



The extent of E-Readiness of NCE Technical Teacher Training Institutions in North-Eastern, Nigeria

Abdulumumini Aliyu Cheledi

Department of Education, School of Vocational and Technical Education, Abubakar Tatari Ali Polytechnic, Bauchi, Nigeria

Abstract

The study assessed the availability, functionality and adequacy of ICT infrastructural facilities, tools and equipment; ICT proficiency level of the lecturers and the extent of ICT Resources utilization for academic activities at the NCE Technical Teacher Training Institutions in North-Eastern Nigeria. Descriptive Survey Design was used for the study. Three research questions were formulated in line with the objectives of the study. The Data collected were analyzed using appropriate statistical tools. The results obtained revealed that though, NCE Technical Teacher Training institutions in the North-Eastern Nigeria have adequate ICT infrastructural facilities for e-learning activities, yet they are not e-Ready with regard to their lecturers' level of ICT proficiency and the extent of ICT resources utilization for academic activities. It was recommended that the ICT facilities at the NCE Technical Teacher Training Institutions should be upgraded to meet the required standard based on the international practice, the lecturers should endeavour to acquire the required competency through personal efforts to achieve the desired proficiency in the use of ICT facilities for academic purposes and also that the management of the institutions should as a policy, compel the lecturers and students to use ICT facilities during teaching and learning sessions, and for extra-curricular activities where possible.

Keywords: E-Readiness, NCE Technical, ICT Proficiency, ICT facilities, ICT Resources

Introduction

Vocational and Technical Education (VTE) is a comprehensive term referring to those aspects of the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupation in various sectors of the economic and social life. It comprises of education, training and skills development relating to a wide range of occupational fields, production, services and livelihoods. VTE is concerned with the acquisition of knowledge and skills for the world of work (Bakri & Zakaria, 2018) ^[6]. It is an important element in determining the future direction and pattern of a country, and a vital instrument that can help to improve the quality of the workforce by nurturing the knowledge and skill needed in industries (Asiabaka, 2018). VTE programme has a pertinent contribution to the enhancement of country's competitiveness in today's globalized world. One of the most important features of VTE is its orientation towards effective psychomotor skills training. The manipulative skill concerned with direct experimentation or production with psychomotor skill ensures the acquisition of employable skills (Amanchukwu & Ololube, 2015) ^[3]. According to the Nigerian National Policy on Education (NPE), teaching of technical subject shall be practical, activity-based, ICT based and experimental (FRN, 2013). Also Okwelle (2011), asserts that the quality of learning outcome demonstrated by students of any VTE training programme will determine the extent to which behavioural or instructional objectives have been achieved. "Technical and vocational education (TVE) has been an integral part of national development strategies in many societies because of its impact on productivity and economic development" (Uwaifo, 2010). An education system has to be suited to the demands of the technological age so that a competitive edge can be maintained (Agboola, 2014). Zakaria & Iksan (in Yaro, 2013) assert that "in preparing the students of today to become successful

individuals of tomorrow, teachers have the responsibility of structuring the student's learning activities and goals to ensure effective and up to date knowledge is passed to the students". With the introduction of ICTs, developing nations envision the elimination or improvement of age-old barriers they face, such as their geography, high cost of and limited access to quality information, communication limitations, non-transparent governance and, of course, education (Oliver, 2011). The introduction of e-learning has indeed revolutionized teaching and learning process at all levels of our educational system by making knowledge more accessible to all. This knowledge is highly needed in colleges of education where lecturers teach the would-be-teachers (Ifeakor & Anujeonye, 2012). The federal government of Nigeria also recognizes IT as a strategic imperative for national development and taking cognizance of its immense benefits, it has resolved to provide considerable national resources, both financial and otherwise for the realization of the National IT Vision statement. (NNPIT, 2001). According to Yaro (2013), In Nigeria, the training of technical personnel has witnessed formidable challenges, ranging from poor funding to inadequate facilities both quantitatively and qualitatively, non-availability of adequate human resources, brain drain and poor staff training and retention profiles. Others include weak university/industry partnership, defective curricula, traditional approach to teaching, poorly equipped laboratories, poorly monitoring standards for the training of prospective technologists and an inadequate ICT environment.

The availability and utilization of workshop facilities depends largely on management techniques that are implemented in the workshops. Management according to Nwosu (2014) is the process that involves some activities like planning, organizing, coordinating and controlling in order to use available resources to advance a desired

outcome in the fastest and most efficient way. Uzoagulu (2016) affirmed that, the proper management of workshop tools enhances students' skill acquisition during workshop practice. The use of a workflow pattern in workshop facilities management will provide avenue for proper monitoring and utilization of the facilities, which in turn provides a platform for the students to gainfully acquire the needed skills required of them as prospectus teachers of technology. The actualization of the goals and objectives of education requires provision, maximum utilization and appropriate management of the facilities. The primary purpose of education is to bring about the desirable behavioural change in the learner through critical thinking (Kingsley, 2019) ^[26]. Learning facilities management as a process ensures that infrastructures and other systems support the fundamental operations desired to be carried out. This can be achieved through the use of a suitable ICT tools and equipment that will facilitate the operational procedures and safety measures.

Statement of the Problem

Murphy and Greenwood (2021), indicated that "research findings suggest that Information and Communication Technology is significantly under-used by students and teachers". The National IT Vision emphasized on the critical role that ICT should play in the socio-economic development of Nigeria (NNPIT, 2017). Wheeler, 2017, Dada, 2018, Oliver, 2021 and Anderson, 2021 have cited some of the reasons for the low ICT use in schools to include unavailability and/or inaccessibility of resources in schools; the scarcity of opportunity to use computers by students and teachers; lack of experience and training in using ICT at the pre-service level; the lack of teacher or teacher trainers' encouragement to students on using ICT in schools and the lack of confidence on the part of student-teachers and their trainers in computing skills. Anderson (2018) asserts that today, parents and guardians are not satisfied with the IT proficiency level of the teachers that teach their children in schools considering the global trend of computer driven economy and the era of on-line programmes including external examinations, admission into tertiary institutions, recruitments for employment, businesses and banking. The NCCE being the regulatory body for all NCE awarding programmes and institutions makes computer literacy mandatory for lecturers in Colleges of Education, which serves as a yardstick for their progression in the job (NCCE/ETF 2021).

Objectives of the Study

1. The availability and adequacy of the infrastructural facilities for ICT usage at the NCE (Technical) Teacher Training Institutions in North-Eastern states of Nigeria.
2. The ICT proficiency of the Lecturers at the NCE (Technical) Teacher Training Institutions in North-Eastern states of Nigeria.
3. The level of ICT facilities utilization for academic activities at the NCE (Technical) Teacher Training Institutions in North-Eastern states of Nigeria.

Research Questions

1. What is extent of the availability and adequacy of ICT infrastructural facilities at the NCE (Technical) Teacher Training Institutions in North-Eastern states of Nigeria?

2. What is extent of the Lecturers' ICT proficiency at the NCE (Technical) Teacher Training Institutions in North-Eastern states of Nigeria?
3. What is extent of the ICT facilities utilization for academic activities at the NCE (Technical) Teacher Training Institutions in North-Eastern states of Nigeria?

Significance of the Study

1. The findings will help the lecturers and the management of the Institutions to identify their strengths and weaknesses in terms of availability, adequacy, functionality and proficiency level of their ICT instructional capacity. This will assist them in formulating and planning of ICT training and facility improvement programmes in their various institutions.
2. The lecturers in the institutions will be aware of the expected technical competencies and the challenges ahead of them in their quest for new innovative knowledge that will keep them at relevance with the current trend of instructional delivery in line with internationally accepted practice.
3. It will also serve as a guide to the NCCE, being the regulatory body of the NCE programmes in Nigeria, to assess the status of the various NCE awarding institutions in order to facilitate professional development activities based on respective institutions' level of e- Readiness.
4. The study will also assist the Federal Government to be aware of the existing facilities for ICT- instructional utilization in the institutions, which will indicate the extent to which the objectives of ICT policy are being achieved by the respective institutions. This will help the government to determine the next step to be taken in ICT integration policy planning and implementation, especially in the education sub - sector.

Methodology

The procedure employed in the study comprise the following:

- Design of the Study: Descriptive Survey Design
- Area of the Study: North-East geopolitical zone of Nigeria
- Population of the Study: 154 Lectures out which 146 were analyzed
- Sample size: The entire population was used
- Instrument of Data Collection: Checklist and Questionnaire
- Validation of the Instrument: Face & Content by three experts
- Reliability of the Instrument: Pilot test at Plateau Poly & FCE (T) Bichi
- Method of Data Collection: 1 checklist/Instn. & questrs for all lecturers
- Method of Data Analysis: Percentage, Mean and Standard Deviation

Results and Discussions

R/Q 1: The result of the findings indicated that there are adequate ICT infrastructural facilities, tools and equipment available for e-Learning activities at the NCE Technical Teacher Training Institutions in North-Eastern Nigeria.

R/Q 2: The result indicated that the lecturers are less proficient in most of the ICT tasks required for e-Learning activities at the NCE Technical Teacher Training Institutions in North-Eastern Nigeria.

R/Q3: The overall result indicated that ICT resources are scarcely utilized for academic activities in the Institutions at the NCE Technical Teacher Training Institutions in North-Eastern Nigeria.

Based on the result obtained, it was concluded that though, NCE Technical Teacher Training institutions in the North-Eastern Nigeria have adequate ICT infrastructural facilities for e-learning activities, yet they are not e-Ready with regard to their lecturers' level of ICT proficiency, extent of ICT resources utilization and adequacy of NCE Curriculum-content support for ICT based academic activities.

Recommendations

1. The ICT facilities at the NCE Technical Teacher Training Institutions should be upgraded to meet the required standard based on the international practice. This will make the institutions to provide adequate and effective up-to-date knowledge to the students who will then be able to compete favourably with their counterparts anywhere in the world.
2. The lecturers should endeavour to acquaint themselves with the required competency through personal efforts, and the authorities of the institutions should encourage them further by way of training and re-training to achieve the desired proficiency in the use of ICT facilities for academic purposes.
3. The management of the institutions should as a policy, compel the lecturers and students to use ICT facilities during teaching and learning sessions, and even for extra-curricular activities where possible. The more they engage in the ICT facility utilization, the more competent they will become.

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