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# Application of Technologies to Instruction in Nigeria's Tertiary Education System: Panacea in the Midst of National Challenges

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**Received:** 24 September 2021

**Accepted:** 06 December 2021

**Published:** 10 January 2022

**Abstract:** *The nation is currently witnessing lots of challenges, which has negatively impacted the entire society. These challenges are so enormous that the political, social, economic, religious, health and educational sectors are adversely affected. This paper examines in detail these challenges, especially as it affects the tertiary education sector in particular and education in general. The tertiary education sector is in disarray, and there is a need to find solutions towards addressing this menace. This paper posits the application of technologies to education as one of the solutions to ensure that instruction is not really affected, despite the national crisis. The paper examines the current state of the use of technologies in public tertiary institutions. It further highlights how we can effectively integrate technologies to instruction in the midst of the national crisis. Challenges to achieve this were highlighted. Lastly, suggestions were given on how to achieve this.*

**Keywords:** *Technologies, Tertiary Education, Panacea, National Challenges*

## 1. INTRODUCTION

Education is important for development, knowledge acquisition and human growth. Its importance cannot be over emphasised nor under-estimated at any point in time.

Education has been the pillar of support for the existence of human beings. Education also features greatly in human capital developments. Fagerland and Saha (2016) were of the notion that



education is means or vehicle of self-development through which learning, skills, knowledge and habits are conveyed from one generation to the other.

Tertiary education is the third and last stage or level of education following the completion of secondary education. In 2004, The Federal Government of Nigeria explained the components of Tertiary education. These include Universities, Polytechnics, Monotechnics, Colleges of Education and other allied institutions. The National Policy on Education (2004) listed the goals of tertiary education to include:

- Production of the much-needed high level manpower that are essential for the nation's growth and development
- Promotion and encouragement of scholarship and community services
- Development and inculcation of proper value for the survival of the society
- Acquisition of physical and intellectual skills to enable individuals to be self-reliant and be useful members of the society.

In addition to the above, the Federal Ministry of Education emphasized that Universities in Nigeria shall vigorously pursue all the above goals through the following:

- Teaching
- Research and Development
- Dedicated service to the communities through extra mural and community services

One would observe that the above goals are lofty. However, for the above goals to be achieved, there is a need for the stakeholders in particular, as well as the society and nation in general to experience a conducive and adequately peaceful environment to achieve these. The tertiary institutions are learning organisations, and as such, they attract students, staffs (academic and non-academic), as well as other stakeholders who have one thing or the other in common to carry out within the teaching-learning environment.

In the bid to effectively carry out instruction in our tertiary institutions, the nation in the last decade or more have been witnessing national challenges, mainly pandemics and state of insecurity. These national challenges, to a very great extent had impacted on not only our educational system, but negatively affected the entire sectors of the society. However, in recent times, the nation has come under serious security challenges that has threatened the existence of Nigeria as a sovereign state (Usman, Sanusi and Galadima, 2020). In essence, the national challenges have become a great threat to the continued existence of Nigeria as a country.

Matters of national challenge are topical issues in today's Nigerian education. The effects of national challenge on tertiary institutions is a social problem that cannot be over-emphasised because of its far-reaching implications and dire consequences on education in particular, and the



economy as well as the society in general. These national challenges are issues that should be seriously tackled as we endeavour to forge a strong, just, democratic and egalitarian society.

Since the national challenges keeps going on, without an end in sight, we need to look for means of enhancing effective instruction in the tertiary education sector, so as to maintain standard and quality education. This paper therefore is written to propose the judicious use of technologies to instruction as a means of alleviating the challenges facing instructions in the midst of national challenges.

### **National Challenges In Nigeria**

Nigeria is Africa's most populous country. She also has the largest economy as well as serve as the leading oil producer. Nigeria also plays a major political and economic role in Africa and wields influence regionally. In addition, she ranks among the top annual receipt of Foreign aid globally.

Despite the above accolades, the nation is beset with myriads of challenges that cuts across all the sectors – health, political, economic, cultural, religious, social and educational. These challenges had drawn the nation back, and made the entire society to be in a state of disarray. With reference to governance or political issues, matters like corruption, ethno- religious tensions, security force abuses, discrimination against women, sexual minorities, and government harassment of political opponents/ journalists actually remain as key challenges. It must be reiterated that President Muhammadu Buhari was re-elected into power in 2019, in elections that featured historically low turnout, pervasive vote buying, widespread violence and heightened concerns over Nigeria's democratic trajectory.

Economically, one expects that with massive oil reserves, youthful rapidly growing population, Nigeria would be a global economic powerhouse. However, corruption, infrastructure gaps, insecurity and a failure to diversify the economy away from petroleum production and other issues, had served as constraints to economic growth and development. Presently, Nigeria already ranks among the world's least developed countries across a range of indicators (Husted, 2020) He went further to state that Nigeria is home to the world's largest population, living in extreme poverty. In addition, Nigeria faces security challenges on several fronts. In the North East, there is conflict between the military and Boko Haram. Tens of thousands were killed over the past decade, millions were displaced, causing a protracted humanitarian crisis. In the North West, conflict between pastoralists and farmers has escalated amidst a broader deterioration in security conditions involving cattle rustling, kidnapping and ethnic massacres among others. Farmer-herder violence had surged in the Middle Belt, where disputes over resources access coincide with ethno-religious cleavages between Christian and Moslem communities. In the South, criminality and militancy in the oil-rich Niger Delta have impeded development and contributed to insecurity in the Gulf of Guinea for decades.



Health wise, just like all other parts of the globe, the Covid -19 pandemic had impacted negatively on the society in general. All sectors of the society experienced total or partial lockdown in 2020. Most public tertiary institutions were fully locked down for most parts of 2020. This was further compounded by The Academic Staff Union of Universities (ASUU) strike which lasted for about nine months. On resumption, the tertiary education sector had lost some female students to unwanted pregnancies, unplanned marriages, while some boys decided not to go back to school because they have started business or re-located outside Nigeria.

Other national challenges include armed robbery, terrorism, cultism, suicide bombing, kidnapping, thuggery, restiveness, human trafficking, rape, prostitution, baby factory and vandalization of oil pipelines, among others. These are various social vices that have increased the level of insecurity in the country (Ihuoma and Ikpa,2013). The security challenges have exacerbated problems of corruption, poverty and unemployment that are so high in the society today. It is disheartening to state that the number of poor people is increasing. Some businesses are collapsing, and many are thrown out of their jobs.

### **2.1 National Challenge Cases In Nigerian Tertiary Institutions**

In the last ten years, researchers have documented some incidents that has happened in some tertiary institutions. These incidents has occurred, still occurring, and may continue to occur unless it is nipped in the bud. Ekpoh, Edet and Ukpong (2020) recorded some of these national challenges (mainly kidnapping) that occurred in some tertiary institutions from 2012 to 2020.

- a. In 2012, about forty (40) students of Federal Polytechnic, Mubi, were massacred by Boko Haram terrorist group
- b. On August 16<sup>th</sup> 2013, a female student of Abia State University was held hostage for over one hour, and gang-raped by persons suspected to be cultists.
- c. On 18<sup>th</sup> December, 2013, suspected cultists attacked and killed Dr Segun Onabanjo, a Senior Lecturer in the Department of Sociology of Olabisi Onabanjo University, Ago-Iwoye, Ogun State
- d. On 3<sup>rd</sup> April, 2015, Mrs Awala George, a lecturer in University of Port Harcourt was kidnapped, but later freed by police operatives eight days later (Oni, 2016)
- e. In July, 2015, an 18-year old admission seeker in University of Lagos was raped by a lecturer
- f. On August 19<sup>th</sup>, 2015, a 4<sup>th</sup> year law student of University of Calabar was sexually assaulted by her lecturer
- g. In the University of Calabar Staff Quarters, lecturers were attacked and three persons were kidnapped on May, 2013, 2016.
- h. In July, 2016, a female undergraduate of Babcock University, Ogun State kidnapped her friend in order to make money from the parents
- i. In 2017, a Professor in the Department of Zoology , University of Calabar was kidnapped by gunmen, while he was jogging on campus at about 6.40am. He was whisked away to a waiting boat at the Big Qua River that borders the University



- j. On 16<sup>th</sup> January 2018, two suicide bombers attacked University of Maiduguri, killing three people, including a Professor
- k. In May 2019, a final year male student of Cross Rivers State University of Technology was butchered in the classroom by persons suspected to be rival cultist group
- l. On 17<sup>th</sup> February, 2020, an Associate Professor in the Institute of Public Administration, University of Calabar was kidnapped in his house. A sum of N50 million ransom was demanded by his abductors
- m. In 2021, two female students of Olabisi Onabanjo University were abducted in front of their hostel
- n. On 20<sup>th</sup> March 2021, 23 students of Greenfield University, which is a private University in Kaduna state were abducted in their school premises
- o. In addition, in March 2021, some students and staff of a Polytechnic in Zaria were kidnapped in their school campus.
- p. Also, on 11<sup>th</sup> March, 2021, 39 students from Federal College of Forestry Mechanisation, Afaka, Kaduna State were abducted
- q. On April 24<sup>th</sup>, 2021, 3 students from the Federal University of Agriculture, Markurdi, Benue State were kidnapped.

These few incidents among the numerous that occurred, but which were not documented or recorded shows that the national challenges are biting hard on our tertiary education system

## **2.2 Impact of National Challenges on Tertiary Education**

These national challenges do have negative impacts on tertiary education. These had served as drawbacks towards achieving quality education and standard. Students have been risking their lives for education these are some of the impacts:

Parents have not been encouraged to send their children to school because of the fear of insecurity in the country. There are some parents who declined their children from even going to school because of the menace of kidnapping, cultism and other vices. The females in particular were totally not encouraged to attend tertiary institution because of this menace.

Peace, security and serenity are important factors for successful teaching and learning. In the absence of these factors, teaching and learning becomes distorted. Since mass abduction of students has become a thing of regular occurrence, teachers and students are now been taught basic emergency and safety skills. These safety skills had not actually yielded positive outcomes.

Under these extreme circumstances of fear and uncertainty, lecturers cannot impart knowledge fully and effectively to their students, and students cannot learn either with full concentration and attention. As a matter of fact, lecturers and students do go to school, and instructions do take place with fear, because nobody knows when an evil practice would occur. The net result is rapid decline in the quality of education, as performances in examinations begins to hit the rock.



In addition, the national challenges had led to temporary and permanent closure of some institutions. Whenever an institution is bedeviled with national challenge, such institutions are closed temporarily for sanity to return. However, due to the pandemic of last year that affected the entire world, all tertiary institutions were directed to close down for a certain period. However, the public Universities remained shut for months because of the Academic Staff Union of Universities (ASUU) strike. The effect of this closure was that some institutions had to cancel an entire session to give room for normalizing the school academic calendar. The resultant effect of this is that there would be no new students' intake that session.

### **Applications of Technology To Tertiary Education As A Panacea**

From the above impact of national challenges to tertiary education, we can see that it has led to decline in enrolment, fear on the part of the lecturers and students during instruction as well as loosing of an entire semester or session. These can be minimized if technologies are effectively applied to instruction.

First of all, instructions in our tertiary institutions needs or requires total over-hauling, whether there are national crisis or not. The lecture method that we have been adopting has not yielded the positive result which is expected. We have only succeeded in encouraging rote learning instead of transformative learning. We need to make our students not only active learners, but also develop their critical thinking, logical reasoning and self-reflection (Kurnia, 2021).

If technologies are applied to instruction in the midst of the pandemic, students do not need to be physically present in classroom before they can learn. They can learn in their homes, online, using the internet. Also, the lecturers do not need to take the risk of traveling lots of miles to come and deliver his lectures face-to- face. Some lecturers had been kidnapped when traveling down from their home to the lecture room to present their lectures.

In addition, if technologies had been applied to instruction in public Universities during the Covid 19 pandemic, students would have been engaged in meaningful activities. The ten – month period of staying at home would have yielded positive results. The one session which most students lost would have been averted. This is because location is not a barrier with online teaching. Students would have been able to learn at their own pace, rate and convenience during the pandemic. The lecturers would have kept them busy with tasks to be carried out.

Furthermore, applications of technologies to education during national challenges had been seen to be cost effective. If technologies is applied to instruction, number of hours wasted on travels, travel costs and the travel risks involved are totally eliminated. Hundreds of students who would travel and risks their lives to bandits, kidnappers and accidents on the road can easily be in the comfort of their homes and communicate effectively and learn online by interacting with their peers and the lecturer. Presently, most trainings and conferences are presented virtually. This had





been seen to be cost effective and safe considering the national challenges of this present dispensation.

Finally, applications of technologies to education can also be a panacea because it is an indication that we are also 21<sup>st</sup> century compliant. Most nations of the world are now changing from face to face learning to blended learning in the delivery of tertiary education instruction. Lots of advantages are derived from this mode of instruction. Since Nigeria is still a developing nation, it is pertinent that we also move towards educational growth and development so as to make instruction easier, more interesting and appealing for both the lecturers and the students.

### **Current State Of The Use Of Technologies In Nigerian Public Tertiary Institutions**

There is a need to emphasise at the on-set that the use of technologies to support instructions in our public institutions is nothing to write home about. This is because we are facing lots of challenges and we are yet to understand the benefits and potentials to be derived from the utilization.

It must be pointed out that the current state where we are can be adduced to the lecturers' attitude. Most of the 'old school' lecturers are not keen on using technologies to support learning. They have phobia for technology utilization. These set of lecturers have been in academics for a long time and were trained without technologies. They still attend to their classes by dictating notes to students. The dictation is followed by some explanations. Before the lecturer leaves, he/she gives 'hand out' to the class captain who makes photocopies for other students to copy. Unfortunately, most of these lecture notes/hand outs were neither updated nor revised over the years.

On the other hand, most 'new school' lecturers are exposed to technologies. Particularly, for those who studied overseas, they used it for instruction, submitting assignments and other forms of communication. Though, they are computer literate and are supposed to be using it for instruction, yet, they don't do so just like their senior colleagues. The major reason is that they decided to maintain the status quo.

With respect to the students, majority of them at times do attend lectures without any writing materials. They go to lecture rooms empty handed. They hardly write notes, even, when the lecturer is dictating. It is pertinent to state that some students are in possession of android mobile phone which can be used for learning. Despite this, it is sad to state that most of those in possession of android mobile phones do use it for non-educational purposes. They use it to chat on whatsapp with friends, log on to facebook to post and read non-meaningful information, visit Instagram, telegram and other social media platforms to engage in non- educationally profitable activities. On the other hand, some indigent students cannot afford to purchase android mobile phones or tablets. Few of those who can afford to buy the android mobile phones had no financial capacity to load data to connect to the internet.



Finally, most public tertiary institutions do not make provision for connecting WiFi in the environment. Students and staff had to make use of modem before they can get connected online. As a matter of fact, some institutions are located in rural areas where there are no mobile networks, talk less of internet connectivity.

In a nutshell, there is a need for our public institutions Management to buckle up, and do the needful in the area of utilization of technologies to enhance and promote learning, despite the national challenges facing the country.

### **Integrating Technologies To Education In The Midst Of National Challenges**

Like we are aware, this present dispensation is a period of the application of ICT or technologies generally into all human endeavours. Technology is applied in health, banking, economic, hospitality, political, social, transport and education sectors among others. In the education sector, it is applied in the organization of trainings and conferences, instruction and practical activities. Integrating technologies into education or instruction can start from the scratch. A lecturer can set up a WhatsApp group whereby he would serve as the administrator. All the students using android mobile phones can be added to the group. Ground rules must be stated at the on-set. However, in order to discourage the posting of irrelevant information or junks, the administrator may decide to be the only person that can send educational information on the platform.

To move a step further, the lecturer may introduce blended learning. Blended learning is a mixed mode of instruction, whereby there is a combination of traditional face-to-face mode of instruction with online modes of learning, drawing on technology-mediated instruction, where all participants in the learning process are separated by distance, some of the time (Graham, 2013). The lecturer can organize or set up a webinar, which is lecturer-led. The course lecturer would be in charge in this situation. Organising a webinar is quite cheap, and easy too. What is most essential is getting a WiFi or data with good internet activity. Lots of webinar tools are available nowadays. Most popular ones are zoom, goggle hangouts, meet.goggle, gotomeeting, and gotowebinar among others.

An advanced stage would involve the Institution's Management as well as the Management Information Science (MIS) Unit. This would involve the setting up of a Learning Management System (LMS). LMS is a software application for the administration, documentation, tracking, reporting automation and delivery of educational courses or programs. Teaching sessions can be recorded and used at a later date.

Essentially, webinar tools and sessions can be integrated into the LMS. Additionally, the lecturer can set up a register of all students through the LMS. With this, he would be able to monitor those that are available online, that has joined the class.

If the above implementation strategies (starting from simple to complex) is put in place, it is obvious that instructions would still continue in our tertiary institutions despite the national





challenges. Lecturers and students would not need to risk their lives on journeys, students would be able to save money on transportation, they would not need to be idle at home doing nothing, and they will not have a course not to be active in learning. The effects of the national challenges on their education would be minimal. Finally, they would be able to enjoy learning more than before, thereby, raising their hopes on the quality of education that they are receiving.

### **Challenges Of Integrating Technology Into Instruction**

As good and as easy as the process of integration mentioned above was, one needs to point out that there are obstacles that stands on the way to make this a reality.

The first major challenge pertains to policy planning, policy making and policy implementation. It is quite easy making these policies, but executing these policies is a herculian task. These policies are always in black and white. These policies on modernization of instruction had been treated times without number by the Federal Ministry of Education as well as the State Ministries of Higher Education.

Funding is also a germane issue on the part of the Government. The Federal and State Governments do not make adequate financial provision for the use of technologies in our tertiary institutions. The budget allocated to the education sector had been always low, compared to other sectors of the society. As a result, provision is not made to provide the facilities and equipment to make instruction 21<sup>st</sup> century compliant.

Students also contributed to the challenges. Some students are from very low social status economic home. Such students cannot afford to purchase tablet or android mobile phones for instruction. The cost is beyond their means. Consequently, they cannot participate in the use of technologies for instruction.

The above notwithstanding, there are some students who have the financial capacity to purchase a laptop or android mobile phone. However, there are some extraneous challenges which are beyond their control regarding the effective use of the technology for instruction. These include internet connectivity, poor networking systems, epileptic power supply and other considerations. When majority of the students lack the condusive atmosphere and environment necessary for virtual learning, it is practically impossible to embark effectively on online learning (Olutola and Olatoye, 2015).

Also, there is poor knowledge/ skills on the use of computers to support learning on the part of most students and lecturers. Most lecturers, especially those who belong to 'old school' have little knowledge of the operation of microcomputers. The foundation or basic skills are not there, talk less of the application of computers to enhance learning. Therefore, they would like to maintain the status quo, by continuing with the conventional face to face instruction.



Finally, there is the dearth of experts or professionals in the key areas of the use of computers for instructions. Programmers are few in number. In some tertiary institutions, the Management and Information Science Unit goes extra miles to recruit experienced personnel to take up this duty. Related to this is the fact that when some of these experts are recruited, they are not usually sent to establishments for training and re-training so as to keep abreast of developments regarding the duties that they are expected to perform.

## **2. CONCLUSION**

The paper has critically examined the national challenges, especially as it affects education in general and tertiary education in particular. It was realized that these challenges had greatly affected education. Looking at the deplorable state of tertiary education during this national crisis, it is realized that there is a need to look for alternative means of maintaining and sustaining quality education and standard despite the challenges rocking the nation.

Based on the discussions so far, the following suggestions are hereby postulated:

- a. **The Government:** Federal and State Governments, especially the Ministries of Education, should influence the adoption and utilization of technologies to support learning in the midst of the challenges. They should ensure that policy is put in place for its effective implementation. Relevant 21<sup>st</sup> century-compliant curriculum should be introduced to make students cope with the various national challenges.
- b. **Students:** They should realise that general sound development is the key to learning. They should be prepared to embrace all – round learning which would enable them to face the challenges that would be emanating in the society from time to time. In addition, they should embrace modern methods of instruction.
- c. **Administrators/ Council:** The Council/Administrators are the ones that would give the go-ahead for the implementation of the innovations. Consequently, there is a need for infrastructural development and provision of facilities to make the use of technologies for learning a reality. Internally Generated Revenue (IGR) can be judiciously utilized for the provision of infrastructures.
- d. **Lecturers:** All lecturers are expected to undergo training in pedagogy. Training and re-training are keys to keeping abreast of modern developments. Lecturers must be dynamic, innovative and resourceful.

It should be highlighted that all the above stakeholders need to work as a team in order to make the application of technologies to instruction, a reality, and not a myth in the midst of national challenges.



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