deemed imperative to ascertain if Nigerian university students had sufficient access and skill to continue their studies during the lockdown through the use of social media. Additionally, data on the extent of use, and which platforms were preferred and why, could provide valuable information for future efforts by universities to augment student-driven connectivity and networking forums.

Research questions

1. Did students have access to relevant technological devices for their online learning during the Covid-19 lockdown?
2. Which social media platforms did students use for online learning during the Covid-19 lockdown?
3. What was the extent of students' use of these social media platforms for online learning during the Covid-19 lockdown?

METHODOLOGY

A descriptive survey design was adopted for this study. The three sampled universities were: the University of Ibadan (Federal), Ekiti State University (Oyo affiliated – State) and Ajayi Crowther University (Private).

The population comprised undergraduate students in the three universities (Federal, State and Private) in Oyo State in Nigeria. A sample size of 450 was purposively selected. One hundred and fifty-three students participated in the online survey, which was deemed adequate for the data analysis (Govender & Kayode, 2020)

RESEARCH INSTRUMENT

Online survey questionnaires using social media platforms (Alonge, 2017; Kayode et al., 2019) were used due to the COVID-19 lockdown. A pilot study was conducted to ascertain the validity and reliability of the instrument; and the instrument was validated by an educational ICT expert in the field of testing and measurement.

The instrument was trial-tested at the participating universities with undergraduates that were not part of this study. Cronbach-alpha reliability was computed and subjected to a reliability test that yielded 0.78, indicating reliability for the study. Descriptive statistics were applied to the data to derive the frequency, mean and standard deviation, which were used to answer the research questions.

University ethical clearance was obtained, and participants signed informed consent letters. Due to the lockdown, telephonic meetings were held with senior administrative staff at each university to explain the study and plan the logistics. In addition, student WhatsApp groups were used to communicate with the participants. After receiving accepted consent from students online, a Google form was designed and sent to the WhatsApp groups.

RESULTS

The results are presented according to each research question and triangulated in the discussion.

Research Question 1: Did students have access to relevant technological devices for their online learning during the Covid-19 lockdown?

The results obtained are presented in Table 1 and illustrated as a pie chart in Figure 1.

Table 1: Access to relevant technological devices

Do you own a gadget (phone, PC, Pad, Notebook, etc.) that connects to the internet?	Frequency	Percent
Yes	151	98.7
No	2	1.3
Total	153	100.0

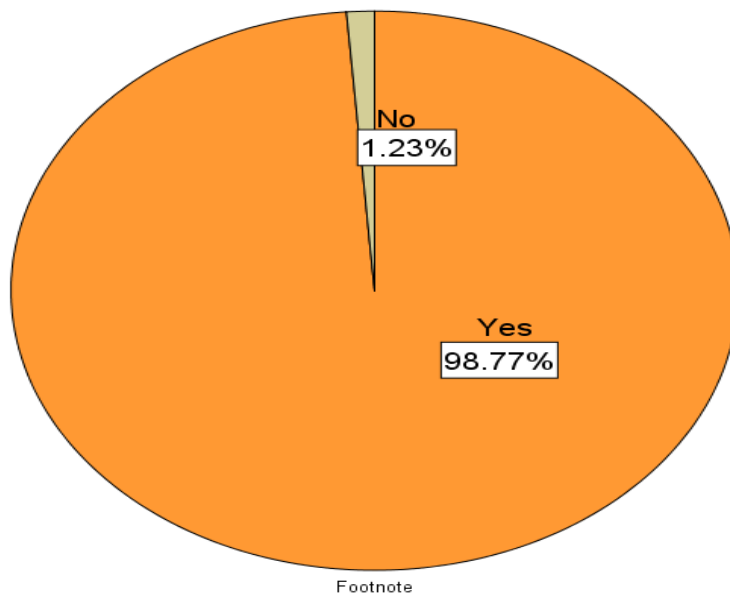


Figure 1: Access to relevant technological devices

The results revealed that majority (98.7%) of the students have access to relevant technological devices for their online learning whereas a minority (1.3%) of the students do not.

In 2000, Moja conducted a study on the Nigerian education sector by analysing the main issues in the Nigerian education system relating to human resources capacity, access and equity,

quality and information for decision making. The study reported that the basic CBT facilities that aid teaching and learning were readily available. Earlier Nigerian studies indicate a similar situation, implying that challenges of poor infrastructure continue to face Nigerian students (for example, Onasanya, Shehu, Ogunlade & Adefuye, 2011; Ikegwuro, 2017). The results of this study suggest that the high reported access to social media learning is the result of student-driven efforts.

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Research Question 2: Which social media platforms did students use for online learning during the Covid-19 lockdown?

The results obtained are presented in Table 2 and illustrated as a pie chart in Figure 2.

Table 2: Use of social media platforms

Which of the social media platform do you use for learning purposes during Covid-19 lockdown?	Frequency	Percent
WhatsApp	97	63.4
Zoom	21	13.7
Google classroom	4	2.6
Twitter	6	3.9
YouTube	15	9.8
Others	10	6.5
Total	153	100.0

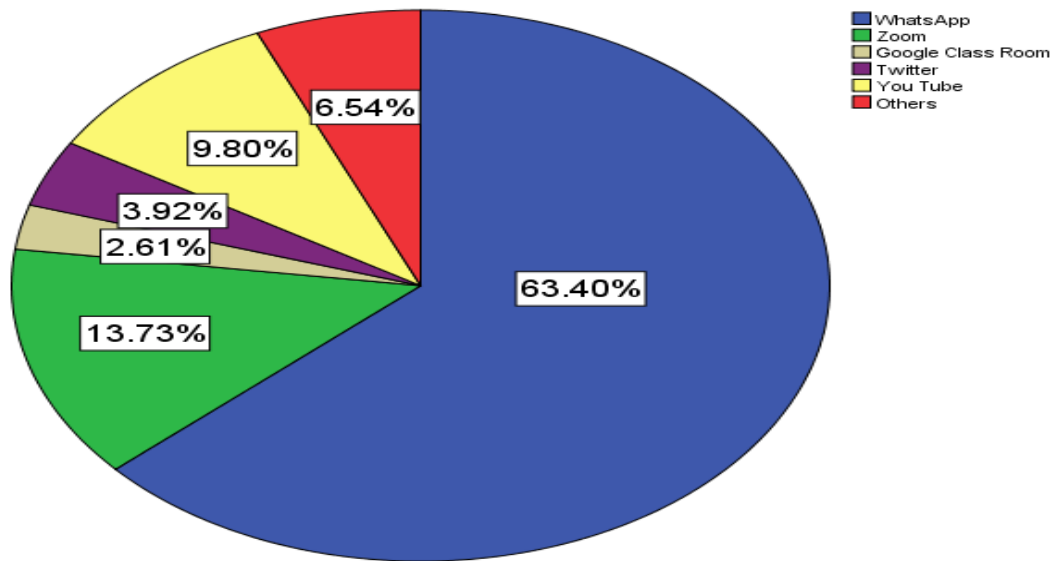


Figure 2: Use of social media platforms

The results show that WhatsApp was the most commonly used platform among several social media platforms such as Zoom, Google classroom, Twitter, YouTube and Google meet, which were identified the most effective social media platforms for learning purposes among undergraduate students across the three tertiary institutions. WhatsApp accounting for 63.4% of the students; whereas Zoom, Google classroom, Twitter, YouTube, Google and the other social media platforms accounted for the remaining 36.6% of the students.

These results are consistent with those from a study by Al-Said (2015) on the use of tools such as Wi-Fi, 3G and 4G mobile phones compatible with a range of devices such as smartphones, tablets, desktops, and laptops computers. Findings illustrated the use of these technologies as blended tools by undergraduate students in Nigerian universities – mostly word processing, PowerPoint, spreadsheets, synchronous and asynchronous chat and the internet.

Additionally, WhatsApp, which dominated student networking and collaboration in this study, is regarded by researchers as a social innovator due to its speed and efficiency in facilitating interaction and information transfer (Dorwal et al., 2016; Kiran et al., 2017). Most of the

students in this study used WhatsApp groups as a social network for sharing, interacting and exchanging information on their studies.

Research Question 3: What extent did students use these social media platforms for online learning during the Covid-19 lockdown?

The results obtained are presented in Table 3.

Table 3: Extent of students' use of social media platforms

	NA	S	O	VO	Total	Mean	Std. Dev.
I use social media for asking academic related questions.	8	41	39	65	153	3.05	.95
	5.2	26.8	25.5	42.5	100		
I use social media for catching up with events around school.	7	56	56	34	153	2.76	.85
	4.6	36.6	36.6	22.2	100		
I make use of social media for completion of my academic assignments in school.	5	41	49	58	153	3.05	.88
	3.3	26.8	32.0	37.9	100		
I make use of social media for communication purposes with my lecturers	8	44	53	48	153	2.92	.90
	5.2	28.9	34.2	31.6	153		

Mean Decision Scale: 1 = Not at All (NA), 2 = Sometimes (S), 3 = Often (O), 4 = Very Often (VO)

Table 3 shows the extent of students' use of social media devices for learning among the three tertiary institutions. The results show that undergraduate students often use social media for asking academic related questions; for catching up with events around school; for completion of their academic assignments in school; and for communication purposes with their lecturers, with 3.05 ± 0.95 , 2.76 ± 0.85 , 3.05 ± 0.88 , and 2.92 ± 0.90 values respectively. The mean values were consistent with the 'Often' scale (3).

Govender and Kayode (2020) have found that ICT is being used in education in Nigeria, but not to its full educational potential. Other authors concur that computers were not fully integrated into conventional courses (though there was a boost in interest in computer-based technology because of its reported benefits to education) due, as discussed, to certain barriers to proper adoption of computer technologies in Nigerian education, e.g., unstable electricity supply, inadequate ICT tools, limited computer competence (computer literacy) and limited access to communication infrastructure, among others (Adeyemi & Olaleye, 2010; Omeluzor, Oyovwe-Tinuoye & Abayomi, 2016; Ikegwuro, 2017).

Therefore, the results of this study suggest that the application of these student networks to their online learning has evolved from existing student social networks – possibly with less-than-optimal lecturer initiation or campus support.

Interpreting results according to the WST model

Based on the study results, students perform well in all three variables – will, skill and tools. However, related Nigerian research has shown poor mediation by lecturers, who often lack the competence to fulfill this role and a failure on the part of tertiary institutions to provide skills training and access to ICT facilities (Kayode et al., 2019).

During the lockdown and staff strike, systemic and institutional failures were compounded, and students' use of social media became of even greater value (Favale et al., 2020; Kayode & Rapeane-Mathonsi, 2021). In addition, the lockdown and staff strike were not the first examples of academic disruption in a country where university campuses are not deemed to be ICT ready (Ntiasagwe, 2020).

The positive relationship between students' academic achievement and their use of computer technology, with prior knowledge providing a major academic advantage, is borne out by many studies. For example: Li (2008); Fu (2013); Sagarmay (2014); Andreoli (2014); Kayode et al. (2021); Petko et al. (2017); Fu et al. (2019); Govender and Kayode (2020).

Given these conditions, the high levels of WST displayed by students are likely to be severely hampered by systemic and institutional factors, which are out of their control (Knezek &

Christensen, 2016; Kayode and Rapeane-Mathonsi, 2021). Thus, no matter what commitment and effort is displayed on the part of students, the attainment of their full education potential – as augmented by ICT in teaching and learning in higher education – will inevitably be curtailed by these factors. These challenges to the availability and usage of ICT by the students, despite their high WST indicators, cannot be ignored if Nigerian students are to compete in a global economy.

Implications for higher education theory

From an extensive literature review, Duta & Martínez-Riverab (2015), concluded that social networking in higher education is fast becoming the new form of communication between students and lecturers for many different purposes. The advantages have been recognised by students, who tend to be the most tech-savvy and are leading the way in recognising the importance of ICT as a tool for collaborative learning.

Additionally, social networking and collaborative reflection are overturning the individualistic culture of teaching and learning that has previously dominated universities. These authors also note that student motivation and creativity is enhanced in an online environment. Finally, they also mention the potential for greater inclusivity where a diverse student body is involved – a reality of many of today's tertiary institutions.

Based on the theoretical foundations of their study and their findings, they give the following advantages for the use of social media at the tertiary level: the creation of national and international networks for education, research, and innovation; a focus on lifelong learning; greater involvement of students and teachers (beginners and experienced) in learning and research; the creation of a collaborative network of training providers or access to other institutional networks.

On the issue of assessment, the assessment of transversal competencies is considered an essential factor in student development. These transversal competencies can best be evaluated in small groups (programmed tutorials), in which students can develop a continuous task during the course. In order to monitor the tutorials, social networks are needed to evaluate everyday work, communication, and interaction of the students (Agudo et al., 2013).

As Duta & Martínez-Riverab (2015) concluded, the learning theories of behaviourism, cognitivism and constructivism, previously most often used in designing instructional environments, were developed in a time when learning was not impacted by technology. However, in the last twenty years, technology has reorganized how students live, communicate and learn. Today, connectivism provides best provides an appropriate theory of learning for higher education.

Other authors concur that the contemporary reality of tertiary study, assessment, and research is characterized by diversity, interdependence, and change; and that only practice guided connectivism can equip students to respond to these challenges (Veletsianos & Kimmons, 2012; Roblyer, McDaniel, Webb, Herman & Witty, 2010).

DIGITALISATION AND DECOLONISATION

The digitalization of higher education – including access to social media platforms – are creating new opportunities for developing countries – as well as potentially exacerbating current educational inequities as developing nations often lag behind the developed world due to poor infrastructure and skills development programmes (Salavati, 2016; Chukwuere, 2017). This is true even within certain countries. For example, Molawa (2009), shows that the level of digitalisation and ICT penetration in South Africa is not equally distributed across the nine provinces because of rural communities and townships communities. Another cautionary note is whether educators (lecturers) and students use these platforms effectively, as effective digital education requires access and competency (Chukwuere, 2017).

With access and competence, digitalisation opens a new world for underdeveloped countries to partake in global digital resources, but this requires budgetary commitment on the part of government and higher education institutions. In this context, the South Africa government invests 0.6% in higher education, which is extremely inadequate (Mbembe, 2016). Researchers call for this investment to increase because academic institutions are becoming increasingly technological-oriented (Glenn & D'Agostino, 2008; Chukwuere, 2017).

There are two issues here, firstly the issue of educational inequity, which can most effectively be addressed through digital education, providing that both infrastructure and skills development are addressed. In this case, as mentioned, students lead the way via social networking forums. In addition, students' high motivation (will) provides a head start for institutions – a valuable human resource for facilitating change.

The second issue is decolonisation of curriculum content and modes of delivery (Chukwuere, 2017). This author argues that the digitalisation of the decolonised education curriculum should become the proper forum for education. Additionally, that digital learning software should be developed using culture-specific criteria (Salavati, 2016).

Many researchers argue that higher education institutions will be greatly re-shaped through technological innovations, thus increasing access to higher education as well as national and international information, ideas, and knowledge through digital resources such as magazines, journals and books (Glenn & D'Agostino, 2008; Molawa, 2009).

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Although this research did not specifically look at aspects of inclusivity or decolonized curricula, both ideals' potential to be achieved will inevitably be enhanced through student networking and internet access to global digital resources. However, lecturer and university guidance is needed to focus student efforts in both regards; and maximize the potential of these student-driven social media networks.

CONCLUSION AND RECOMMENDATIONS

The findings of this study reveal that the students were positively disposed towards, and actively engaging with, social media for educational purposes – possibly realizing their dependence on social media platforms for academic advancement as emphasized by Kayode et al. (2021) – driven by the combined challenges of lockdown and the national strike among academic staff.

In addition, related Nigerian studies have reported that Nigerian universities are not ICT ready with poor access to facilities and training and unreliable power supplies. This situation is of concern when viewed against a large body of international research supporting a positive relationship between ICT usage in teaching and learning and academic performance. This research cannot be ignored if Nigerian students are to compete in a global economy (World Bank Group, 2017).

Recommendations from this study to academic and government institutions are to ensure that all students in Nigerian universities have adequate access to digital Tool and the internet and adequate competence to use these tools and facilities to maximum effect. For this to occur, both funding and policy change is needed. For example, UNESCO has recommended that between 15% and 20% of budgetary provision should be made for education in developing countries. In contrast, Nigeria allocated about 7.05% to the educational sector in the 2019 budget (Binuomoyo, 2020; Gambo & Fasanmi, 2019)

Government subsidies for CBT devices and facilities would also help in promoting CBT usage and blended learning. Government policy in this respect should ideally involve all stakeholders, such as university management, lecturers and student representative bodies, and potential ICT funding partners. These recommendations become imperative when considering that the global educational and work environment cannot be navigated by any undergraduate or graduate who cannot meet these 21st-century demands (World Bank Group, 2017). Additionally, digital didactics and pedagogy are, potentially, the most influential forums for delivering informed decolonised teaching and learning; as well as addressing historical, educational inequity (Molawa, 2009; Salavati, 2016; Chukwuere, 2017).

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