

COMPUTER TECHNOLOGY: A NECESSARY TOOL FOR TEACHER EDUCATION IN NIGERIA

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Abstract

This paper sees computer technology as a possible mission and a necessary tool that would promote the efficiency of the future of teacher education in Nigeria. Teacher education appears to be ideally positioned in its very important role to make meaningful contributions towards the development of the Nigerian child's right from the primary school education to that of the tertiary education level. Therefore, regardless of teaching specialty, every teacher must be aware of the present-day computer technology that has brought some innovative changes in the teaching and learning situation. The paper observes that with the global activities which computer technology has brought to humanity, only a handful of teachers in Nigeria are computer literate. In this vein, it is recommended, among others, that computer literacy programmes be made compulsory for teachers so as to enable them be abreast with the rest of the world, and be able to prepare the youths for useful and purposeful living.

Introduction

Oyedele (2002:1 81) explains that technology is one of the most misunderstood words in our language, especially when it is applied by educators to education. Galbraith (1997) defines it as The systematic application of scientific or other organized knowledge to practical tasks. Its most important consequence, at least for purposes of economics, is in forcing the division and sub-division of any such task into its component parts. Thus, and only thus, can organized knowledge be brought to bear on performance (p. 28).

Oyedele (2002) stresses that educational technology can be applied at all levels of educational practice as an approval to solving practical problems. As it concerns the teacher, the new computer technology represents a multitude of changes because his/her role will have to be re-defined in order to utilize the changing technology. This is the reason why the entire planet Earth has been regarded as "a global village", hence the teacher is also included.

Hornby (2001:1333) explains that vision is "the ability to think about or plan the future with great imagination and intelligence", while a mission statement like the one issued by the National Commission for Colleges of Education (NCCE) which mandated teachers in Colleges of Education throughout Nigeria to be computer literate becomes a must-do affair. This has become the mission for the educational sub-sector to implement.

In this vein, Oyedele (2002) further stresses that one of the goals of computer technology is to create learning environments, which are flexible, dynamic, and capable of responding to a wide range of individual needs and learning styles through the use of media, personnel, and actual experience, hence: many youths and adults can be educated for a cluster of jobs.

Computer Technology: A Necessary Tool for Teacher Education in Nigeria

Barrington, Liddy, Frtiehling and Weaver (2004:30) have expressed that the computer has become "an extraordinarily efficient machine for processing, storing, and distributing information in a business office or in any other related activity in an educational institution." Hence, the uses of the computer system cut across all disciplines throughout the world.

In this vein, Eyitayo, Eyitayo and Akeju (2002) stresses that there are computer professionals and computer users. Computer professionals have undergone professional computer training while computer users are those in other professions who make use of the computer. Training in computer studies includes certificate, diploma and degree programmes, and such categories of people are always involved "in the development, maintenance and use of the computer system, e.g.

programmers, computer educators, computer engineers, computer managers, system analysts and computer operators.

On the other hand, computer users are those in other professions who make use of the computer system to carry out their day-to-day jobs and they are also called "end-users". These are the people who have to undergo a computer literacy or application training in order to make their jobs to be at abreast with modern

technology. Examples are: teachers at all levels, managers, engineers, medical doctors, office secretaries, typists, bankers, lawyers, and students, etc.

In this vein, Spencer and Pruss (2004) opine that computer technology has greatly enhanced business writings and calculations. Much of the drudgery of writing has been replaced by computerization, but this does not mean that such technology has replaced the human flair and intuition. Rather, it only removed the unnecessary obstacles that cause long delays and temporary work stoppages experienced when major or minor errors occur in work processes so as to enable a worker to concentrate fully on the job. As computing is playing a major role in everyday life and in the technological future of Nigeria, the subject matter should be played with especially in teacher education programmes. Nowadays, the ability to use computers is very necessary to a person's formal education such as reading, writing and arithmetic including job creation and orientation.

In this vein, many organizations including some educational institutions are seeing computer literacy and applications as very necessary tools for job enlargement and enrichment. Society demands and rewards individuals who know how to use information systems. Today, Oyedele (2002) asserts, despite the importance of computers, the majority of Nigerians, especially teachers, are woefully ill-prepared to live and work in a computerized society. This is the reason many educational institutions in Nigeria are making progress in developing computer-literate citizens. On the other hand, the task of educating students today is becoming difficult because of crowded classrooms, tighter budgets, etc.

As regards this, there are some definite-purpose applications software packages that can assist the teachers, e.g. Word Processing, Micro-Soft Excel, Corel Draw, Computer-Assisted Instruction' (CAI), etc.

Word Processing Packages

Examples of word processing packages are: Microsoft Word, WordStar, and Word Perfect.. The packages provide a number of options for the teacher or other users which will make them to navigate the desktop to produce the documents wanted. They also allow the user to type, create, edit, amend, copy or print, etc, the desired documents.

Electronic Spreadsheet Packages

A spreadsheet is a method of manipulating some data by separating them into columns and rows. Eytayo, Eytayo and Akeju (2002) explain that a user of the package "can change the format to adapt a spreadsheet to various applications." It can be used to "display selected data graphically as well as to perform computations as it relies on formulas that can be revised with great accuracy."¹ An example is the Microsoft Excel.

Graphics Packages

These are computer facilities which "allow the user to do various kinds of graphics like: producing drawings or diagrams. In most cases, the mouse is used frequently as an input device. E.g.: a business graphics package would provide business charts and graphs.

Communication Software

These are computer programs that are used to send memos, reports and messages, to transfer computer data files, to access information stored at distant locations, and even have electronic meetings among people. Examples are: E-mail programs, the Internet Browsers, etc.

Computer-Assisted Instruction (CAI)

The Microsoft packages help to manipulate the computer for different uses. Computer-Assisted Instructions (CAI) on the other hand, refers to the use of computers in teaching. It does not involve teaching about computers, but rather, by using computers as an aid in the classroom instruction of a particular subject matter. It is an individual-based instruction that uses a program presented by a computer as the learning medium, but this is both a capital-intensive and system-intensive venture.

Computer literacy and applications begin with an appreciation of the immense capabilities of the computer and also an awareness of its limitations and its dependence upon human guidance. This is why the computer is very useful to the students as they learn how to use the computer intelligently as a tool. This is the reason many computer trainers regard computer literacy as the key that will unlock the potentials both of the computer, and of the computer user.

From the above information, therefore, computer technology is a necessary tool for teacher education which is well capped as an aspect of national development to teach the youths, adults and women the proper

orientation for achieving various quality careers in education for useful living and self-reliance in a deregulated economy. Teacher education, in this respect, will redirect behaviours, thoughts, feelings, actions, attitudes and skills of all the citizens towards achieving national goals. This will be in line with the views of Ezebe (1992:45) and Ngada (2001:148) that nation building calls for value orientation of the society, and this is what is needed in contemporary Nigeria. In this vein, effective nation building cannot be achieved without a sustainable teacher education which is widely known to discharge the desirable attitudes, skills, knowledge and values to the youths right from their early stage of development to their maturity at the tertiary education level.

Development of Teacher Education in

Prior to the advent of the Europeans and Missionary activities in Nigeria as well as other parts of Africa, nobody was called a teacher in the traditional system of training the youths. It was the introduction of a formal system of education that gave birth to the professional teacher, and this was in 1843 in Nigeria.

By 1952, according to Oghuvbu (2001:154) while making reference to Ejiogu (1988), the Christian Mission was having 4,324 primary schools, 29 secondary schools and 49 teacher training colleges. At that time, the numbers of teacher education were more than that of secondary school education, and one can see that the government of that period saw teacher education as panacea for nation building. Akhilomen (1992:49) says "quality education is not possible without quality teachers". Hence, education is the most important instrument of social change, and all efforts should be garnered by the government, non-governmental institutions and individuals alike, etc., to see to it that teacher education is given the widest priority because the teacher is an expensive resource person needed to train the youth.

During the early years of independence, Nigeria's interest then, according to Ehigie (1992:211), was the opening of more schools and employment of more teachers. Initially, non-professional teachers (e.g. HSC, BA or B.Sc degree holders) were employed into the teaching profession. According to the author, it was the Ashby Commission's recommendation in 1960 that gave Nigerian universities the authority to commence the awards of degrees in Education, and this gave birth to the establishment of faculties of Education in the university system to meet the yearnings and aspirations of those individuals who were interested in the teaching profession. This is why we have three categories of teacher training institutions in our education system, which train teachers as follows:

- (a) Teacher training colleges which train teachers for nursery and primary schools;
- (b) Colleges of Education which train teachers for primary and secondary schools; and
- (c) Institutes of Education/Faculties of Education in the Nigerian universities which award Bachelors and Postgraduate degrees and certificates in Education to deserving individuals.

Problems in Teacher Education

The success of any educational system is strictly tied to the quality of its teachers. This is why there are a lot of problems which bedevil the Nigerian teacher educational system from the primary school level to that of the tertiary institution's level as follows:

Wide-Scale Corruption and Indiscipline in Nigeria's National Life

Corruption and indiscipline have become the *modus operandi* of Nigeria's banking, religious, public, private, industrial, political, management, business sectors and all facets of her economy. This is the reason why Egbochuku (2003:16) asserts that corruption has been "institutionalized and has been regarded as a legitimate income supplement" in the country and has "permeated the entire fabrics of the society." In this vein, every leader sees himself/herself "at the centre of everything" so much that he/she perpetrates and manouvres all kinds of fraud to the detriment of the larger population. The order of the day is that there are a few people are getting richer while the larger masses are getting poorer.

As a result of the large-scale corruption, little is left to fund the various teacher education programmes in the country. Schools, colleges, polytechnics, and universities scarcely cope with good infrastructures, equipment, laboratories/workshops, classroom/office spaces, etc., which ought to aid the teaching and learning environment. Even some State governments in the country are handing over their primary and secondary schools back to the missions. This is at variance with the advice of Bailey (1986:123) that education should not be placed in the hands of the missions because of their narrow and caging doctrines, which do not liberate the high thinking levels of children and youths, and thereby, would suppress their positive creativity to a meager living.

On indiscipline, Akpochiafo (2002:41) stresses that many Nigerians want wealth without work, and so, they indulge in ritual murders, advance fee fraud (419), prostitution, and armed robbery, etc. Also, they

practice commerce without morality, and this is why we have many cases of expired and fake drugs, derive pleasure without conscience, and this is why children can be raped and important citizens are assassinated anyhow for monetary or material gains.

Ill-Motivated Personnel

The teaching and allied staff of teacher education programmes are always handled with lukewarm attitudes. This is the reason the attitudinal dispositions of our leaders and the society are gravely connected with poor treatment of teachers through long delays in payment of salaries and in implementing newly approved salary structures whenever there is one. In some cases, industrial actions have to be embarked upon before implementation takes place, and this eventually, would further compound the quality problem.

The Stepping-Stone Syndrome

Abdulsalami (2002:170) opines that the stepping-stone syndrome is contributing to low-level commitment by non-professional teachers in the teaching field. Such people see teaching as a stepping-stone to entering greener pastures. They are not committed to the art of teaching when they are in the field.

Poor Funding/Lack of Instructional Materials/Equipment

Poor funding of teacher education by the Federal, State and Local governments including other stakeholders has led to shortage of facilities, instructional materials, or equipment in the primary, secondary and tertiary institutions. As education needs constant teaching and learning facilities and instructional materials in order to keep abreast with global competition, regular funding to procure teaching and learning materials/equipment should be maintained. This is not the case in Nigeria as leaders prefer to fund the purchase of presidential jets, build gigantic stadia, and enhance international travels, etc., which would benefit only a few people, to funding education which ought to benefit the majority of people in the country.

Over-Stretched Facilities Due to Population Upsurge

Nowadays, population upsurge experienced in the enrolment of students in various schools in Nigerian educational systems have been recorded. This has certainly affected the existing facilities as many students now use limited resources of classroom space, furniture, laboratories/workshops, machines, tools or equipment. Students are now divided into many groups thereby, over-stretching the materials. The result is that many hands now use few equipment or learning tools, and this has resulted in the regular maintenance and replacement of such facilities at regular intervals. In most cases, funds are not readily available to keep pace with the regular maintenance of machines.

Shortage of Computer Systems

In the Nigerian teacher education programmes today, there is a widespread acute shortage of computer systems which aid teaching and learning including their usage to update knowledge and skills in the office. With computer technology that has come to influence competencies at work, there is the need for the various teaching staff to become computer literate. This is why Beekman and Rathswohl (1999:25) explain that computer applications are software tools that allow a computer-system to be used for specific purposes.

As a result of low funding, the supply of computer systems and other gadgets to various programmes of teacher education in Nigeria has been very poor. This has resulted in lack of computer application devices to aid academic researches, computerization of students' records/results, amongst others.

Recommendations

The various constraints militating against the quality of teachers in Nigeria may be corrected through approving the following recommendations:

- (a) Viable funding of all teacher-training institutions, including that of the universities should be embarked upon so as to sustain standards. It would influence the provision of infrastructural facilities and equipment.
- (b) There is a dire need for teachers to be computer literate as a way of keeping abreast of the world's technological break-through in the use of the computer systems. The National Commission for Colleges of Education (NCCE) has taken the lead by making it compulsory for the teachers to be computer literate, otherwise, they would forfeit some privileges, e.g. promotion.
- (c) All forms of corruption and indiscipline should be boldly solved by everybody and through good examples of accountability dispositions of leaders of the various tiers of government

Everybody should know that no other nation can do it for the Nigerians; for they (Nigerians) have to do it by themselves. Therefore, there is need to embark upon moral reawakening campaigns through various information media and that no development can take place where corruption and indiscipline are thriving. They are cankerworms that should be eradicated from our national life.

- (d) Non-professional teachers should not be allowed as teachers in our schools and colleges. In this vein, such teachers should be trained immediately without further delay.
- (e) The Federal, State and Local Governments including other stakeholders, should-always embark on a regular review of teachers salaries and wages so as to stop brain drain from the teaching profession.
- (f) In-service training should always be approved for teachers in order to retrain them to know more about modern changes that have taken place especially with the use of the computer system.
- (g) Regular procurement of equipment, machinery or tools for the various laboratories or workshops which aid teaching and learning should be embarked upon.
- (h) Renovating old school structures should be massively carried out in the primary, secondary, and tertiary institutions. It will take care of leaking roofs, dilapidating buildings, broken floors and rotten tables and chairs.

Conclusion

It can be concluded that the computer technology is a necessary tool for improving teacher education. It is the only instrument that can influence the youths and adults in Nigeria to become gainfully employed and intelligently apply it to solve basic problems for the benefit of the greater population of the country. True development cannot take place when teacher education programmes are strangulated with funds and when teachers' conditions of service are given epileptic attention and implementation.

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