



HARNESSING INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) OPPORTUNITIES BY OFFICE TECHNOLOGY AND MANAGEMENT STUDENTS FOR SELF-RELIANCE AND NATIONAL DEVELOPMENT

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Abstract

This paper brings to the fore the impact of harnessing Information and Communication Technology (ICT) opportunities by OTM students for self-reliance and National Development. ICT is a veritable tool in actualizing the ICT opportunities for National Development when properly harnessed through the activities of the government, teachers and all stakeholders involved in the business of quality instructional delivery in our institutions of learning. The ICT opportunities available for OTM students for self-reliance and National Development are: Computer programming, Web designing, Database analyst, Project management, Social media management, Social community, Security/networking analyst, Technology support among others. Contributions of ICT to National /development includes by not limited to: Reducing information and transaction costs in business, Creating new collaborative models to increase the efficiency of workers, Promoting innovation, Improving education, Contributes to GDP growth among others. As good as these opportunities are, there are challenges bedeviling its actualization, and they are: level of utilization of ICT Tools for instruction by lecturers, Level of availability and adequacy of ICT tools for OTM service delivery, Level of accessibility to ICT Tools for Hands-on Experience, Level of maintenance of ICT Tools and Technical Instructors for effective service delivery, Inadequate funding of Technical and Vocational Education among others. Based on the challenges identified, the following suggestions were put forward: The government should have the political will to vote more money in education, lecturers should be sent on workshops, conferences and in-service training to update their knowledge in the latest ICT gadgets, the management of institutions should make the laboratories accessible to students for Hands-on to acquire the required skills for the 21st century work place and self-reliance.

Keywords: ICT, OTM programme, self-reliance, national development

Introduction

The concept of Information and Communication Technology (ICT) is about a whole range of technologies involved in information processing and electronic communication practices. It represents a process that includes the use of communication devices and applications to transmit messages, information or news broadcasts. Hence it will encompass the use of the radio, television, cellular phone, computers, information networks involving hardware and software systems, the satellite system, video conferencing and online transactions. These are the main

systems that enhance the management of communication by enabling the student acquire skills of organizing, processing, communicating, assessing, presenting and storing information as well as searching for and retrieving necessary messages.

A significant value that cannot be overlooked in both technological education and societal service is that ICT often surfaces as a convergence of several technologies that are of immense benefit to the modern society. While the ICT application can indeed be highly demanding because of its sophistication, its diverse applications in data sourcing and management, medial service, transportation systems, power transmission, research and data processing offer a great opportunity for advancing the society. It is becoming common knowledge that one can easily contact business partners and negotiate on goods by simply ordering for the goods through online process.

The elements of national development can be determined by the country's per capita income, average literacy level, health status of the people, eradication of poverty among others. The effects of national development include full growth and expansion of our industries, agriculture, education, social, religious and cultural institutions. Moreover, national development implies development of a nation as a whole.

The introduction of the Office Technology and Management (OTM) programme by the National Board for Technical Education (NBTE, 2004) to replace the earlier Secretarial Studies programme can be seen as providing a befitting programme that will make students undertake a secretarial studies option that is more ICT compliant. As a result, the OTM programme has to generate students that are not just ICT compliant but also able to fit adequately into the world of work expected of the modern workplace in the society and for self-reliance. This will require the OTM curriculum in Polytechnics to be focused on implementing a skills development process that would groom students in ICT skills and office management techniques. By extension, the Polytechnics have a responsibility to ensure that their OTM graduate is someone brought up to exhibit a competency in ICT skills demanded in the workplace and for self-reliance.

However, there are contentions that despite the fact that the ICT introduces a big impact on the nation development, there are prominent challenges to the implementation of an ICT-driven curriculum in some institutions. According to Amwine and Mugizi (2020), there is a hindrance to harnessing the immense benefits that can be derived from ICT practice. It is pointed out that there are challenges relating to ICT accessibility, network connectivity, the manpower technical support, and even the competency of lecturers in implementing the use of ICT tools to run the programmes. If the lecturers are not granted opportunities to undertake in-service programmes to upgrade their skills then they cannot be expected to deliver what they do not possess. More importantly, however, the lecturers' attitude to embrace the ICT-driven approach for instruction delivery poses another stumbling block. Yet it is clearly what the OTM programme demands for producing graduates able to exercise the ICT-driven competence in the work place and self-reliance.

The purpose of this study is therefore to find out the ICT opportunities for OTM students for self-reliance and national development, challenges in harnessing these opportunities and to proffer solutions to the challenges.

Conceptual Review

Information and Communication Technology (ICT)

ICT is fast becoming the largest distribution platform for providing public and private facilities and services to millions of people. The value of information and accumulated knowledge within developing countries is a strong point for national economic growth. ICT has emerged as a core

driver of the modern knowledge based economy with its crucial role in the socioeconomic development and economic growth of a country. ICT based education and socioeconomic development programmes provide innovative solutions to defeat poverty. The most important role of ICT to the society is that ICT permeates all aspects of life, providing newer, better and quicker ways for people to interact, network, seek help, gain access to information and learn.

ICT provides opportunities to both urban and rural populations. One common contribution is that it increases productivity and links markets with and complements the development of industry, trade, learning, education, health and finance. ICT provides quick access to affordable and better means of communication in the form of instant messaging and VoIP phone. It brings exciting ways to indulge in entertainment, leisure, build contacts, make relations and procure services and goods from suppliers.

The ICT-driven curriculum in OTM programme is important for grooming the student to acquire abilities in the use of computers, online self-learning packages, interactive electronic board usage, satellite, radio, television use and related technologies in information sharing (Yusuf & Onasanya, 2014). The use of the ICT application in education has also brought about a revolution of tremendous proportion in educational practice especially in cases of conducting examinations, processing and conveying the results, distance education transmission, classroom teaching and conducting research. In other words. The ICT provides for the generation, processing, dissemination, receiving, decoding, storage and retrieval of information.

Office Technology and Management (OTM)

The Office Technology and Management (OTM) programme run in Polytechnics is mainly the course designed to service the demand for producing highly efficient breeds of administrative personnel who will manage the office records and information system and be self-reliant. Students admitted into the programme are expected to acquire appropriate skills, competencies and knowledge that equip them to service the workplace and for self-reliance, thereby contributing to an effective development of the society. The OTM programme is expected to develop in the students those capacities essential for developing the office management skills especially with emphasis on ICT competency, skills, knowledge and attitudes essential for making the individual function effectively in the 21st century work environment and self-reliance..

The modern emphasis in the OTM programme being on Information and Communications Technology (ICT), students are then expected to develop the knowledge, skills and competencies for an effective functioning in the ICT dispensation National Board for Technical Education (NBTE, 2020). This is on account of the fact that to effectively man the positions of secretaries, managers or administrative personnel in the evolving ICT driven workplace, or even for self-reliance, an individual must be compliant with the modern ICT trends.

Self-Reliance

Self-reliance is a developmental quality ascribed to a nation, a people or a person, life sustaining. Ronstadt (2020) opines that it is the development of knowledge, power as well as the feeling of responsibility in the individual ability to take initiative by organizing and reorganizing of social and economic mechanisms to turn resources and situations to practical account and the acceptance of risk or failure.

National Development

National Development can best be defined by Aminu (2019) as the all -round and balanced development of different aspects and facets of the nation. National Development is a

comprehensive term that includes improving the standard of living of the people, increase in per capita income, providing social amenities, like education, medical care, social services etc for a country's citizens. The importance of national development is the provision of social amenities to the people, enhancing equal distribution of power and wealth as well as aiding the economy of the country. National development refers to a nations' ability to improve the lives of her citizens.

ICT Opportunities

ICT can contribute to employment and income generation and poverty reduction. It enables people and enterprises to capture economic opportunities by increasing process efficiency, promoting participation in expanded economic networks and creating opportunities for employment. The following are some of the ICT opportunities open to students of Office Technology and Management for self-reliance:

- Cyber Café Business
- Cyber copyrighting
- ICT Consulting services
- Web designing
- Database analyst
- Project management
- Social media managers
- Social community managers
- Security/networking analyst
- Technology support, Internet advertising among others

ICT Tools and facilities used for Instruction in OTM Programme

The following are the ICT Tools used for instruction in OTM Programme:

A. Multimedia communication facilities

- Photocopier
- Public address system
- Projector system
- Digital Camera
- Television
- Mobile phone
- Radio transmission

B. Internet Facilities

- Router
- Satellite dish
- Satellite decoder
- Date facility subscription
- Technician
- Modem

C. Computer (Desktop/Laptop)

- Wireless mouse
- Electronic board
- Networked laboratory

- Printers
- Storage devices

Contributions of ICT for National Development

Sharma, Bassi, and Sharma, (2021) observe that ICT has emerged as a core driver of the modern knowledge based economy with the crucial role in the socioeconomic development and economic growth of a country, ICT-based education and socioeconomic development programs provide innovative solutions to defat poverty. The development of ICT has strong potential to transform economies and societies in several ways. ICT plays a prominent role in all sectors of the economy and:

1. Reducing information and transaction costs in business,
2. Creating new collaborative models to increase the efficiency of workers
3. Promoting innovation and
4. Improving education.
5. Contributes to GDP growth,
6. Telecommunications,
7. E-commerce,
8. Banking,
9. Agriculture,
10. Health,
11. Manufacturing among others.

Challenges in Harnessing the ICT Opportunities for OTM students' Self-reliance

1. Level of utilization ICT Tools for instruction by lecturers

The proper dispensation rests mostly on the lecturers' ability to use the ICT tools and facilities available for the programme. If the lecturer is not updated enough to employ and use the ICT scheme to educate the students, the students cannot be expected to develop the required skills. It means therefore that to brace up with the modern trends in information gathering, storage, processing and dissemination an ICT competency will be needed for the lecturer. This is particularly against the background that the modern trends have taken a shift from typewriting and hardcopy file storage to the technique of computerized information management scheme. The lecturer of the OTM programme need to have the competency to operate in this ICT techniques in order to be able to effectively groom students to acquire and master the skills. A lecturer that lacks the competency to functionally operate in the ICT techniques can never be expected to groom students who will develop a mastery of what their teacher did not possess.

The OTM programme in Polytechnics emphasizes quality instructional delivery in each institution. Quality instructional delivery in this regard implies that the course curriculum and instructional process must meet the inculcation of relevant office management skills into the students. This further demands that qualified experts are those engaged to train students to acquire skills. Such lecturers should be those equipped to adequately utilize the ICT tools and facilities in the teaching and skills advancement of students. This is in line with the stand of the National Board for Technical Education (NBTE, 2020) which emphasizes that a skilled manpower should be engaged to drive the inculcation of the skills demanded by technologies in the industry. Thus the Polytechnics in Northeast Nigeria, like any other such institution, have responsibility to engage only

such lecturers that are competent to handle equipment and tools required for the proper grooming of the OTM students.

The relevance of quality instructional delivery in the OTM programmes to meet the work expectations can never be overemphasized. The instructional process is the one that makes the OTM curriculum allow for the inculcation of relevant ICT and administrative skills into the students. In that regard, the lecturers are persons equipped professionally to handle students by providing them exposures towards utilizing the ICT tools and equipment. By extension, this demands that the institution has a workforce that can utilize technology as an important means to educate the OTM students. As the National Board for Technical Education (NBTE, 2020) points out, a skilled manpower should be engaged to drive the inculcation of ICT skills demanded in the industry.

2. Level of Availability and Adequacy of ICT tools for OTM service delivery

The effective utilization of ICT in teaching and learning cannot be achieved without the availability of required facilities. The availability of the ICT tools and facilities is what can allow for providing multiple technologies (e.g. video, computer and online communication) that enhance providing students with visualization aids. Undoubtedly, without the adequate provision of tools and facilities for the OTM programme, lecturers cannot be expected to teach optimally. As observed in earlier literature (Bamiro & Liverpool, 2019; and Akuegwu, Ntudukem & Jaja, 2018), lecturers can only transfer or transmit ideas and skills to students when relevant facilities are provided for teaching. This is to emphasize that conducting laboratory practical exercises and workshop activities depend on the facilities present for the OTM programme. In other words, the total development of the students in their cognitive, affective and psychomotor domains will occur only in the conducive environment. This is the kind of environment with laboratories, workshops, tools and equipment provided in their right quantities to enhance the students' adequate grooming in secretarial and management services.

3. Level of Accessibility to ICT Tools for Hands-on Experience

Other important factors that could affect the successful implementation of an ICT-driven curriculum in the OTM programme include the accessibility to ICT tools and having in service qualified technical instructors. According to Ergdogu and Ergdogu (2019) the accessibility to ICT tools is viewed from various angles. Firstly, the tools and facilities need to be in a functional state before they can serve in the lessons delivery. Secondly, the OTM operating personnel should be abreast with the way such tools and facilities can be put to use for the instruction process. The extent to which these requirements are met contributes another dimension for measuring the graduates' efficiency for 21st century work place and self-reliance.

4. Level of Maintenance of ICT Tools and Technical Instructors for effective service delivery

It can further be noted that part of the challenges that may confront the lecturer in dispensing the OTM programme with a focus on the students' ICT competency development include the provision and functionality of the requisite tools and facilities in the institution Cox, 2018). Without doubt, the Polytechnic would require the ICT resources in their functional state to enable even the competent lecturer to teach and transfer appropriate skills and qualities into the students.

5. **Inadequate funding of Technical and Vocational Education:** No doubt, vocational technical education has made some notable impacts on the Nigerian society, especially in respect to the products of the training programme who are contributing their quota to the economic growth and development of the nation through various industrial establishments (Odu, 2020). Inadequate funding of vocational institutions has caused the turning out of half-baked graduates because there is no fund to build and maintain workshops, laboratories or even purchase modern equipment (Aghenta, 2019). Momoh (2017) and Mohammed (2021) observes that government lack of commitment to technical education and inadequate funding has weakened technical education in Nigeria. A direct consequence of this is that while the number of technical education institution is dwindling that of general education is growing in bounds (Momoh, 2022).
6. **Inadequate facilities** - Most technical education departments in Nigerian Polytechnics do not have well equipped laboratories or workshop space, let alone useable equipment and where they exist, they are grossly inadequate. The available facilities, programme as at today are inadequate quantitatively and qualitatively. Oryem and Origa (2020) also observe that the few laboratories, experience acute shortage of laboratory equipment and supplies.

Conclusion

National development means improved standard of living of citizens of a country. To actualize the lofty potentials inherent in ICT through the generation, processing, dissemination, receiving, decoding, storage and retrieval of information, the Office Technology and Management (OTM) programme trains students to acquire these skills. ICT is a veritable tool in actualizing the ICT opportunities for National Development when properly harnessed through the activities of the government, teachers and all stakeholders involved in the business of quality instructional delivery in our institutions of learning.

Suggestions

Based on the challenges observed, the following suggestions were made:

1. The government should have the political will to vote more money in education, this will cater for all the resources that will be required in the running of the OTM programme in their right and adequate quantities
2. Lecturers should be sent on workshops, conferences and in-service training to update their knowledge in the latest ICT gadgets
3. The management of institutions should make the laboratories to be accessible to students for constant practice to acquire the required skills for the 21st century work place and self-reliance.

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