





















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 21<sup>st</sup> 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 21<sup>st</sup> 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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