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CHALLENGES MILITATING AGAINST THE UTILIZATION OF INFORMATION AND  
COMMUNICATION TECHNOLOGY BY NIGERIAN TEACHER EDUCATORS FOR  
SUSTAINABLE DEVELOPMENT

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**Abstract**

This paper discusses the challenges militating against the utilization of information and communication technology by Nigerian teacher educators. This is a descriptive on type using survey method. A seven items questionnaire designed by the researcher was used to elicit responses from the 280 respondent randomly selected from the three colleges of education in Kano state. The study revealed that lack of skills, lack of adequate training, lack of interest, lack of time, lack of appreciation of the benefits of ICT use, lack of skills and the tasking nature of the preparation of ICT utilization as the challenges militating against the utilization of ICT by teacher educator. The paper was concluded by recommending that government should increase funding for teacher education programmes in the educational sector with emphasis on ICT, continuous and periodic training of teacher educators on ICT skills acquisition, recruit qualified teacher educators with ICT skills, connect all the teacher education institutions to ICT nationwide, teacher educators should be adequately motivated through funding of workshops, conferences and seminars to utilize ICT in teaching. It is the expectation of the researcher that the solution proffers as recommendation would ensure that sustainable development would be achieved in Nigeria in particular and Africa at large.

*Keywords: Challenges, Utilization, Information and Communication Technology,  
Teacher Educators*

**Background to the Study**

Education is regarded as a veritable tool for national development and it is the greatest legacy any nation can bequeath to its citizens. This was the driving force that motivated the organizers of the 1960 National Curriculum Workshop. National workshop observed that, the curricula of schools were not considered relevant to the needs and aspirations of Nigerian people and there was need to review them. The far-reaching recommendations of the workshop and the subsequent Ota seminar held in 1973 led to the emergence of a government white paper now known as the National Policy on Education (NPE 1977) which has undergone several reviews, for example, 1981, 1998, 2004 and 2009. Imogie (1998), reports that the country's educational system was reviewed to emphasize flexibility so that it could be of value to its recipients and the entire society.

Information and community technologies (ICT) have become key tools and had a revolution impact on how we see the world and how we live. Today, the place of ICTs in education and the world in general cannot be undermined. Modern day businesses are conducted and facilitated through the use of telephones, fax machines and computer communication networks through the internet. This phenomenon has given birth to the contemporary e-commerce, e-government, e-medicine, e-banking and e-education among others.

According to Bandele (2006), ICT is a revolution that involves the use of computers, internet and other telecommunication technology in every aspect of human endeavour. The author posited that ICT is simply about sharing and having access to data with ease. It is regarded as the super highway through which information is transmitted and shared by people all over the world. Jimoh (2007) defined ICT as the handling and processing of information (texts, images, graphs, instruction etc) for use, by means of electronic and communication devices such as computers, cameras, telephone. Ofodu (2007) also refer to ICT as electronic or computerized devices, assisted by human and interactive materials that can be used for a wide range of teaching and learning as well as for personal use. From these definitions, ICT could therefore be defined as processing and sharing of information using all kinds of electronic device, an umbrella that includes all technologies for the manipulation and communication of information.

The field of education has certainly been affected by the penetrating influence of ICT worldwide and in particular developed countries; ICT has made a very profound and remarkable impact on the quality and quantity of teaching, learning research in the educational institutions. Information and community technology has the potentials to accelerate, enrich, and deepen skill; to motivate and engage students in learning to help relate school experiences to work practices; to help create economic viability for tomorrow's workers, contribute to radical changes in school; to strengthen teaching and to provide opportunities for connection between the school and the world.

Looking at the role of education in nation building and the population explosion in the schools these days, the use of ICT in the teaching-learning process becomes imperative. This is true because its adoption by the teachers will enhance effective teaching. Such issues like good course organisation, effective class management, content creation, self-assessment, self-study collaborative learning, task oriented activities, and effective communication between the actors of teaching learning process and research activities will be enhanced by the use of ICT based technology.

Teaching and learning has gone beyond the teacher standing in front of a group of pupils and disseminating information to them without the students' adequate participation (Ajayi, 2008). The author posited that with the aid of ICT, teachers can take students beyond traditional limits, ensure their adequate participation in teaching and learning process and create vital environments to experiment and explore. This new development is a strong indication that the era of teachers without ICT skills are gone. Any classroom teacher with adequate and professional skills in ICT utilization will definitely have his students perform better in classroom learning.

A cursory look at the teacher education institutions in Nigeria has shown that many teacher educators in the system still rely much on the traditional "chalk and talk" method of teaching rather than embracing the use of ICT. According to Okebukola (1997), computer is not part of classroom technology in over 90% of public schools in Nigeria, thus the chalkboard and textbooks continue to dominate classroom activities. This is an indication that the student teachers in Nigeria are still lagging behind in the trend of changes in the world. This presupposes that there is the tendency for the teacher educators and student teachers to be denied the opportunities which ICT offers in the teaching-learning activities. There is the need to replace the traditional pedagogical practices that still underpin the educational system in the country, hence the need for the

utilization of ICT in Nigerian teacher education institutions.

ICT has the potential to transform the way education is delivered and promotes new opportunities therefore, enhancing scholarship and enquiries. This can only be attained when teachers, who are still the key to learning, have developed and utilized the necessary pedagogical competencies for instructional delivery through ICT resource utilization. Jones (2003) opined that effective learning is dependent on the will and competencies of the teacher in instructional delivery of lessons. This implies that teachers must undergo capacity building in ICT resources at the NCE and university level of education to enable them utilize maximally its benefit in instructional delivery.

Furthermore, ICT resources are instructional delivery tools used to explore, investigate, solve problems, interact, reflect reason and learn concepts in the classroom. This innovation permits alternative types of educational patterns for facilitating the teaching/learning process (Umoren, 2003). The researcher conceptualized the ICT resources as the e-learning which is most commonly associated with higher education and corporate training that uses an information network through the internet, an intranet (LAN) or extranet (WAN). Electronic learning (e-learning) is used both in informal and formal educational setting for facilitation, instruction, interaction and for instructional delivery. Web-based learning is also a subset of e-learning.

According to Umoren (2003), another type of ICT resources is the virtual teaching which entails instructional delivery through teleconferencing the video conferencing technique. Web based instruction uses internet and the World Wide Web (WWW) as the major component of learning materials and instructional resources for effective instructional delivery. Audio media (instructional slides and tutorials) are teaching/learning aids made and written into compact disks, graphics and texts. Through the power point, instructional delivery is impactful to slow and fast learners.

The various ICT facilities used in the teaching learning process in schools according to Babajide and Bolaji(2003), Bryers (2004), Bandele (2006) and Ofodu (2007) include; radio, television, computers, overhead projectors, optical fibres, fax machines, CD-Rom, Internet, electronic notice board, slides, digital multimedia, video/VCD machine and so on. It appears some of the facilities are not sufficiently provided for teaching learning process in the Nigerian teacher education institutions. This might account for why teacher educators are not making use of them in their teaching.

According to Ajayi (2008), the use of these facilities, involves various method which include systematized feedback system computer-based operation/network, video conferencing and audio conferencing, internet/worldwide websites and computer assisted instruction. It must however be stressed that the effective use of the various method of the ICT in teaching leaning depends on the availability of these facilities and teachers' competence in using them. Observation has shown that there are no functional internet facilities in most of the Nigerian teacher education institution for student teachers use. This appears to hinder the extent of teacher educators' exposure to the use of ICT in teaching.

Teacher educators as well as student teachers appear not to be knowledgeable in the use of ICT because there appears not to be any official training for both the teacher educators and the student teachers in the Nigeria teacher education institutions hence the need to examine the challenges militating against the utilization of ICT by Nigerian teacher educators.

### Statement of the Problem

ICT are essential tools in any educational discipline. It has the potential of being used to meet the learning needs of individual students, promote equality of educational opportunities, offer high learning materials, increase self-efficacy and independence of learning among student, and improve teachers' professional development (Kirschner and Selinger, 2003). In spite of the potentials of ICT, only resourceful and competent teachers can exploit the potentials. Moreover, ICT have been recognized as significant and key strategic tools in teaching by different governments, organizations, institution among others. There are needs to investigate challenges militating against the utilization of ICT by teacher educators

### Purpose of the Study

The purpose of the study is to ascertain the factors militating against teacher educators' utilization of ICT resources in teaching and learning in colleges of education.

### Research question

What are the challenges militating the utilization of ICT by Nigerian teacher educators?

### Significance of the Study

The researchers hope that the findings of the study will benefit the following bodies in the following ways; The college administration will be informed of the challenges militating against the utilization of ICT by teacher educators. Due to the recommendations that will be made here, challenges militating against utilization of ICT by teacher educators will become a thing of the past.

Teacher educators in colleges of education in Kano state and other colleges of education also stand to benefit from the findings of the study when they begin to utilize ICT in their teaching. Findings of this study will also benefit researchers by adding to the pool of information that already exists in this area. Researchers can therefore fall back on information gathered here by replicating this study in another setting. Finally, findings from the study would have implications for teacher educators in other colleges of education and universities.

### Scope of the Study

This study focused on the challenges militating against the utilization of ICT by teacher educators in colleges of education in Kano state. It specifically focused on the utilization of ICT resources by teacher educators. The study covered the seven states in the North West geo-political zone of Nigeria. The states include Kano, Katsina, Kaduna, Jigawa, Kebbi, Zamfara and Sokoto states. Mean and standard deviation are the statically tools used in this study.

### Methodology

The descriptive survey design was used for this study. The population for the study consisted of all the teacher educators in colleges of education in Kano state. The sample for the study is made up of 280 teacher educators in colleges of educator randomly selected from the three colleges of education in the state.

A self-designed questionnaire tagged "ICT Utilization by Teacher Educators (ICTUTE)" was used to collect the data for the study. The instrument was validated by research experts in educational technology. The Cronbach Alpha was to determine the reliability of the instrument and the reliability coefficient was 0.80. The questionnaire was administered by the researchers with the help of research assistants in the three colleges. Data collected were analysed using frequency counts and mean.

## Result

What are the challenges militating the utilization of ICT by Nigerian teacher educators?

Table 1 : The challenges militating the utilization of ICT by Nigerian teacher educators.

S/N	FACTORS AGAINST UTILIZATION			
		X	S	Interpretation
1	Lack of time to use ICT resources.	2.52	0.68	Agree
2	Lecturers lack the skills to use ICT materials.	3.65	0.72	Strongly agree
3	Lack of appreciation of the benefit of ICT in Teaching.	2.79	0.88	Agree
4	Lack of adequate training for teacher educators.	3.52	0.91	Strongly agree
5	Lack of skills to improvise ICT materials.	2.78	0.83	Agree
6	Lack of interest to use ICT in Teaching-Learning Process.	3.66	0.78	Strongly agree
7	Preparation for ICT Utilization is tasking.	2.54	0.77	Agree

Classification scheme: 0.0-1.00=Strongly Disagree, 1.10-2.0=Disagree, 2.10-3.00=Agree, 3.10-4.00=Strongly Agree.

Table 1 shows that the teacher educators indicated a strong agreement to three out of the seven items on the factors militating against the utilization of ICT namely lack of skills, lack of adequate training, and lack of interest. They however, indicated an agreement to items like lack of time, lack of appreciation of the benefits of ICT use, lack of skills and the tasking nature of the preparation of ICT utilization.

## Discussion of Findings

Generally, the factors militating against the utilization of ICT are the same in all colleges of education. These findings were in line with the factors identified in the works of Moore, Wilson and Armistead (1986), Okwudishu (1993), Lockwood (2000), Tella, Tella, Toyoba, Adika, and Adeyinka (2007), where they identified lack of technical support across schools and teachers' lack of expertise in utilising ICT, as prominent factors. Lack of incentives and support for teachers across schools are other factors hindering use of ICT resources. Anderson, Hennessy, and Wamakote (2010) identify a range of physical and cultural factors that affect ICT use by teacher educators, including lack of reliable access to electricity, limited technology infrastructures and available software, geographical factors such as country size, terrain and communication, demographic factors such as population size, density and dispersion, lack of time available in classes and schedules for planning, and lack of national policy on the uses of computers in schools.

Also, Kolawole and Omolara (2010) identified high cost of accessing and purchasing ICT materials and poor supply as factors militating against the use of ICT resources in schools and colleges. This implies that government and all stakeholders in education in Nigeria should start the reform process considering as urgent priority the provision of essential learning resources to facilitate and sustain effective teaching-learning in the colleges of education in particular and in all teacher education programmes in the country in general.

## Conclusion

ICT educational impact cannot be swept under the carpet by any militating factors as identified from the studies. Therefore this study found that the challenges militating against utilization of ICT by teacher educators in colleges of education in Nigeria to include lack of skills, lack of adequate training, lack of interest, lack of time, lack of appreciation of the benefits of ICT use, lack

of skills and the tasking nature of the preparation of ICT utilization. It is the expectation of the Researcher that the solution proffers as recommendation would ensure that sustainable development would be achieved in Nigeria in particular and Africa at large. This has been blamed on poor funding of education. Low allocation to education has certainly adversely affect the proper implementation of government policies on education. In order for sustainable developmental programme, the quality of what is learn at the school requires substantial improvement in teachers competencies and learning environment, and therefore utilization of ICT in teaching and learning process in the only medium to actualize this dream.

#### Recommendations

1. The government should increase funding for teacher education institutions in the educational sector with emphasis on ICT. This will help improve the level of ICT facilities in the colleges.
2. There should also be continuous and periodic training of teacher educators on ICT skills acquisition.
3. Recruit qualified teacher educators with ICT skills.
4. Connect all the teacher education institutions to ICT nationwide.
5. Teacher educators should be adequately motivated through funding of workshops, conferences and seminars to utilize ICT in teaching

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