# CURRENT STATUS AND PROBLEMS FACING THE IMPLEMENTATION OF COMPUTER EDUCATION PROGRAMME IN NIGERIA

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**Abstract**

Computer has come to stay and its education is fundamental to the level of understanding and application of computer technology. However, factors like cost, weak infrastructure, lack of skills and so on are militating against the successfulness of computer education in Nigeria. Tracing the genesis of computer education in the nation, this paper examined the trend of computer education in primary, secondary, and tertiary levels of education in Nigeria. Also suggested in this paper are some ways to successfully and efficiently implement computer education programme in Nigeria, which include giving adequate practical training to teachers, making every teacher and students have continuous access to computers, Nigeria joining the World Links of Development and government subsidizing the provision of computers.

## Introduction

Today many nations including Nigeria are moving towards the computerization of almost all the human activities. The wide uses to which computers are being put presently, the nation's response to get along with the new information age, and because the Federal Republic of Nigeria recognizes education as major instrument for affecting national development to the need of the individual, it will be out of place to argue the urgency for the need for computer education both for now and future development of the nation.

As technology remains poised to rule the world, several nations have continued to achieve technological literacy through the acquisition of computer skills. Students of both secondary and tertiary institutions are often the chief targets of these efforts. But coordinated spurts towards achieving this target is often lacking in Nigeria (Alalibo, 2006). Ebenehi (2004) said that the government and many Nigerians believe that computer education is one of the major tools of social-economic and technological development, but to Alabi (2001), the awareness of the potentials of computers and their relevance to our national development and well-being is not so encouraging. This is in line with the statement of President Obasanjo during the launching of Computer for All Nigerians Initiative in the State House in July, 2006 (The Tide Online, 2006).

Many today in the nation find computer learning uninteresting and difficult to understand because of the method employed in teaching it. The teaching of computer can only be effective if it is democratic in the sense that the learner will assume an active participatory role in the entire learning process (Al_alibo, 2006). Today, the picture of computer education reveals that primary schools are out of the picture; in the secondary schools level, computer education is generally limited to Federal Unity Secondary Schools while our tertiary institutions are busy producing graduates well loaded with theories making them practically useless in the labour market and classrooms (Alabi, 2001; Jegede & Owolabi, 2003; Nweke, 2006; Broad Street Journal, 2006).

In this paper, the current status of computer education programme in Nigeria and some of the many problems facing its implementation were looked into with the belief that they will provide a basis for fruitful discussion.

## The Concept of Computer Education

Computer education refers to as education about computer, either in a wider or specific sense (Ebenehi, 2004):

- *Wider Sense* - computer education is education about the computer that is focused on both the manufacturing technology and usage.
- *Specific Sense* — computer education means a focus of training directed at an aspect of computer, e.g. computer literacy education which deals with knowledge of how to use the computer.

According to Daniel (2004), computer education could be seen as a process that enables the individual to adjust himself to appreciate, use, and communicate with the computer, he further stated that computer education envelopes and sublimes computer appreciation, computer fluency and computer literacy. To Alabi (2001), a good computer education programme aim not only at teaching Nigerians how to use the computer effectively for national development but also at preparing them to master computer technology with a view to ensuring the maintenance, and eventually the production

of computers. Looking at the current status of and the problems facing computer education programme in Nigeria, this aim is far from reach.

**The Genesis of computer Education in Nigeria**

Computer education was introduced into the Nigerian education system in the late 1980s specifically based on the recommendation of the 32nd ministerial council meeting of the National Council on Education in 1987 (Alabi, 2001; Yusuf, 2005).

Before 1988, offerings in computer science were envisaged strictly for tertiary level of education. Only the universities, polytechnics and college of education/Technology were expected to teach courses in computer science and produce graduates in that discipline. As claimed by Alabi (2001), this resulted to:

- very few Nigerians having access to tertiary education and only a negligible percentage of this number were admitted into department of computer science. Thus, only few Nigerians were trained in computer technology; and
- societal demand for computer literate Nigerians far outstripped the level of production of this cadre of manpower.

In an attempt to solve these problems and many others, the Federal Government of Nigeria decided to formulate a Computer Policy which will not only address the need for more awareness but also ensure that sound basis of computer education and utilization is laid. In line with this, according to Alabi (2001), the Government in 1988 decided to start its pilot programme in the Federal Government Colleges and the armed forces secondary schools in line with the recommendations of the Committee on National Policy for Computer Education in Nigeria. Training programmes were also conducted for 197 teachers from the schools in the pilot.

Computer education was introduced to bring Nigerian children into contact with the computer so that they could use it, appreciate its potential, understand how it works, and learn to apply the knowledge and skills to solve emerging problems. The computer systems were introduced into the Federal Unity Schools throughout the federation in 1989. The revised national policy on education gave prominence to computer education because it was made pre-vocational and vocational elective at the junior and senior secondary school levels, respectively (Alabi, 2001; Jegede & Owolabi, 2003; Aduwa-Ogiegbaen & lyamu, 2005; Yusuf, 2005; **Yusuf, 2005).

**Current Status of Computer Education in Nigerian Schools**

Ensuring the provision of the manpower and other resources required to meet the broader objectives of computer education at the tertiary, secondary and primary levels of education, and at the societal level has been the aim of the nation through the Nigeria Policy on Computer Education right from the beginning, but Aduwa-Ogiegbaen and lyamu (2005), concluded that, computer is not part of classroom technology in over 90% of public schools in Nigeria. The introduction of computer education into schools has consisted mainly of buying a few computers and some software. These are added to existing educational technology facilities in schools with little in the traditional operation of the school being affected by the presence of computers. It can thus be deduced that the full potential of computers is yet to be exploited within the Nigerian school system (Yusuf, 2005). Discussed below are contemporary issues as it affects these three (3) levels of education in Nigeria.

**Primary Schools**

In line with Nigeria's education system, it is expected that a child be in the primary school at an average age of six (6) years. Which implies that from 1 - 5 years are considered pre-school and kindergarten age. The authors' have only come across a negligible number of public and private primary schools where computer education is taught with one or very few computers and in such schools these computers are gotten through donations by individuals or group of people.

The question is what can a teacher achieve with one or two computers surrounded with more than thirty pupils who eventually have no hands-on practice with the computers? The reasons may not be far-fetched because the scarcity or none availability of research literature on computer education in primary schools in Nigeria is an indication that they are more or less out of the 'picture'. Besides, in carrying out their assignment, the National Committee on Computer Education that was constituted by the government in 1988 (Jegede & Owolabi, 2003) was more or less too emphatic on the recommendation that the most appropriate level within the education system where computer education should be introduced is the secondary school level (Alabi, 2001; Daniel, 2004). Contrary to this view, it should be noted that children three (3) and four (4) years of age are developmentally ready to explore computers, and most early childhood educators see the computer center a valuable activity center for children's learning. A good example is

found in the Canterbury International School in Lekki Peninsula, Lagos state: this nursery and primary school is the first sign-on for the Computer Pioneers Programme in Nigeria and West Africa.

The Computer Pioneers Programme is run from the pre-primary class of pupils aged 4 right through to the Primary 6 class of 10 and 11 year olds. In fact, one of the IT teachers said "The children never want to leave class at the end of their forty minute lessons. They just love it!" (http://www.nccedu.com/Qualifications/schools/cpcasestudies.asp). What a wonderful thing it will be if such is the comment by the teachers about the pupils in at least 80% of all our public and private primary schools in the nation. However, the summary is that the necessary facilities and resources (human and material) do not currently exist to handle computer education in the primary school level in Nigeria.

## Secondary Schools

Students in various secondary schools in the country have very little access to computers for regular academic activities; few that were provided were given to federal unity schools, which constitute less than four per cent (4%) of the nation's secondary schools. Even in these federal unity schools, the student-computer ratio is small (Alalibo, 2006).

According to Jegede and Owolabi (2003), computer education is still limited to Federal Unity Secondary Schools. It is scarcely offered in any of the state secondary schools, which constitutes more than 80% of Nigerian schools. Though some private schools have introduced computer instruction into their school system, the number of schools that offered computer education is negligible compared to the general schools' population. His research further reveals that the teaching of computer education in the federal government schools is limited to JSS levels only of which almost 80% of them agreed that they could not operate computers. However, very few private schools offered it at the SSS level. Based on his findings it is clear that the computer literate citizenry envisaged over a decade ago is still a mirage.

In one of his researches Yusuf (2005), investigated teachers' (male and female) perceived self-efficacy in the implementation of computer education in Nigeria secondary schools which covered 16 Federal Unity School in the nation. Based on the results of the study, the following findings were discovered:
- most teachers (about 63% males and 69% females) in Federal Government Colleges in Nigeria do not have the needed experience and competence in the use of computers either for educational or industrial purposes;
- a majority of male (about 68%) and female (about 73%) teachers in Federal Government Colleges do not have needed competence in basic computer operations; and
- most of the teachers (about 65.34% males and 64.86% females) in Federal Government Colleges do not have needed skills and knowledge in the use of common computer software while less than 40% were those with full and some proficiencies in common computer software.

If these results represent the experience and competence of an average Nigerian Federal Government College teacher then our public secondary schools that are not directly under the Federal Government are nothing to write home about; thus it can be concluded that computer education is seriously sick in Nigeria because secondary school is pivotal to our educational system, hence it may not be implemented successfully within the Nigeria school system except all the factors militating against it are carefully, tactically and timely taken care of.

## Tertiary Schools

Though, many Nigeria universities are already having computer studies as part of their academic programmes, most of them are still theoretical in nature to impact meaningfully on the society, thus, giving most Nigerian graduates overdose of theoretical knowledge, which does not match well with the demands of workplace practice. In a report of the World Bank sponsored research study on the state of the Nigerian graduate, it was discovered that Nigerian University graduates of the past decade are poorly trained and unproductive on the job (Alabi, 2001; Aduwa-Ogiegbaen & lyamu, 2005), and it sad to note that this ugly situation is yet to change.

In fact, in a recent interview for a job in an Information and Communication Technology (ICT) firm in Lagos with six (6) computer science graduates from the six geo-political zones of the country, it was discovered that they have no practical knowledge of what they have spent at least four years studying and none of their universities' curricula has any of the applications being used by the firm. Besides, it was later discovered from these graduates that most of them had no working computers at their institutions for practical; where they are available it is guarded like an egg. This and many other pathetic states of our tertiary institutions are well documented (Idowu, Alu, Popoola, 2004; Broad Street Journal, 2006; Nweke, 2006).

**Problems of Implementing Computer Education in Nigeria**

There are several impediments to the successful implementation of computer education in Nigeria. Some of them are briefly discussed below.

- Mismanagement of our huge resources. Many of our political leaders lack the ability to prioritize Nigeria's developmental needs. They invest for selfish reasons and focus on things that are of less priority neglecting technological development, which can be brought about quickly through computer education programme.
- Lack of infrastructural facilities. Many of the schools lack adequate infrastructure such as classrooms, laboratories, electricity, air conditioners, and so on
- Shortage of qualified personnel. In our schools there is lack of the human skills and knowledge to fully implement computer education. According to Aduwa-Ogiegbaen & lyamu (2005), there is acute shortage of trained personnel in application software, operating systems, network administration and local technicians to service and repair computer facilities. Those who are designated to use computers in Nigeria do not receive adequate training; at worst do not receive any training at all.
- Cost. The cost of computer hardware and software is expensive. Apart from the basic computers themselves, other costs associated with peripherals such as printers, monitors, paper, modem, extra disk drives are beyond the reach of most secondary schools in Nigeria not to talk of the exorbitant Internet connection fees.
- Training and instructional emphasis on theory rather that practical. This is a common factor in our educational system most especially in tertiary institutions and is not helping issues. Computer education cannot yield positive fruits without intensive and continuous practical.
- Death of research on computer education. Researches on computer education in Nigeria is scanty, hence there is not much literature (information) available for consultations to aid further researches that could help proffer suggestions and recommendations to promote computer education.
- Attitude of teachers and pupils to computer education. Because many teachers are not computer literate hence cannot operate the computer they feel reluctant embracing computer education and often try to shy away from students' question. In line with this, many students resolve playing non-educational games for hours on the computer when they have the opportunity.
- Students' limited access to available computer systems. Because of lack of computer systems in many schools, many students often end up entering the computer lab (where it is available) a few times before the end of semester or term. While in other cases students are not allowed to use the computer with the belief that they will spoil it.

**Future Challenges Facing Computer Education in Nigeria**

The challenge posed by technology has created an increased access to the computer, originating a literate and well-trained skilled workforce suited for the demands of a competitive world, which has become a top priority for many countries. Thus, it has become clearer that computer education is a driving force in the present century (Alalibo, 2006). Through computer education programme Nigerian students can be equipped with the needed technological skills to face the present and future world of information technology. If necessary steps are not taken to train teachers who can integrate the computer into everyday teaching in Nigerian schools, the computer may be another important educational innovation making little or no impact on the Nigerian educational system (Yusuf, 2005).

Nigeria's President Olusegun Obasanjo has directed earlier this year that at least 500,000 computers be made available to Nigerians this year, which shall be doubled next year under the federal government's "Computer for All Nigerians Initiative (CAN!)". This is to democratise access of citizens to information communication technology (The Tide Online, 2006). It is therefore, expected that everyone should cooperate with the government to see to the reality of this gesture and the suppliers of these computers should not capitalize on this opportunity to exploit the citizens.

The Etsu Nupe, Alhaji Yahaya Abubakar, of recent this year, donated a computer set to the Government Girls Day Secondary School, Bida, Niger State at the 2006 Price Giving and Speech Day ceremony of the school (The Tide Online, 2006). A gesture designed to make students in the area computer literate. This is a challenge to the school authorities, wealthy indigenes and other parts of the nation.

In Nigeria, with an illiteracy level of about 60 per cent, promoting mass computer literacy becomes a herculean task without basic education. This therefore, calls for government to intensify efforts to promote adult literacy and all

Nigerians to fully support the UBE programme.

If a country such as Uganda, which has less than a-fifth of Nigeria's resources, is now using information and communication technology to help secondary schools students to become better information users, why is Nigeria lagging behind? (Aduwa-Ogiegbaen & Iyamu, 2005). Yet we claim to be the giant of Africa- Nigerian leaders should therefore, wake up and stop accumulating wealth for selfish reasons to help see to the practical reality of computer education programme in Nigeria for the sake of our future.

**Ways to Successfully and Efficiently Implement Computer Education in Nigeria**

Patience and constant practice are necessary for teachers and learners. This implies that a learner of computer requires more time to master the basic computer skills. Thus, enough computers should be made available to all schools as well as continuous access to them.

Government should involve the private sector to fund the provision of computers in all institutions. Old students and alumni associations can engage in fund-raising activities to generate money to support the provision of computers in their institutions.

In order for teachers to implement computer education programme, they will need to become proficient in basic computer operations, basic applications of software like word processing, databases, and so forth, and the integration of computers in teaching.

Attention must be focused on the need to give practicing teachers in-service training through seminars, workshops, sandwich degree, and certificate programmes. Student teachers should be introduced to at least compulsory courses in the area of computer awareness, word-processing, microelectronics, programming, and so on. Only teachers who have the expertise and the right frame of mind can provide needed leadership and guidance for students.

Computer equipment was made to function with other infrastructure such as electricity under "controlled conditions". For many years Nigeria has been having difficulty in providing stable and reliable electricity supply to every nook and cranny of the country without success. This should be looked into by the government.

Nigeria should join the World Links of Development (World), a program initiated by the World Bank in 1997. The program has been establishing computer laboratories and bringing Internet connectivity to secondary schools in developing countries around the world. It is also training teachers in these countries to acquire skills necessary to integrate information and communication technology into their classroom practices (Aduwa-Ogiegbaen and Iyamu, 2005).

The federal government has done well by promising to make computers available to many Nigerians, but more can be done to highly subsidize their provisions for the sake of poor students and other citizens in the nation.

**Conclusion**

For anyone leaving school, computer education is not negotiable. A sound and well-implemented computer education programme in Nigeria will go a long way to help narrow the gap between her and other developed nations of the world. Though the task of providing computers to each school is not an easy one given the dearth of infrastructural facilities in the nation, yet it is the key to delivering better education, and speeding up the development process of the Nigerian child and the nation in general in this age of technology.

Teachers and lecturers should be more diligent, sincere, take delight in their jobs, make extra effort to be vast in computer education and develop good skills of teaching (theoretically and practically) to make computer education easy for students, and should not be involved in examination malpractice in any way.

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