

CHALLENGES OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IMPLEMENTATION IN TERTIARY INSTITUTIONS IN BAUCHI STATE, NIGERIA

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Abstract: The global apparent persistent clamour of tertiary education institutions to cooperate information and communication technology for effective and efficient management was to ensure higher access to information, effective communication, accuracy, effectiveness, etc. This study intends to explore the implementation's challenges of information and communication technology in tertiary institutions of Bauchi State, Nigeria. ICT, is an essential part of the global development goal. Therefore, within the globe, in the 21st-century information and communication technology (ICT), is playing a vigorous role in shaping education and contributed immensely to the progress of the tertiary institutions; and as well, it has a significant starring role to play in facilitating the education, manufacturing to succeed complex information streams and for effective and efficient educational design and development. Despite the government efforts in ICT to hold pronouncing potentials in boosting current education and nationwide progress efforts in Nigeria. Yet, more efforts should be done for the attainment of the sound education and pronounce tertiary institutions with potential technological attributes in the state. This study observed the potential challenges of implementation of ICT facilities at tertiary institutions in Bauchi state, which conducted through the review of the related literatures. Thus, poor electricity power supply, inadequate ICT facilities, Cost of internet services, lack of knowledge of technological attributes, leadership problem, and weather issue. This study recommended solutions that will ensure proper implementations of ICT facilities in public tertiary institutions, such as remedying these above mentioned challenges, consultations, seminar and conferences.

Keywords: Tertiary Institutions, Challenges, ICT facilities, Implementations, Nigeria.

1.0 Introduction

The speedy steps of globalization joined with the information technology revolution have motivated governments across the globe to embrace e-services progressively in the delivery of statutory duties in the public domain (Asogwa, 2013). The e-applications have infused into all economic sectors and are progressively becoming the basis of government actions in industrialized nations and subsequently changing the instruments, orientation, ideologies, trajectory, patterns of communication, and management style within and outside government (Asogwa, 2013).

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Tertiary institution refers to the training of highly skilled specialists in the fields of, science, social sciences, technology, languages, economics, culture, etc., at multiple of higher education institutions which admits candidates from the secondary school of specialized education. It is likewise the education beyond the secondary level, particularly, the university, college or Polytechnic or mono-technic level (Bloom, et al., 2014; Adelabu, & Adu, 2014)

Equally, the majority of developing and transition nations continue to fight with difficulties formed by insufficient answers to long-lasting challenges confronted by their tertiary education systems. Bounded by these animated encounters is the sustainable extension of tertiary education coverage, the decrease of imbalances of access and results, the development of educational excellence and applicability, and the introduction of more effective governance arrangements and administrative practices, Salmi (2015).

Information and communication technology (ICT) facilities refer to as the technological tools, such as, computer systems, internet service, printers, photocopiers, individual websites, telephones, mobile phones, facsimiles, video conferencing, scanners, teleconferencing etc. These are used for numerous tasks, famous uses for word processing, statistical analysis, internet browsing, and electronic communication, searching for information, and preparation of course materials, among others (Olatokun, 2017).

Implementation is the procedure of moving an idea to reality in the various fields of engineering, business, and other related fields. It is a process of building rather than process of design. Implementation happens in the later parts of the phase models of the process of policy. Implementation is frequently addressed as the rest. It's viewed as a presumed outstanding in goal accomplishment implies a slight consideration to political perspective, similar to uncertainty and battle (Hupe & Hill, 2016).

More so, the key reason for the fresh report by the World Bank is to investigate the starring role of tertiary education in constructing up a nation's ability to convert to a knowledge society Salmi (2015). These are the focal messages illustrated in table 1.1.

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Table 1.1
Report on the role of tertiary institutions in the society

THE PURPOSE AND STRUCTURE OF WORLD BANK NEW REPORT	
SN.	
1.	Economic and social progress is accomplished essentially through the application and advancement of knowledge.
2.	Tertiary education is essential for the creation, distribution, and application of knowledge, as well as for the construction professional and technical capacity.
3.	The tertiary education systems of most transitions and developing countries are not sufficiently ready to play this role, which places these nations at risk of being more relegated in a
4.	The government has an accountability, to put in place a permitting framework to inspire tertiary education institutions to be more pioneering and responsive to the requirements of a global competitive knowledge economy and to the changing
5.	The World Bank can help its client nations in the illustration on worldwide experience and in mobilizing the capitals wanted to improve the responsiveness and effectiveness of their tertiary education systems.

Source: World Bank, 2012, as cited in Bloom, et al., (2014)

The essential part of the global development goal is information and communication technology (ICT), (Adeoye, et al., 2013). Therefore, within the globe, in the 21st-century information and communication technology (ICT), is playing a vigorous role in shaping education and contributed immensely to the progress of the tertiary institutions (Yeboah, et al., 2013).

However, despite the important of ICT to all activities of man today due to its nature of the followings: enabling speedy and easy access to information, processing of large data, proper storing, easy retrieval of information, communication via smart phones, laptop, fax, video calls, charting etc yet, the tertiary institutions of Bauchi state did not implement and full utilisation of the ICT facilities owing to rigorous challenges, due to

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some peculiar factors commonly recognised associated with the use of ICT tools includes related policy makers deliberate effort, and lower level of computer literacy among staff etc (Nwosu & Ogbomo, 2011).

2.0 ICT Implementation Challenges

Like tertiary institutions in the other part of Nigeria, Bauchi state own have fronted with the series of challenges on the implementation of information and communication technology (Pegu, 2014). The numerous factors these include, non-availability of required power supply, Inadequate ICT facilities, lack of strong internet service, illiteracy of technological tools, leadership problem, lack of staff training programmes and weather issue, (Nwosu & Ogbomo, 2011; Anene, et al., 2014; Kipsoi, et al., 2012).

2.1 Non availability of power supply

Moreover, power supply in Nigeria, is generally inadequate and is hardly to predict, because most of the time, the power holding company of Nigeria (PHCN) may not make the supply available. This situation warranted for all departments of tertiary institutions and other units to use standby Generators, in order to serve as the alternative power supply (Okoro & Chikuni, 2017). Although using a generator is also challenging, due to the cost it involved. Using a generator is much more expensive compared to the PHCN because of the cost of fueling, maintenance, and services. Due to inadequate electricity power supply in Nigerian, the call for sector reform became a primary demand (Okoro & Chikuni, 2017)

2.2 Inadequate ICT facilities

Actually, inadequacy of ICT facilities is among the challenges of information and communication technology implementation in tertiary institutions in Bauchi state. Some of the computer system uses in most of the institutions are desktops, which are basically outdated. There are a number of computer laptops that are used in these institutions, but the majority does not belong to the institutions, rather were bought by staff individual for their own personal consumption (Olatokun, 2017). Similarly, internet service mostly available, but the service was not always good. The capacity of the service provider could not accommodate the number of overloaded users, due to the number of the staff that are consuming the service on a daily basis (Adebayo & Tope-Oke, 2017).

At tertiary institutions of the developed nations, like China, USA, France, Germany and many more, all the necessary ICT facilities are available in their institutions of learning, such as faxing machines, strong Wi-Fi,

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printer, Constance power supply and many more. (Johnson, et al., 2014). So in this case, the Bauchi State Government should intervene, by liaising with Tertiary Education trust fund (TETFund) to ensure all the necessary required ICT facilities have been provided, to overcome this challenge of inadequate ICT facilities in all tertiary institutions in Bauchi state (Hupe, & Hill, 2016).

2.3 Cost of internet service,

One of the major Information and communication technology implementation challenges in tertiary institutions of Bauchi state, is the cost of Internet service. Internet service involves a lot of spending on some factors, thus, sources of power, service provider, Antenna dish, payment for signal, maintenance cost, technical staff as well as, problem of network, overloading, needs for frequent maintenance, etc. These will cost a big expense to the institutions (Tarasova & Shein, 2014). Meanwhile, that is why for the attainment of sound education is a serious challenge due to the poor or absence of internet connectivity (Busulwa & Bbuye, 2018).

2.4 Lack of technological tools knowledge

Lack of knowledge of using technological tools is among the challenges of Information and communication technology implementation in Bauchi state tertiary institution. Considering the fact that, there are a number of staff in these tertiary institutions that are ignorant in operating ICT facilities, which is a serious setback in this generation of computer digital age, (Idowu & Esere, 2013). Although there are so many staff that can operate computer perfectly, but they are not fully utilising their system for their daily routines. Rather, they could only use their computers, limited to writing letters, designing of time tables, saving some records and more of these. Whereas, no proper coordination of e-service in offices, so the system of administration is still semi e-administration rather than fully digital. Yet, there is the need for them to undergo some training or attending workshops of information and communication technology series (Ismail & Affandy, 2013)

Furthermore, computer illiteracy could not be an excuse in this era of the computer digital age, particularly, the staff of institutions of higher learning; considering the global outcry for academic excellence and performance today necessitated the use of current technological instruments which become indispensable as per as public and private institutions are concerned. It has been signified that, the Information and Communication Technology (ICT), possesses all the required measurable as well as societal material goods, required to support workers' performance (Jasen, 2012).

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2.5 Leadership problem

Leadership is one of the challenges of information and communication technology implementation in tertiary education institutions. Because, leadership style can be considered effective in resolving all possible challenges confronted in today's system of education. More so, many leadership styles considered appropriate in trying to incorporate ICT in an exceptional situation. According to Schoeny (2002), certain situation currently confronted in the tertiary educational institutions needs a direct type of leadership and further involves a moderate directed to achieve recognized goal.

2.6 Weather issue

Weather is one of the challenges of information and communication technology implementation in tertiary educational institutions in Bauchi state, due to the fact that, every institution has, it is own peculiarities in terms of school settings and environment. Moreover, the question of where the educational technology is situated, such as the needed infrastructures, objectives and goals of the said institutions. So also the perspective of the socio-political as well as governmental policies surrounding the institutions, including the level down to the classroom has to be considered. More so, there are the needs to conceptualise it, particularly as associated with the current significance of a particular whether the context in imparting knowledge (Baba, 2015).

However, offices and classes should have, enough ventilation, fans, air-conditioner, and planting trees around the buildings, to be conducive for the staff, students, and the facilities of the institutions. Therefore, in tertiary institutions, managers, should progressively observe the economic as well as demography of the high-tech environment of the present in order to make sure complete a future preparedness (Ololube, 2018). These will create an avenue to ensure the environment liable and conducive for the attainment of the proper solution to information and communication technology implementation challenges (Okoro & Chikuni, 2017).

These are the recognised challenges that hinder the full implementation of information and communication technology in tertiary institutions of higher learning, in Bauchi state, Nigeria.

Conclusion

This study has been discussed the non-availability power supply, inadequate ICT facilities, cost of internet services, illiteracy of technological

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tools, leadership problem and weather issue, as the major challenges of Information and communication technology implementation, in Bauchi states tertiary institutions of higher learning. These, are gigantic challenges of implementations of ICT among others. Nevertheless, Bauchi State Government is requires to collaborate with the National Commission for Colleges of Education (NCCE), National Universities Commission (NUC), National Teachers Institutes (NTI), and Tertiary Education Trust Fund (TETFund), to deliberate on these particular challenges, in order to come up with a particular policy for intervention to these institutions, to ensure these challenges are overcome, ensure remedy and impliment fully digital or e-administrative system in the institutions (Rabah, 2015; Oluwaseun, & Adeyemi, 2015). More so, this study has recommended that, there is the need for regular staff development, through consistent in-house training, conferences, seminars, and online publications, in order to match with today's global technological and digital era.

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