

RE-TOOLING EDUCATION FOR THE INFORMATION AGE: IMPLICATIONS FOR NIGERIAN TEACHER EDUCATION

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Abstract

In the new world order, the use of information and communication technology (ICT) for good and purposeful teaching and instruction, can no longer be left to chance. Nigeria as a nation was late in the use of ICT, in all its sectors of development, especially in its teacher education practice. Consequent upon this, many Nigerian teachers have not been well trained and encouraged in the use of ICT in their classrooms. To this end, the paper submitted that unless Nigeria teacher education programme is re-tooled or re-generated with ICT, it may not effectively achieve its envisioned ideology. Thus, the paper made a philological analysis of the term “tool” as a means to achieving an end. The central issues in the ideology of Nigeria teacher education were articulated. The necessity of re-tooling Nigeria teacher education practice with ICT was discussed. The educational implications of the study were highlighted. And some recommendations were proffered.

Introduction

The term “tool” is derived from the Greek word *tekhne*, meaning an instrument used by workmen. It could also mean that which acts as the instrument of another. In this aspect, a tool or an instrument becomes a means to achieving an end. *Random House Webster’s College*

Dictionary (1991: 1405), considers the word “tool” as “that, which stands for any instrument used in doing work, especially one held in the hand as a hammer, saw or file for performing a facilitating mechanical operation”. On the other hand, a “tool” is a means of accomplishing a task or a purpose. For instance: Education is a tool for success. To re-tool Nigerian teacher education for the information age, implies using the information and communication to recondition or even to recharge the Nigerian teacher education practice, especially now the world has become a global village.

On the part of Mailer (2005) the whole range of technologies which are involved in information processing, and electronic communication are referred to as information and communication technology (ICT). It includes the radio, television, videos, computers, sensors, interface boxes, e-mail, satellite connection, internet and the soft wares and materials which are employed by teachers in their teaching and learning practice.

Lamentably, Ayeni (2006) submits that, Nigeria, a country that is approaching fifty years of existence as an independent nation, is still in the process of clamouring for transfer of technology, socio-political stability, economic survival and capacity building and sustainable development in education. The central and strategic position and role which ICT occupies and plays in development strategies of various economies, as Enemuo and Onwuka (2006) concur in their research report, has made it the cardinal tool of governments and organizations. It is now almost imperative for policy-makers to focus on e-health, e-commerce, e-finance, e-government, and e-education as catalysts for all development agenda. It is the contention of this paper that ICT ought to leave its imprint more on teacher education, since teacher education is the bedrock of any nation’s education and national development.

Undoubtedly, ICT is a revolution that involves the use of computers, internet and other telecommunication technologies in every aspect of human endeavour. It is also self evident truth that the computer and internet have a more direct relationship to fundamental

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changes in human communication and cognition, and the overall organization of the learning and teaching practice of the society. Based on the above, the interest point of this paper lies on the inevitability of re-tooling Nigeria teacher education with information and communication technology in order to achieve the ideology of Nigeria teacher education.

The Ideology of Nigerian Education

Teacher education is the process of training that deals with the art of acquiring professional competences and growth. Osunde & Omoruyi (2004) were of the view that in Nigeria, the need for well qualified teachers has gained pre-eminence because it is considered that, teacher education programme is a means of providing teachers with the necessary skill and knowledge needed to adequately carry out their teaching jobs, as well as for professional growth. Teacher education is designed to produce highly motivated, conscientious and successful classroom teachers, who will handle students effectively and professionally for better educational achievement. This must have been the kerosene which supplied energy to Anya's (2001) lamp of argument that, teacher education is the intellectual laboratory of any nation and the engine that propels its economy.

Inadequate teacher preparation programmes as Amedeker (2005) affirms in his study, result in majority of teachers' inability to demonstrate adequate knowledge and understanding of the structure, function and the development of their disciplines. On cogent premises however an effective teacher education programme is a *condition sine qua non* (necessary condition or prerequisite) for a reliant education, which leads to a good level of confidence in both teachers and their students. Going by the implication of the above assertion, Lawal (2003) affirms that it is only when learning is co-ordinates effective and professionally that the inherent problems in the teacher education could be rectified and solved.

The entire system of education in Nigeria as Iwuchukwu (2006) alleges, depends on the teacher for effectiveness. Such a claim stands

on the ground that the teacher as a human person is the most important factor among the agents of production in the educational system. As a human person, the teacher organizes all other facilities for effectiveness and functionality of the educational system. The teacher is the manager and the co-ordinator of both the facilities and the learners. Any inadequacies in the personality and education of the teachers will certainly be reflected in both the competency and productivity of the prospective learners, as the teacher's products.

In the same wake of thought, Umar (2002), notes that one of the issues dominating the debate on the current educational crisis is teacher quality. He further observes that, teachers' level of preparation is inadequate. Their training has not prepared them for the realities of their classroom, and the new challenges posed by the new information age. In the words of Abiogu (2007), the Nigerian teacher of today is like a farmer who cultivates his farm sometimes with an antiquated hoe, or with available instrument that is crude in design and traditional in construction. He occasionally succeeds, but often fails, not because he enjoys the odium of failure, but because he can only teach what he knows and with the material available to him. *A fortiori* (for greater reasons), the ideology of Nigeria teacher education may not sustain its philosophic onions if the teacher fails in his practice of satisfy the students' new learning needs in this information age. This then implies that there is necessity of launch Nigeria teacher education programme into the changing and challenging roles of ICT in education practice.

The Necessity of Re-tooling Nigerian Teacher Education with ICT:

In education practice, the teacher needs to be conscious at all times in order to guide his students intelligently, so as to enable them learn new ideas, and put them into practice. The teacher's main professional responsibility is not only to encounter his students as intelligent beings, but also it use the informative technological devise to further develop their learning process. Such development is expected to be for learning at the theoretical level, and to facilitate the application of theory to practical living. For the teacher to succeed on these two levels of

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professional endeavour, the teacher needs not only an assumption of his students as actual or potential thinkers; he also needs to complement this assumption with practical educational tools or resources.

In view of the above, Ololube (2006) is insistent that many Nigerian teachers have been unable to find effective ways to use technology in their classrooms, or any other aspect of their teaching and learning life. The possible explanation for this lack of success by teachers is that the use of technology in the classroom has not been encouraged and teachers are not well trained in using ICT in teaching, as a means for educational sustainability. This is in spite of the specifications in the National Policy on Education by the Federal Government of Nigeria to “provide through education technology, full-time or part-time courses of instruction and training in engineering, other technologies, applied science, business and management, leading to the production of trained manpower” (FGN, 2004:41). Nigeria as a nation came later into the use of ICT in all sectors of the nation’s existence, more especially in teacher education. This is as a result of chronic limitations brought about by economic disadvantages and government policies.

Disappointingly in a research study conducted by the Global Information Technology (2004), the report used the Networked Readiness Index (NRI) to measure the degree of preparation of a nation or community to participate in, and benefit from ICT development. Nigeria was ranked 86th out of 104 countries. In 2005, the same research study was repeated by the same research corpus. This time it covered a total of 115 economies in 2005-2006. Nigeria was ranked 90th out of the 115 countries surveyed. United States of America topped the list, followed by Singapore, Denmark, Iceland, Finland, Canada, Taiwan, Sweden, Switzerland, United Kingdom, and what have you. The above indicates a decline in Nigeria’s preparedness to participate in and from ICT development globally. Interpretatively, Mac-Ikemenjims (2005) in his paper presentation observes that fundamentally, the slow access to basic ICT equipments,

low internet connectivity and computer, and the inadequacies in the use of audiovisual materials and equipments including films, slides, transparencies, projectors, globes, charts, maps, bulletin boards, plus programmed materials, information retrieval systems, and instructional television in teacher education programmes, are barrier to the effective and professional development of teachers in Nigeria.

This suggests the urgent need for Nigeria government, as well as the educational administrators and trainers to re-tool Nigeria teacher education practice with appropriate technological tools, for there is apparent information out burst in education system world over, as Ogbuanya (2007) rightly avers. This is spurred by advancement in technology causing knowledge, ideas and techniques to change so rapidly that they quickly become obsolete. In other words, Nigeria teacher education is to re-tool its sector with the media and its evolving technology, such as ICT, since its conventional teaching strategies and pedagogy no longer satisfy students' needs.

Educational Implications of Re-Tooling Nigerian Teacher Education with ICT:

Nigerian teacher education has to be re-tooled with information and communication technology because teacher education, as Anya (2001) highlights, is the intellectual laboratory of any nation, and the engine that propels its economy. By implication, the teacher education and economic survival of Nigeria in the information age cannot be detached from ICT.

The use and effective application of ICT in Nigeria teacher education, will certainly transform the teachers' obsolete and abstruse traditional methods. It will also supplant the teaching and learning practice with revolutionary new paradigms of the information age. This implies that teachers will no longer teach and learn with difficulty and tears, for their methods as well as resources and data will be modeled into programmable bits, to facilitate the transfer and acquisition of knowledge.

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Now that the whole world has become a global village through the use of ICT, it implies that the teacher will achieve more effective performance, and an easy upturn of the reality of educational challenges, in order to propel the learner on the upward global human development index.

Since modern education is now more or less centered on ICT, which includes internet education, e-commerce, human management, technical writing and communications, programme and project management as backbone of all other traditional domains of education, it implies that Nigeria teacher education programme cannot isolate itself from the emerging global culture, as a result of the progress of science and technology whose impact is already evident in Nigeria's mode of thinking and existence.

With the use of ICT, the world has moved closer to us, but such dream is yet to be realized in Nigeria school system, because the Nigeria teacher who is the key man in the drive to progress, and who ought to teach and direct the students, is lacking in ICT skills and knowledge. Contendingly, the aphorism is true that *nemo dat quod non habet* (no one offers what one has not). In other words, it is what the teacher has, that he offers. This implies that there is need for re-tooling or re-structuring Nigeria teacher education programme with the skill and knowledge of ICT, since the knowledge or ignorance of the teacher as the case may be invariably affects his products.

Recommendations

Based on the above thesis on re-tooling education for the information age, and its implications for Nigerian teacher education, the following recommendations are made:

1. Since Nigerian teacher education programme came late into the use of ICT, Nigeria government should declare ICT capacity building and infrastructure development an emergency which deserves the highest priority and budgetary allocation.
2. To meet the digital challenges of the 21st century, and to save Nigeria teacher from remaining culpably inferior and ignorant

in intimate mates of education technology, the teacher as well as the student teacher, should learn how to utilize computer technology, particularly in the areas of system engineering and development, database, multimedia interfaces and networking, visual working systems, apart from being connected with internet web.

3. There should be well articulated policies and designed curriculum to enforce conservative teachers in all levels of education system to apply ICT in their instruction.
4. The Federal, State and Local Government should embark on immediate capacity building of teachers in ICT and its instructional applications though in service training, workshops and seminar.
5. It is the *onus* (responsibility) of the principals of both primary, secondary and tertiary institutions to create awareness for their teachers, that the global evolution of super-scientific approaches and manipulations (ICT), have made it imperative that, the teachers' quality outcomes measured through multiple indices, became the felt need of education today.

Conclusion

The paper endeavoured to establish that today's world is characterized by constant technological changes. The changes are perceived in human communication and cognition, and in the overall organization of the learning and teaching practice of the society. For Nigeria to catch up with these rapid changes, it has to recognize essentially the indispensable role of teachers in maintained that since Nigeria conventional teaching strategies and pedagogy no longer satisfy the needs of the learners, Nigeria is to "re-tool" its teacher education programme, with the application of Information and Communication Technology.

References

- Abiogu, G.C. (2007), "Teacher Education in Nigeria: A critical Examination of its Planning," *Nigeria Journal of Teacher Education and Teaching*, 3(1): 88-89.
- Amedeker, M.K. (2005), "Reforming Ghanaian Teacher Education Towards Preparing an Effective Pre-service Teacher," *Journal of Education for Teaching*, 31(2): 99-110.
- Anya, A.O. (2001), "The Drams, Vision and Myth of Nigerian Reality," *The Guardian on Line*, June 19.
- Ayeni, M.A. (2006), "Distance Education, Information Communication Technology (ICT) and Workers Productivity," *Nigerian Journal of Educational Philosophy*, 2(1): 65.
- Enemu, P.C, & Onwuka, C.J.A. (2006), "Evaluating the Prospects of Distance Education in Nigeria Vis-à-vis Information and Communication Technology (ICT): Critical Issues for Determination," *Nigerian Journal of Educational Philosophy*, 2(1): 87.
- Federal Government of Nigeria (2004), *National Policy on Education* (4th ed.), Yaba Lagos: NERDC Press.
- Global Information Technology Report (2004), "The Networked Readiness Index Rankings 2005," Retrieved 22/04/2006 from [http://www.weforum.org/pdf/Global Competitiveness Reports/Reports/GLTR20042005/Networked Readiness Index Ranking](http://www.weforum.org/pdf/Global%20Competitiveness%20Reports/Reports/GLTR20042005/Networked%20Readiness%20Index%20Ranking).
- Global Information Technology Report (2005), "The Networked Readiness index Rankings 2005," Retrieved 22/04/2006 from [http://www.weforum.org/pdf/Global Competitiveness Reports/Reports/gitr2006/rankings.pdf](http://www.weforum.org/pdf/Global%20Competitiveness%20Reports/Reports/gitr2006/rankings.pdf).
- Iwuchukwu, C.B. (2006), "Between Teacher Education and the World of Work: the predicament of Productivity in Nigeria," *Nigerian Journal of Education Philosophy*, 1(1): 7-13.
- Lawal, H.S. (2003), "Teacher Education and the Professional Growth of the 21st century Nigeria Teacher," *The African Symposium*, 9(1): 1-12.

- Mac-Ikemenjims, D. (2005), e-Education in Nigeria: Challenges and Prospects, *Paper presentation at the 8th UN ICT Task forces meeting*, April 13-15, 2005 Dublin, Ireland.
- Mailer, A.C. (2005), Information and Communication Technology. Retrieved on March, 9, 2005, <http://www.cesie.ie/ictgu/what.hmt>.
- Ololube, N.P. (2006), "Teachers Instructional Material Utilization Competencies in Secondary Schools in Sub-Sahara Africa: Professional and Non-Professional Teachers' Perspective," *Conference Proceedings of the 6th International Educational Technology Conference (EMU)*, 19-21 April 2006 North Cyprus.
- Osunde, A.C. & Omoruyi, F.E.O. (2004), "An Evaluation of the National Teachers Institute's Manpower Training Program for Teaching Personnel in Mid-Western Nigeria," *International Education Journal*, 5(3): 405-409.
- Random House Webster's College Dictionary (1991), New York: Random House Inc.
- Umar, A. (2002), "Assessing the Quality of Teacher Education in Nigeria," *Nigerian Journal of Educational Philosophy*, 9(1): 1-12.