



Integration of Information and Communication Technology into the Training of Basic Education Teachers in Nigeria: Issues, Challenges and Prospects.

by:

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Abstract

In recognition of its globally proven importance, Information and Communication Technology (ICT) has been integrated into the Educational system of Nigeria starting from the basic Education level. Basic Education is a strategic subsector of Nigeria's educational system because it holds the potential for 9 year free, compulsory and uninterrupted education for the Nigerian Child in line with the Education for all (EFA) goals. Hence important basic knowledge and skills in relevant subject areas have been built into the Basic Education Curriculum (BEC). The revised 9-year basic education curriculum has explicit information and technology (IT) components for primary 1-6 pupils and Junior Secondary School (JSS) 1-3 students. However current studies in various parts of Nigeria have shown that the teaching, learning and use of ICT at the Basic education level is still very low. Inadequate training of the Basic Education teacher in ICT skills has been identified among other leading factors, as responsible for the poor teaching, learning and use of ICT in the schools. This paper surveyed the ICT component of the content and method of instruction embedded in the curriculum (i.e. the Nigeria Certificate in Education (NCE) minimum standards) for the training of Basic Education teachers, so as to ascertain the extent to which they had opportunity to acquire the ICT skills required at the level they are prepared to teach. This paper compared the ICT skills specified to be acquired by Basic Education learners and that integrated into the NCE, minimum standards which showed that the later provided enough opportunity for teacher trainees to acquire sufficient ICT skills. Curriculum package usually specify minimum standards for learners undergoing a particular programme of study. Achievement of the objectives of curriculum by the programme participants is weighed against the minimum standards. This paper explored the specific ICT skills which a Basic Education graduate should possess, so as to live effectively in the modern ICT driven society as expected. The national policy (6th edition) emphasised that information technology training shall be incorporated into all teacher training programmes. Teacher educators who train the basic education teachers should be ICT trained also. In this vein, the National Commission for Colleges of Education (NCCE) has also specified the minimum ICT standards which the teacher educators should possess so as to train the Basic education teachers effectively,. This paper described succinctly the ICT standards for the teacher educators and compared them with the ICT skill to be acquired from the NCE minimum standards, by Basic education teachers. The ICT standards for teacher educators prepared by NCCE is sufficient to enable them train the Basic Education teachers in ICT skill curriculum specifies implementation strategies drawn from policy statements, which includes activities of stakeholders and conditions under which objectives are achieved. This paper entails to discuss the policy provisions for the acquisition of adequate ICT skills by prospective basic education teachers. Finally, the challenges and prospects of translating the curricular provisions into practical reality that will enable the

optimal acquisition of ICT skills by Basic Education teacher trainees are outlined in this paper. The paper concluded that the policy and curricular provisions for the integration of ICT into the training of Basic Education teachers are adequate and presented practical tips to make their implementation a reality in the Colleges.

(Keywords: Basic Education teachers, Basic Education, Information and Communication Technology).

Introduction

The Universal Basic Education (UBE) was legally introduced into the educational system of Nigeria (via the UBE act of May, 2004), to ensure uninterrupted access to nine-year formal education, reduction of school drop-out, provision of literacy and numeracy and life skills and values for life-long education and useful living. The basic Education sub-sector encompasses the following categories of education

- i) Pre-Primary and Early Childhood and care education (ECCE)
- ii) Primary education
- iii) Junior secondary Education
- iv) Adult and Non-formal Education, and
- v) Special needs Education

For each of these categories of Education there is an approved national curriculum which is distinctive and extensive. Describing the UBE as a reform programme, Kpangban (2009) listed its basic features which included the introduction of computer literacy into the curriculum for the first nine years of formal education, spanning the primary and Junior Secondary school levels. The Basic Education Curriculum (BEC) usually undergoes revisions in line with the reviews of the National Policy on Education. As in the fourth edition of the national policy on education, review was partly informed by the need to emphasize on information and communication technology in schools. Part of the policy states Consequently the subject, Information Technology (IT) was included in the basic education curriculum as from primary one. The most recent edition of The National policy on Education, has integrated the Information Technology as a theme into the former Basic Science and Technology subject from primary one to Junior Secondary School (JSS 3) (FRN, 2013).

The Colleges of Education in Nigeria are mandated to produce quality teachers for the basic education sub-sector through the award of Nigeria certificate in Education (NCE), which is the approved minimum teaching qualification. The curriculum of the Colleges of Education is prepared by the National Commission for Colleges of Education (NCCE), and known as the NCE Minimum Standards for various schools. It is also regularly reviewed to cater for trends in the education sector especially the basic education subsector. Introducing the latest edition of the Minimum Standards, it was stated as follows:

"In recognition of the role of Information and Communication Technology in advancing knowledge and skills necessary for effective functioning in the modern world, there is urgent need to integrate Information and Communication Technology (ICT) into education in Nigeria" p-17 (FRN, 2004).

"It has also taken the advantage of the review exercise to update minimum contents, using those provided in the Basic Education Curriculum" P-(v) (NCCE, 2012). teacher, teacher

educators. This minimum professional standard define the minimum the teacher educators should know and be able to do as well as their expected minimum dispositions towards their work, If they are to remain/progress in their career. Out of the three sections of attributes presented in the minimum professional standards, one of them specified the ICT standards for instruction, for the teacher educators.

This paper will discuss the issues of the levels of: computer (or ICT) literacy introduced in the basic education curriculum; integration of ICT into the NCE Minimum Standards, and the ICT standards which teacher educators should possess. Specifically, the paper will attempt to appraise the extent to which the ICT component of the NCE Minimum Standards gives the teacher-trainees the opportunity to acquire enough knowledge and skills to inculcate the required computer literacy skills in the basic education learners. A survey of the ICT minimum standards of the teacher educators to compare the attributes to the one required to train the basic education teachers is presented in the paper. These are done to explain some challenges, which have been identified and discussed by many stakeholders of the implementation of ICT training of both basic education teachers and learners. In addition to the challenges, the prospects of implementing the acquisition, and use of the knowledge of ICT in the Nigerian school system is discussed in practical terms.

The Feature of Information and Communication Technology in The Basic Education Curriculum The revised basic education curriculum has made the subject/theme, Information Technology a prominent feature in primary and JSS levels of schooling. The aim, as stated earlier is to raise a generation products of the basic education level that will function in a dynamic economy and adapt to the technological changes of the 21 century. The products of the basic education level that have been taught Information Technology are already in the society. Some researchers have accessed the implementation of the ICT teaching/learning at the basic education level and concluded that it is not satisfactory since computer illiteracy still abounds and few teachers and students can operate computer (Arop et al, 2018; Abubakar 2016), Jimoh et al (2017). The issue is: how much ICT knowledge and skills should the basic education learner be taught? How much of ICT facilities are required for use in the basic education school? What method of instruction is implied or specified to be adopted in teaching ICT?

Content of ICT In Basic Education Curriculum: The subthemes under the information technology theme in the revised. Basic Science and Technology subject from primary one to JSS3 are as shown in table one below:

TABLE 1: Subthemes in Information Technology

<i>Theme: Information Technology</i>	<i>Primary 1-6 * Basic Computer Operations and Concepts * Basic Concepts in Information Technology</i>	<i>JSS 1-3 * Basic Computer operations and concepts * Computer Ethics * Computer Application Packages * Basic knowledge of information technology.</i>
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Source: NERDC (2013). (The content of the Revised Basic Science and Technology Subject)

A survey of the teaching and learning resources/materials suggested to be used in teaching at the basic information Technology at the primary level ranged from pictures and charts of the equipment to real objects such as GSM phones, digital wrist watch, calculators, keyboard, mouse and mouse pad and computer set for the lower basic level. At the upper basic level, softwares and internet facilities are introduced.

The method of teaching at the basic education level is clearly specified in the policy to be participatory, exploratory, experimental and child centered (FRN, 2013). These methods require the use of sufficient teaching aids in both quantity and quality so that learners can participate, explore and perform experimental activities. Above all, ICT-trained teachers are the primary implementers of this curriculum.

With this curriculum package, a basic education graduate who was thoroughly taught the IT subjects from primary one to JSS3, should be able to perform input, output and storage operations in a computer in addition to being acquainted with the operation of other ICT devices such as GSM phones. They should be computer literate enough to adapt to the technological changes in the knowledge-driven society.

The basis for this expectation is the policy provision that implies a practical teaching of IT skills which require electricity/power supply, internet connectivity and well- equipped laboratories and other infrastructures to be provided as stated below.

“In recognition of the prominent roles of information Technology (IT) in advancing knowledge and skills necessary for effective functioning in a knowledge-driven world, government shall provide adequate infrastructure and develop capacity for effective utilization of information Technology (IT) to enhance delivery of Basic Education in Nigerian” P-10 (FRN, 2013)”.

Despite these noble policy provisions, studies have shown that the acquisition of the ICT skills is far from being realized, especially in public basic education, schools. Hossanna (2015), surveyed the extent to which ICT programme is implemented in basic education schools and found it at a very low level although there is high interest to learn computer skills by both the teachers and pupils. According to the study (Hossanna, 2015), some of them resorted to private settings to acquire the skills.

In another study, Okah (2012) noted that ICT is the least developed area in primary and Junior secondary school levels, and that computer illiteracy still abounded as only few teachers and pupils could operate computer. Ogbuvbu (2009) analyzed the quantity and quality of ICT resources available in UBE schools in a state-wide study, and concluded that no ICT resources were available in the schools. There were grossly inadequate computers compared to the population of the students and no internet connectivity/services in any of the schools of the study. Ogbuvbu (op-cit.)

Focusing on the revised basic education curriculum, Dolapo (2015), monitored the level of implementation in terms of teacher training among other issues, and recommended from the findings that on-the-job training of teachers should be organized. Similar recommendation was made by Mbang and Urom (2013) who included the training and re-training of all non-teaching staff on the use of ICT devices. All these studies upheld the recommendation that all UBE teachers must be computer literate and able to operate any ICT equipment at the level of basic education with ease.

The teacher is the key actor in the implementation of any curriculum. Hence capacity building of the teacher should be ensured in the implementation of the basic education curriculum on a continuing basis by re-training serving teachers and updating the curriculum of pre-service concurrently to cater for any change. Knowledge leads to empowerment, and when teachers are empowered with requisite knowledge and skills, they will likely be motivated to ensure that all provisions/ infrastructure they require to get their job done are supplied by appropriate authorities. This paper will proceed to describe the extent to which the ICT component of the NCE minimum standards (which has been reviewed by considering changes in the basic education sector as stated earlier), offers the required ICT training to teacher-trainees.

The integration of Information and Communication Technology (ICT) into the NCE Minimum Standards.

The current NCE minimum standards was restructured and expanded in line with the changes in the basic education curriculum (NCCE, 2012). It has distinct ICT component in the

General Studies Education (GSE) courses and in the general education course, Educational Technology which are core courses for all teacher trainees. In addition, it has specific computer courses for teacher trainees of Early Childhood Care and Primary Education; which are the foundation levels of basic education. The objectives of these courses, the specific ICT skills they offer, the methods of instruction, adopted and the main facilities which should be used in teaching them are hereby described. This description is obtained from a survey of the NCE minimum standards for Early Childhood and Care Primary Education, Vocational and Technical Education, Science Education, Arts and Social Science Education, General Education and Languages. Teacher trainees in all the schools study the two GSE core courses titled Introduction to Computer Studies (I & II).

The objectives of the courses are to enable the teacher trainees to be able to:

- (i) Explain the meaning and uses of computer
- (ii) State the various computer assisted instructional programmes and their uses
- (iii) Discuss computer operational and networking system
- (iv) Teach general knowledge of computers and assist their pupils/students in their uses
- (v) Demonstrate competence in the use of computer and internet facilities
- (vi) Demonstrate competence in the use of computer for teaching purposes.

The content of the computer courses are as follows

Introduction to computer

- * *Definition and meaning of computers,*
- * *Data and information scope,*
- * *Brief historical development of computer*
- * *Classification of computer (by purpose, size and capability)*
- * *Computer application areas (law, health, education, communication, industry, government, military, etc)*

Basic Components

- * *Hardware and Software, Devices Systems and application of software.*

Computer Operations/Computer peripherals (input and output devices)

- * *Booting, Keyboard, The mouse, Loading, Printer, Scanner, Digital Camera, UPS, Stabilizer, Flash drive, CD/DVD.*

Types Of Software and their applications

- * *Operating systems, Windows NT, Windows XP, Vista, UNIX.*
- * *Application Software, Games, Drawing, Playing Music, Shopping, Record Keeping, Banking, etc.*

Using the Computer

- * *Word processing (Power point), spreadsheet (Ms-Excel)*

Introduction to Networking

- * *LAN, WAN, Internet, accessing the internet for instructional purposes, protection of computer data.*

The methods of instructions which should be used to teach these contents are among others practical demonstration and computer assisted teaching/learning. The use of these methods requires availability of relevant ICT equipments, gadgets and accessories which are also specified in the NCE minimum standards are as follows:

Computers, VCD/DVD, CD, Cameras, Video Cassettes/Players, Flash Drivers Stabilizers, Scanners, Printer, UPS (Uninterrupted Power Supply), Projectors and accessories. Facilities such as sufficient power supply, internet connectivity, computer laboratories/rooms and e-libraries are also required. Special designs of computer (e.g. with French or Hausa Keyboard) are usually need for some basic education subject areas. Satellite dish, decoders, and television sets are included.

Consequently, ICT trained non-teaching personnel's such as computer literate typist/technicians, instructors and lecturers from the retinue of human resources are required to implement the ICT training of basic education teachers, and these are also specified in the minimum standards.

Looking at the ICT package described above it can inferred that an effective teaching of the ICT component of the NCE minimum standards will undoubtedly prepare teachers adequately to teach the ICT component of the BEC described earlier. Effective teaching using the facilities stated will enable the trainees demonstrate the competencies in the course objectives. Serving teachers could also demonstrate ICT competencies through continuous teacher development programmes. Hence the basic education teacher should be able to use computer effectively, to type and print letters or any word document (e.g question papers), use spreadsheets to compile students results/scores, browse on the internet, send and receive e-mails, network with the fellow teachers and use multimedia. Teachers could assist their pupils on how to use the computer, play computer games (for ECE kids) and learn individually using educational CDs. They can utilize any simple e-packages such as e-registration of teachers and similar situations. Simply put, they are computer literate!

However, the reality of this expectation is at best a mirage as known to us stakeholders. It will be pertinent to ascertain the level of ICT skills which are possessed by the teacher educators, the trainers of the basic education teachers, before discussing further, the reality on ground about the teachers on the job. The teacher educators in the Colleges of Education are key factors in the training of the basic education teachers on ICT. Are they

sufficiently ICT trained? Are they also fully equipped and opportune to use their ICT skills to teach in the Colleges?

The ICT standards for teacher educators in College of Education

NCCE (2010) provided twelve (12) attribute science and technology standards which teacher educators should possess. Two of these attributes are ICT standards and have the following scope.

- (1) *Science and Technology teacher educators can make use of the basic ICT available in their Colleges.*

Indicators of this first ICT attribute are that the teacher educators should be able to :-

- i. Use the basic operations of available ICT applications. i.e e-mail , word processing , data-based management programmes, presentation models and graphics.*
- ii. Perform internet searches to develop materials for instruction.*
- iii. Evaluate quality of internet based materials.*
- iv. Develop activities in his/her own area of specialization that use available ICT.*
- v. Integrate and adapt curriculum content in ICT environment,*
- vi. Use teacher online communities for collaboration and sharing.*
- vii. Use ICT for communication with stakeholders.*

-) *Science and Technology teacher educators use their knowledge of subject matter, teaching, learning and ICT to facilitate experiences that advance student learning, creativity and innovations in both face-face and virtual environment.*

Indicators of this second attribute include:

- i. Promote, support and model creative and innovative thinking about using ICT for teaching and learning in his/her area of specialization.*
- ii. Engage students in exploring real world issues and solving authentic problems using digital tools and resources.*
- iii. Promote students' reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning and creative processes.*
- iv. Model collaborative knowledge construction and in engaging in learning with students, colleagues, and others in face - to- face and virtual environment.*
- v. Engage in competitions to showcase the integration of ICT into education*
- vi. Demonstrate skill of a facilitator rather than instructor using ICT.*
- vii. Promote project-based learning in one-on-one ICT environment.*
- viii. Access relevant content from virtual library.*
- ix. Use virtual laboratories for experiments and projects.*
- x. Create e-mailing materials.*

These imply that the teacher educators can use computer and its accessories and other ICT equipments available in the Colleges efficiently to produce text materials, design and produce power point presentations for teaching, prepare their results so that they can upload them into college websites/ portals, send and receive emails and similar e-messages, perform literature review using virtual libraries, use group platforms such as Skype for video conferencing, produce CDs and use projectors/multimedia and other ICT devices available.

Usually ICT based courses are taught by teacher educators who are specialists in computer science and computer science education, and not generalists, and will likely possess the attributes. Every teacher educator is supposed to have at least a personal computer set or laptop in his/her offices. Hence the ICT standards are robust enough to enable teacher educators inculcate the basic knowledge of ICT in the basic education teacher-trainees. Are the ideals of these standards being realized among the existing teacher educators in Colleges of Education? Are other conditions which enable them to exhibit these skills available in the Colleges? Does the required teacher student ratio of one lecturer to twenty students (i.e 1:20) exist in the Colleges? Is the number of computers available for learning in the ratio of one (1) computer to three (3) students as specified in NCE minimum standards for skilled subject areas like ICT? Do all lecturers' offices have internet connectivity? These questions will be addressed in the next section.

The challenges of preparing an ICT-trained Basic Education Teacher.

Despite the existence of the well-articulated and comprehensive ICT content in the training programme of the basic education teacher, its delivery or implementation is beset with impediments. The challenges span the various facets of the resources and the activities involved in their training, from the handicap of the teacher educators, through the poor ICT of environment of the Colleges of Education for training to the inadequacy of ICT facilities in the schools of teaching practice.

Many concerned scholars have surveyed, observed and discussed the state of the ICT training and competencies of Nigerian teachers and especially the basic education teachers and came up with very similar conclusions and recommendations. On the average; the teacher educators are moderately proficient in the use of ICT (Ojalere et al, 2017), lack internet facilities to use the ICT skills they possess (Anjili & Ahmed, 2015), make predominantly use of laptop with modem, mobile phones or public cyber café to access internet (Onwuagboke and Onwuagboke, 2014), teach in lecture rooms without ICT facilities (Olawoyeye, 2016) and use library without internet facilities Okonoko et al 2018). Therefore the trend continues in the

findings that many basic education teachers are not adequately trained in the use of ICT, (TRCN, (2018). Shuaibu (2017), Adeyemo et al (2015), Ayogu (2015), Owolabi et al (2013) and Nwosu et al (2018). It is very clear, that the policy has been translated into a robust and valid curriculum, as described in this paper, both for teacher educators and teacher trainees. The implementation of the curriculum to prepare in reality the ICT trained teachers has not fully materialized. Many factors militating against the full implementation have been highlighted by several authors right from the introduction of ICT into the educational system (Iji, 2005; Olakunlehi (2007).

From a participant observer's view point, all the militating factors identified which range from poor infrastructures and funding limitations to lack of ICT facilities and support for trainees and trainers are real, in the Colleges of Education, in Nigeria. These factors are hereby listed in addition to establishments where they are not hindering progress, so as to adapt what has been done to overcome them as challenges.

Poor Infrastructure: There is irregular and inadequate power supply and no internet connectivity in the Colleges and schools. Many private businesses, like banks that necessarily use regular power supply and internet connectivity are successfully operated in Nigeria.

Lack of ICT Facilities: These facilities are mainly computers, the softwares, projectors, cameras and other ICT gadgets. The examining bodies like JAMB are able to conduct computer-based examinations with adequate number of functioning computers.

Poor Maintenance: At times the computers are supplied in adequate numbers, but they are soon damaged by poor storage systems like non-air-conditioned laboratories/rooms/offices. Although this is an offshoot of poor maintenance culture in Nigeria, but other places where air-conditioned rooms are needed (e.g Mortuaries and cold-rooms) still function for business

Poverty of individuals and government in purchasing ICT-related materials: Indeed the nation is experiencing poor economy and poor citizens, parents and guardians find it difficult to purchase costly ICT gadgets for use. It is also a reality that Nigerians purchased GSM phones in the spirit of "one man, one phone (at least). This could be carried over to the issue of necessary ICT for learning

Lack of willingness to engage in independent personal learning of skills: Although some studies, (Hossana (2015), Onwuagboke and Onwuagboke (2014)) have shown that some teachers and students resorted to private efforts to acquire ICT skills; it is not a general phenomenon in the nation. However, it is a pointer that with adequate motivation, delving into self improvement in ICT skills will become popular.

Lack of Government Intervention: Truly governments financial provision for Colleges, since after the recession has dwindled and funding for all aspects of infrastructure and equipments

are adversely affected. But the necessity of ICT to national development in this 21st century is too strategic to be put on hold in any nation.

Telephobia: Some teachers may fear that they may be replaced by computers, as it happened when banks lay off many workers because of the use of computers. Computers have not replaced the teachers in developed nations where use of ICT is at its peak, so this lack of information can be bridged.

There is dire need to tackle these challenges practically, because they form a viscous cycle that culminates into lack of ICT trained teachers of basic education. A participant observers' view of the prospects of ICT training of teachers at the College of Education level is hereby discussed.

Prospects of Training Basic Education Teachers on ICT in Colleges Of Education

Developments, changes and innovations taking place in the nation at present are pointing to the unavoidable need for ICT literate citizens. Registration for post-basic education examinations, application for jobs, admissions and many requirements (like booking for flight, shopping, banking, etc) are done online with greater ease. The cashless society is very imminent in the nation and all these require the entire population to be ICT literate ultimately. Just like in the case of literacy and numeracy, It is the teachers who will make the people ICT literate starting from the basic education level as expected. Therefore the prospects of adequate preparation of ICT-trained basic education teachers are very glaring, and require a radical approach. This radical approach is aimed at "ICT-literacy for all" in Nigeria just like "education for all" in the world.

Provision of infrastructure for ICT: All stakeholders in the educational system must cultivate the attitude of regarding the provision of adequate power supply, internet (with effective band width, air-conditioned computer rooms/laboratories, computers and all other ICT gadgets adequate for the population of users in the Colleges of Education and schools as top priority. With this attitude, public-spirited persons, associations, banks, industries, politicians (such as senators and members of house of representations), in College communities should channel any aid on constituency projects to provision of ICT infrastructure for now.

Provision of computers for all teacher trainees: As part of the responsibility of parents/guardians and community developers, they should provide computers/laptops/notebooks for their wards, just as it is requirement for lawyers going to law school to have a laptop. This will enable each teacher trainee to practice individually as they are taught.

Power Supply: Since the national electricity distribution is not satisfactory, Colleges and schools should have adequate power supply for ICT-training, as a condition for existence pending the revival of national power supply. In addition, power projects should be encouraged at state and local government levels.

Adequate Motivation: ICT literacy should be regarded as the fourth to the 3Rs (i.e. Arithmetic Reading and Writing) for any basically educated person in the country. In this way people in this generation will be motivated to acquire practical ICT skills to operate as an educated person.

Requirement for professional registration with TRCN: The TRCN professional test should be replaced (in part or wholly) with appropriate ICT-competency test in which pre-service teachers (or those seeking or renewing of their registration) must be tested on practical skills with ICT equipments. This will also motivate them to acquire the skills before they register.

Practical ICT competency test for serving teachers and teacher educators (Not theory tests): As part of the Continual Teacher Development which is enshrined in the teaching profession, serving teachers and teacher educators should be made to update their ICT knowledge and skills and be tested practically as requirement for their promotion and continuation to practice. ICT skills are practical skills and must be tested accordingly instead of theory test done to obtain a certificate of ICT proficiency.

Instructional methods should be ICT-based: All methods of teaching ICT courses must be by practical demonstration with Computer Assisted Instructional Methods. In this way, trainees will acquire the skills by “immersion” or active participation with their own laptops/computers.

Supervision Of ICT Teaching and Learning Should be Used to Accredite and Grade Colleges: Supervision of Colleges by NCCE should go beyond a 5-year affair to the use of ICT to track teaching/learning activities. NCCE could engage Colleges on video-conferencing and obtain real-time records/observation of the use of ICT in teaching/learning by teacher educators and trainees.

Lesson Plans/Lesson Notes Should Portray the Use of Practical Demonstration In Teaching ICT Courses: The very good innovation in which teacher educators should use lesson notes to teach should be utilized to ensure that ICT courses are not taught as theory.

Making ICT gadgets affordable to Nigerian Teacher/Learners: Although laptops were supplied to some lecturers in Colleges of Education by Nigerian Communication Commission (Onwuagboke et al, 2015), more collaboration is needed, for more users. The National Information Technology Development Agency (NITDA) could expand its ICT campaign to help to get computers and other ICT gadgets at affordable cost for schools and Colleges.

Government Should Implement The National Policy: The federal government is duty-bound to make the policy provisions real as expected, in order to education Nigerians optimally. It expected that government take her position strongly to develop the necessary ICT skills in the entire population, by providing necessary infrastructure and incentives, so as to develop the nation.

Conclusion

This paper has shown that the basic education curriculum has ICT component which is capable of making learners, computer literate enough to adapt to technological changes in the 21st century, if they are properly taught. The NCE minimum standard also has ICT component which could prepare basic education teachers adequately to teach the ICT component of the basic education curriculum effectively. The ICT standards for teacher educators at the Colleges of Education are clearly specified and are adequate to enable them prepare the basic education teacher trainees on ICT skills. However, there is a mis-match between curricular goals and implementation at both the school level and Colleges of Education.

Factors militating against the acquisition of ICT Skill by Basic Education teacher trainees are identified to range from lack ICT infrastructure, high cost of ICT gadgets to poor attitude of some teachers towards acquisitions of ICT skills. Since ICT skill is a “must have” for citizens to operate well in the current knowledge-driven society, this paper recommends a radical approach which hinges on making acquisition of ICT skills a top priority in all basic education schools and Colleges of Education. We opine that this approach “ICT for all” will achieve similar result as “education for all” pursuit in this nation.

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