
Information and Communication Technology for UBE Implementation in Nigeria: An Imperative for Achieving Sustainable Millennium Development Goals

By

DR. I. ROBERT-OKAH

*Department of Educational Foundations
and Management,
Rivers State University of Education,
Port Harcourt*

Abstract

The importance of the UBE programme in the development of a third world country such as Nigeria cannot be overemphasized. Being a foundation programme, if the teachings of certain basic skills are compromised at this level, what become of students achievements at the secondary and tertiary levels are better imagined. As a result, the paper discussed the need to incorporate ICT into the implementation of the UBE programme. The paper further analyzed the uses and relevance of the ICT and acknowledged the outstanding challenges in such a laudable endeavour as lack of ICT awareness, poverty among stakeholders, lack of ICT infrastructure, inadequate power supply, and low internet connectivity. The paper recommended among others; workshops in computer studies and appreciation for primary school teachers, and adequate power supply by the federal government.

History of education in Nigeria reflects the problems which basic and secondary education have faced and will continue to face in Nigeria. Education at these levels show the sad fate of education in the country. Even though different stakeholders in education at these levels have different opinions regarding the most effective ways to confront the serious problems that exist, all agree on the need to work towards a better educational system that will equip the learners with the necessary skills, knowledge, attitudes and habits that will enhance their contributions towards sustainable development (Aneakwe, 2009).

Aneakwe, (2009) further decried the standard of education at the primary and

secondary schools in Nigeria. Adebayo in Aneakwe, (2009) noted that the present generation of primary school leavers are not exhibiting the required code of conduct which are expected of them. Emen (2004) observed that most products of this level of education lack the skill for literacy, clear expression and logical argument, attitude of service, of locality, integrity and self-discipline. The Millennium Development Goals cannot be achieved under this circumstance. The number of pupils in the classroom is too large for teachers to manage well for effective learning. This has affected teachers' methodology and techniques in teaching. According to Okoye (2004) most of the teachers produced for this level of education lack the required psychological basis and therefore find it difficult to identify, integrate and lack the appropriate skills to communicate to pupils and vice-versa. Many of them received high share of professional and general education with little content.

Curriculum in both primary and junior secondary schools as they exist now are not sensitive to the national goals and aspirations but rather to ethnic ambitions and needs of a few. There is the need to introduce skill-oriented subjects for adequate preparation of pupils for life generally. As a result, the restructuring and re-alignment of the content of the existing curriculum to meet the target of the Millennium Development Goals have become imperative. Education generally in Nigeria suffers from the problem of inadequate funding, and the primary and junior secondary school levels are the most affected. Poor funding has resulted into poor infrastructure, poor quality of teachers and resources. The general outcome is poor quality education, an obstacle to the attainment of Millennium Development Goals.

In view of what have so far been discussed, this paper attempted to provide answers to the following questions: What is the general philosophy of the UBE programme? What are the impediments to universalize education? What are the uses and relevance of ICT in UBE?

The Philosophy of the UBE Programme

The philosophical assumption of the UBE scheme within the framework of the 9-3-4 system of education states that every Nigerian child should have access to free and compulsory basic education for nine years, covering primary and junior secondary education, irrespective of the socio-economic, political or religious status of his/her parents (Federal Ministry of Education, 1999). The main thrust of the programme as listed in Aneakwe (2009) are to; (i) ensure that all 6 (six) years old children get enrolled in primary schools and complete their education; (ii) ensure 100% transition from primary to junior secondary levels; (iii) contribute to a massive reduction of illiteracy and dropout rates by making basic education free and compulsory for children and increasing the number of schooling for them; (iv) ensure that hitherto underserved groups such as adult men and women, handicapped children, migrant workers and out-of-school youth have access to basic education; (v) impact the rudiments of employment, creating skills at junior secondary school level where technical and vocational education is emphasized; (vi) enhance initial training by contributing to

Information and Communication Technology for UBE Implementation in Nigeria: An Imperative for Achieving Sustainable Millennium Development Goals

personal development of children and youths and; (vii) ensure equalizing access for both boys and girls, thus reducing gender disparities in school enrolment.

These are indeed very lofty goals, but with hasty planning that characterizes the implementation, critics are of the opinion that free and compulsory nine-year basic education is more of a political propaganda than a formula to tackle Nigeria's education problems from its very foundation. It has been argued that those who advocated for a similar programme (UPE) in the past demonstrated their lack of faith in it by sending their children to fee-paying institutions which produce better students and administer high quality education programmes. The right of every Nigeria child to compulsory nine year free education is not in doubt. Fears and concerns of many are however on overemphasis on the qualitative functions of the UBE, the type of life for which this kind of education will bequeath the child and the general question of what happens after nine years especially for those whom junior secondary school education will become terminal. It is not uncommon for a nation to have all its citizens educated, most of whom will become economically inactive and redundant. These problems underscore the need for functional education through Information and Communication technology (ICT) in UBE.

International Declarations on Access to Education

Basic Education was launched in Nigeria as a response to several world declarations on access to education. Such declarations according to Akudo (2009) include:

- i) The Jomtien (1990) declaration and framework for Action on Basic Education for All (EFA);
- ii) the New Delhi declaration on the E-9 countries (Nine countries with the largest concentration of illiterates of which Nigeria is a member). A call for massive reduction of illiteracy;
- iii) the Ouagadoudou (1992) Pan- African declaration on the education of girls and women;
- iv) (iv) the Amman Re-affirmation (1995) which called for forceful pursuit of the Jomtien recommendations on Basic education for All;
- v) the Durban (1998) statement of commitment to the promotion of education for All;
- vi) the OAU Decade of Education in Africa (1997-2006) on Inter-African Cooperation on Education, with a strong emphasis on the vigorous pursuit of basic education and
- vii) Dakar World Education Forum (2000) which set 'an Agenda for Education in the 21st century'.

In addition, World Bank (1995) also emphasized that education contributes to the strengthening of the institution of civil society, to national capacity building and to good governance, all of which increasingly help in effective implementation of sound

economic and social policies. Access to education will enable people to participate fully in the economy and society and help achieve universal primary education, promote gender quality and empower women to achieve the eight Millennium Development Goals to be attained by 2015 (United Nations MDGs, 2006). The achievement of these laudable objectives will however remain a pipe dream where teachers are mostly obsolete in content and instructional delivery methods. This is a computer age and most teachers and even students are computer illiterates. They are neither exposed to the world of internet for information nor do they (teachers) attend retraining programmes to update themselves.

Some impediments in universalizing Basic Education in Nigeria

Five impediments to universalize basic education in Nigeria according to Aneakwe (2009) are as follows:-

- 1) A general misconception of the requirements of UBE: There seems to be a general lack of awareness of the expanded vision of education envisioned by both Jomtien and Dakar, as enunciated in the original vision of Nigeria's UBE. A 'reductionist' view that sees UBE as simply formal school, 'six years, of primary and three years of junior secondary' seems to prevail and this wrong perception has affected the implementation of the programme.
2. Structural defects in implementation mechanism: The urge to create parastatals for every manifested development challenge has caught up strongly with the UBE programme, and this has further worsened by the non-recognition of UBE as synonymous with EFA. For example: (a) UBE was originally conceived as Nigeria's articulation of EFA, as well as its domestication. However, a year into the implementation of UBE, Government created a different organ to plan EFA, a discordant dance to the same musical tune, (b) UBE was originally conceived with the requirements of Jomtien and Dakar in mind, and therefore there was to be a co-ordinate responses to the challenge of basic education. This however has not been so since there are three distinct parastatals for basic education, literacy/mass education and nomadic education respectively. This unwieldy arrangement is replicated at the state level; (c) the situation is even compounded at the state level by two phenomena, viz; (i) the primary section of UBE is controlled by the State Universal Basic Education Board (SUBEB) whereas the junior secondary segment is under the control of a Secondary Education Commission or Board; (ii) the Chairman of SUBEB is a direct appointee of the State Governor and stands on the same pedestal as the political head of the Education Ministry in the State - the Commissioner.
- 3) The true Federalism challenge: The constitutional requirement for the control of education in Nigeria at the primary level is conferred on the local governments. With the coming of the UBE largely as a federally – led 'intervention' programmes, there has been a good deal of 'do-not-dictate-to-us' response from the local governments. The challenge is further compounded at

the state level where state government's stranglehold on local government is total. This makes 'Globalization' (thinking globally but acting locally) difficult. Interpreting the constitutional requirements properly and correctly before any 'intervention' becomes operational is therefore necessary.

- 4) Over-emphasis on money and funding: It would be foolhardy to expect that a huge national enterprise like UBE would not also have huge financial implications. It is therefore expected the UBE should be properly costed, resourced and funded. Emphasis should correspondingly be on what money has done towards the achievements of UBE goals and not simply on funds voted and released. Reports emphasizing funds voted and funds released have not spelt out what have been achieved and how. It would have been better to correlate money released with specific concrete achievements of the programme.
- 5) Haphazardisation: This is the tendency to drum down initiatives in an uncoordinated manner. A good example was the home school feeding programme, drummed down by the federal government, tried out in a number of states, with the unfulfilled expectation that 'States would then take over'. The same drumming down characterized attempts to develop strategic education plans that were expected to be copied down the education line. Such drumming down efforts serves to compound true federalism challenge.

The Concept of ICT

The terminologies, Information Technology (IT) and Information Communication Technology (ICT) are often used interchangeably. This could be due to the fact that ICT as an educational tool presupposes IT capabilities in learners. Ajagun (2003) contended that Information Technology (IT) is the study of concepts, skills, processes and applications of design for representing physical, hypothetical or human relationships, created, collected, stored, retrieved, manipulated, protected and presented electronically. ICT on the hand refers to a whole range of technologies involved in information processing and electronic communications. ICT according to Ajagun (2003) includes the radio, television, videos, computers, sensors, interface boxes, e-mail, satellite connections, internet and all the software and materials which are employed in teaching and learning. In short ICT simply means all that is involved in gathering and processing of information, using modern communication technologies such as computers and other related equipment so that the service (output) generated can reach all that desire them at reasonable cost and in good time to the overall benefit of mankind Aneakwe (2008).

While ICT constitutes facilities that could be used to complement teaching and learning, IT is a subject to be taught and learnt in school. IT equips the learner with the capabilities (understanding skills, and attitudes) to maximally utilize ICT for the improvement of learning and life in the society. The principles of ICT in education also promote the development of IT in the context of using ICT as a learning tool.

The Relevance of ICT in UBE

The relevance of ICT for functional UBE programme cannot be overemphasized. As an educational tool, ICT can enhance and complement teaching and learning in every curriculum area. The main business of any educational institution is teaching and learning. The teaching function in the education process is considered paramount particularly since it has to do with the acquisition of skills and knowledge. Teaching according to Idumange (2008) involves a set of deliberate activities geared towards the development of less matured and inexperienced individuals. Teaching embraces forms or process, behaviour and activities that do not succumb to explanation by a single theory. According to the old theory as noted in Robert-Okah (2009) teaching cannot take place in the absence of the taught (students), the teacher himself, the curriculum, the content and instructional materials. This theory cannot stand in this age of ICT. This is due to the fact that the old method of teaching imposes content and is restrictive of the learners' freedom, whereas ICT enjoys independent judgment in decision making among learners. Under the ICT regime, the teacher is merely a facilitator that creates an enabling environment that brings about the desirable change in behaviour. According to Asobie (2006) ICT has engendered the implementation of the school curriculum in the following ways:

- (i) accelerates students basic skills in science and mathematics related subjects,
- (ii) encourages independent studying habits among students/pupils,
- (iii) updates students' academic knowledge and instructional practices,
- (iv) provides teachers with efficient and effective tools to take care of individual differences,
- (v) provides opportunities for cooperation among teachers/scholars through networking and internet services.
- (vi) teachers and researchers are challenged to new method of acquiring knowledge through sharing and being connected to the global world,
- (vii) provides unrestricted access for teachers to relevant information and developments in the various subject areas. In the opinion of Ofoegbu in Aneakwe (2009), when utilized for classroom instruction, ICT can facilitate the acquisition of the basic skills by concentrating on complex real work task, facilitate the acquisition of higher thinking skills and problem-solving skills, enable learners access a wide range of information resources/sources to develop appropriate concepts and relationships needed for effective life in the society, and provide learners with a medium of further learning.

Aneakwe (2008) further outlined the benefits of ICT as; providing both resources and the pedagogical framework to enable pupils become effective independent learners, placing all learners on equal footing. Giving the right software and hardware, and the right curriculum activities, even severely handicapped pupils can achieve equal degree of success as anyone else, motivating pupils marking papers/scripts with no teachers' remarks all over produces very neat work. The computer is perceived as impartial and non-judgmental in its feedback to pupils, enabling pupil easy access to data which would have been difficult or impossible at

every precise time interval, and enabling pupils to gather data that would otherwise be time consuming or even costly or both.

According to Iyama (2002), computers are used in an extremely versatile way to aid the understanding of a wide variety of subjects, most especially the science and technology subjects as well as mathematics. Computer guides one through a course of instruction at a video display unit in such a way to facilitate understanding of the subject matter. The student learning process is therefore facilitated sometimes faster than when a classroom teacher is involved. This process is referred to a Computer Assisted Learning (CAL). The computer can also provide instructions to students, ask questions, grade students' performance and determine by itself whether new topics are to be taught or to repeat the portion of the lesson just concluded. This process is often referred to as Computer Aid Instruction (CAI). Computers can equally be used in the marking of multiple-choice examination papers and in the processing of examination results for schools and many examination boards.

In several academic institutions, computerized admission process, students' records, library services, time-tabling, inventory control payroll, and general administration are common. The internet provides a very important technology infrastructure for knowledge networking. It equally harnesses knowledge on a global scale. Without effective means of assessing information such as the internet, knowledge will remain fragmented in small pieces of so many heads.

Inyama (2002) categorized the use of internet into;

- E-mail – which is an internet-based electronic substitute for the conventional post-office. With this, messages are sent and received from users in any part of the world at electronic speed.
- Newsgroups – which help users to share new information and articles, being one of the first internet resources to provide a platform for world- wide information sharing.
- Facsimile – which provides internet users with fax machine to send and receive fax via the internet.
- Electronic bulletin boards – which are like notice boards but in electronic form. Through such media, up-to-date information is obtained, events are publicized, and ideas on different topics are exchanged etc.
- Internet phones makes it possible for phone users who are connected to the internet to make calls.
- World-wide-web – which links the users to global information in multimedia pages known as web pages. It is accessed with a software known as browser.

Challenges of ICT Utility in UBE Programme

The underlisted are the challenges/constraints that confront adequate application of ICT in UBE programme

Lack of ICT Awareness

Computer illiteracy is the inability to understand the computer and use it to solve problems. ICT is the least developed areas in Nigerian primary and junior secondary schools. Only few teachers and students can operate computer. Staff and students at this level are yet to adapt and internalize the new ICT ideas in order to appreciate and make it an instrument of work. Lack of computer culture in public schools impedes rapid diffusion of the new ICT technology.

Poverty

The vicious circle of abject poverty in the country hinders an average Nigerian from owning and using a computer. This level of poverty easily creates the spirit of vandalism of IT facilities wherever they are installed. Any wonder only very few individuals/institutions are bold to invest in them.

Lack of ICT Infrastructure

There is inadequate ICT infrastructure including computer hardware and software, mainly as a result of inadequate funding of public schools. There is equally the problem of dearth of skilled manpower and trained ICT personnel to operate and maintain computers and accessories.

Inadequate Power Supply

For ICT to function effectively, there must be regular power supply, telecommunication and computer. In our cities and rural areas, power supply is erratic and epileptic; hence all ICT tools that are electrically powered cannot effectively function.

Low Internet Connectivity and Teledensity

Low teledensity and connectivity in Nigeria constitute a problem in the utilization of ICT. Access to telecommunication tools such as telephone and internet among others are still at very low ebb. Communication services are not available in many places for ICT operation.

Poor Maintenance Culture

Lack of trained and experienced technical personnel to manage, control and maintain the increasingly large numbers of ICT resources have adversely affected their utility values, effectiveness and efficiency. Most ICT technicians are not properly trained.

Government Policy

There is no effective government policy on the use of ICT in the educational system. Teachers to man some ICT resources are yet not available. And there is no properly articulated curriculum on IT in public primary schools.

Time Wastage/Negative Information

The web is so vast and fast that much time is consumed. Good and negative information can be stumbled upon while searching for useful information. Pornographic and unwholesome sights could be reached which are unhealthy for learning process.

Lack of Workable Guidelines in the Implementation of IT in Schools

A workable guideline for designing adequate course work that will integrate face-to-face class instruction to web based-instruction has not yet been harnessed. Some teachers who are used to traditional methods of teaching and as expected are opposed to application of technology to instruction. They fear that the ICT facilities might displace them from their jobs.

Conclusion

In this paper, attempts were made to identify the general philosophy of the UBE programme and some impediments encountered in universalizing education in Nigeria. The concepts of IT and ICT were differentiated and discussed and the relevance of ICT in the implementation of the UBE programme was analyzed. The importance of solid foundation in education such as the UBE cannot be overemphasized. This is because it is at this level that the foundations for secondary and tertiary education are laid. A thorough knowledge of how education is imparted at this level particularly with the use of ICT which serves as a facilitator has become imperative. And this is exactly what this paper has done.

Recommendations

1. The UBEC and ETF should work out an efficient plan for the provision of the necessary infrastructure for computer studies in the primary and junior secondary schools.
2. Public-private partnership should be encouraged in the provision of ICT infrastructure.
3. A policy environment which encourages investment in ICT should be put in place, including that of reduction in tariffs on importation of ICT infrastructure, in order to promote affordability and wide-range usage at the primary school level.
4. Government should increase funding for the entire educational sector, with particular provision for ICT development in primary schools.
5. Primary school teachers should be mandated to participate in workshops, conference and seminars/retreats on Teacher Vacation Course (TVC) in computer studies, computer appreciation even if they are required to pay for such courses.
6. Proprietors/Head teachers should sponsor their teachers to computer appreciation courses during holidays or vacation period.
7. Skills in computer application and appreciation should be a precondition for employment of primary school teachers.

8. The Federal government should urgently do something in the area of power supply.

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Information and Communication Technology for UBE Implementation in Nigeria: An Imperative for Achieving Sustainable Millennium Development Goals

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