

ROADBLOCKS TO EFFECTIVE APPLICATION OF INFORMATION TECHNOLOGY (IT) IN CURRICULUM IMPLEMENTATION IN NIGERIAN COLLEGES OF EDUCATION

J. Oguegbune-Okwuenu, (Ph. D)

Abstract

The world today is ruled by technology. Information Technology (IT) is one of the greatest wonders of the modern times. It has interconnected the nations into a global village. Its impact is felt in every aspect of life. It has greatly facilitated the storage and retrieval of valued information. It is very relevant to education, the world over. It has made remarkable impact on curriculum implementation in many countries. It has however, not made much impact on curriculum implementation in Nigerian higher institutions, especially the colleges of education in the country. This paper therefore, examines some of the reasons for ineffective application of Information Technology in Nigerian colleges of education and suggests some ways out.

Introduction

Technology has made very positive impacts on man's life. It has improved his food production and processing, increased his ability to control his environment, made him healthier and partly solved his problem of childlessness. What may have made the greatest impact on him in recent times is information technology (IT).

Information technology, often called information and communication technology (ICT) has revolutionized the world, by facilitating almost all operations of man. Information technology has revolutionized education. It has made it richer, easier and more accessible to people. There is now electronic learning (e-learning), computer assisted instruction (CAI) and others, all of which have contributed to societal development and the happiness of man. Information technology has however, made little impact on the implementation of Nigerian colleges of education curriculum. This is due to some obstacles which are yet to be identified and cleared. This paper, therefore, examines the obstacles to effective implementation of the curriculum of the colleges of education in Nigeria.

In examining the roadblocks to the effective implementation of the Nigerian colleges of education curriculum, it will discuss the concepts and nature of information technology and curriculum implementation; importance of effective application of IT to curriculum implementation, and there will be suggestions, and conclusion.

The Concepts and Nature of Information Technology and Curriculum Implementation

Information technology (IT) is fast becoming a street term, as an ordinary street hawker, taxi driver, newspaper vendor and others talk about it. It is not however, certain whether all the people who commonly use it know the full meaning of it. This is also the case with curriculum implementation. This is why an attempt at their definitions is necessary.

Information technology to many, has to do with technology that has to do with dissemination of information. Information technology however does much more than that. According to the *1999 edition of the Hutchinson Encyclopedia*, it is a collective term for the different technologies involved in processing and transmitting information, such as computing, telecommunications and microelectronics. It explains that word processing, databases and spreadsheets are some of the computing software packages that have revolutionized work in the office environment. The most significant things about this definition is the function of processing and transmitting information credited to IT here. Thus, while describing the computer as an electronic device which has the capacity to accept data as input, apply series of arithmetic and logical operations to the data and produce the results of these operations as an output information at a very fast speed, Asimonye (2006), defines ICT as the use of computer system and telecommunication equipment in information process, consisting of three basic components of computer, telecommunication and Internet. At the centre of IT is the computer which uses its various components to organize, process, store and retrieve data at any given time. This is why Okwuenu (2006), maintains that IT involves electronic transmission of information using telecommunication equipment and dissemination of information in multi-media. IT has to do with transmission of information using electronic facility, but it does not just end in electronic transmission of information. Woherem (2000), therefore, defines

it as the technology of gathering, analyzing, manipulating, storing and communicating data. According to him, data include voice text, numbers, fax, graphics, pictures, video and multimedia. IT appears to be the child of the wholesome relationship between the computer and telecommunications systems. This is why Fawcett (1995), simply sees it as, being concerned with the automatic processing of information using such electronic technology as computers and telecommunications. This is too simple a definition of IT. Thus even when Woherem, does not mention the computer and telecommunications in his definition, it is a more comprehensive one and so it is adopted here.

Curriculum implementation is a common term among teachers. While Mkpa (1987) calls it the actual execution of curriculum content, or the classroom efforts of the staff and standards of a school in putting into operation the curriculum document, Maduwesi, Ezeani and Maduwesi (1999) refer to it as, putting the agreed curriculum plan into action. These definitions are saying the same thing of curriculum implementation being actions on the plan designed to achieve some objectives. Curriculum implementation means the actual execution of a curriculum plan in which the teacher and the students play a major role. Without implementation which involves the teaching and learning processes, the curriculum plan will remain a paper work and no matter how good the plan might be, it will not make any impact.

Importance of Information Technology to Curriculum Implementation

Information technology has enormous influence on curriculum implementation in recent times. As earlier stated, IT has revolutionized education in various ways.

The importance of IT to curriculum implementation could be seen in various ways. Braide (2003); in Olumba and Iheagwam (2006), maintains that IT has been of great importance to education through such things as:

- 1) Video conferencing and other collaborative working tools through which teachers at distant locations can easily be accessed.
- 2) Multimedia teaching package which can be used in both formal and informal education.
- 3) On-line courses in which the Internet can be used without any constraint to reach the students in their various locations.

Since the IT revolution, access to education has been made very easy and curriculum implementation has benefited a lot. Curriculum implementation now has its basic tools in IT which has facilitated both teaching, learning and evaluation.

Everything about computer based Instruction (CBI) or Computer Assisted Instruction (CAI) is a process of curriculum implementation. Thus, IT has made individualized instruction easy as it does it in line with the principles guiding it, such as giving the information in small bits or frames, ensuring immediate reaction from the learner and ensuring immediate feedback, self-pacing and so on. Moreover with IT, the problem of class size is being solved as any member of the class freely has access to the necessary information through the screen. The teacher and his students benefit from the availability of IT in the classroom and outside the classroom. Educational technology which is a tool for effective curriculum implementation is benefiting so much from IT. It relies so much on IT for its impact to be felt by the student and the teacher.

E-Learning is gaining much ground in the world today. It is one of those things curriculum implementation has gained from the Internet, one of the tools of IT. E-learning is a very improved form of correspondence education because of IT. According to Agaja (2005), e-learning which is electronic learning is learning through the personal computer (PC) with Internet access. He also calls it a structured, interactive approach to learning and informing the workplace. With e-learning, those who cannot go to school can stay in their homes and learn at different stages, using IT facilities. The curriculum is already planned and fed into the computer as a programme for the learner to access through the internet and on his own, follow the directions stipulated. He gets back to his teacher through the same media for clarifications or feedback without delay. Agaja (2005), enumerates essential technologies in e-learning as personal computers, the Internet, the World Wide Web and other developments in multimedia. The process according to him, involves tele software, videotext, video conferencing and so on. IT now provides the "No-Wall" classroom or what Colyer (1997), refers to as the Internet virtual classroom, in which the Internet provides the opportunity to connect both learners, resources and teachers in a very interesting way peculiar to the IT age. The education

of the people is becoming more effective, easier and less expensive with the IT. Teacher education will be very effective if IT is actively employed in every aspect of it.

Problems of Effective Application of Information Technology in Curriculum Implementation

In spite of the obvious benefits of information technology to curriculum implementation in modern times, there are still problems affecting its effective application especially, in Nigeria. Teacher education, especially, in the colleges of education is yet to benefit from IT facilities in education.

There are a lot of obstacles to effective application of IT in the colleges of education. As Agaja (2005) and Agbatogun (2006) observe, IT application in education requires constant electricity, internet access and internet hosts, availability of computers and the necessary hardware at affordable price and so on. In addition, Agaja, insists, that there must be some measure of literacy and there must be political stability. Many of these facilities are lacking in the colleges. Power supply is erratic, level of computer literacy among the teachers is very low, the number of teachers who own personal computers is very negligible and not many of them have access to the Internet.

There are other reasons why IT facilities cannot be effectively applied now in curriculum implementation in the colleges of education in the country. One of them is the location of some of the colleges which places them at a disadvantage. Their locations are such that it will cost so much to make IT facilities available to them. As the Nigeria Higher Examination Reforms in Agaja (2005) observes, only 2% of Nigerian higher institutions have Internet connections. This results from both lack of funds and the disadvantaged locations of some of the institutions. All Nigerian higher institutions, especially, the colleges of education are poorly funded. As a result of this, some regard these IT tools as mere luxury and allow their staff and students to forfeit the benefits of IT in curriculum implementation. In addition to this, many people, including college staff and students still have negative attitude towards IT facilities. Both Olumba and Iheagwam (2006), and Agbatogun (2006) acknowledge this unfortunate phenomenon. Many Nigerians still think of the cost of IT facilities and the processes in acquiring the skills as being too much and unwarranted. They feel like operating without them and so, even as teachers, they de-emphasize it in their interaction with the students.

Many libraries are yet to install the IT facilities to enable more people have access to IT. Many librarians are yet to master the techniques in handling its tools, although Awala -Ale (2005), supposes that all the librarians are experts in the use of IT. Many of them still believe in the traditional concept of a library even when the IT facilities are available. There is also the problem of security. Most Nigerian colleges of education have very porous security arrangement and so, even when facilities are available, their security cannot be assured.

The basic infrastructures such as buildings are not available for the IT tools in many colleges. Nwosu (1998), complains that even when computers are procured, there is dearth of such things as computer storage block, computer studio, computer lecture halls/blocks, computer maintenance workshop and so on. This is a very common problem in the colleges.

Suggestions

The Nigerian colleges of education may have been producing teachers without the application of information technology. Such teachers cannot however, meet up with the challenges of the 21st century classroom. Thus, certain measures must be taken to make the colleges benefit from IT facilities. Such measures include adequate funding of the colleges, installation of sound generating sets, development of high literacy level among the staff and students and so on.

- i) IT facilities need a lot of fund to function adequately. The government must show enough interest in IT in the colleges and have the political will to facilitate IT application in the colleges, by making enough fund available for installation and maintenance of IT facilities. The colleges on their part can also impose IT levies on their students to ensure that IT facilities are available in their institutions. The government will also subsidise the cost of the IT installation and application to ensure that they are available everywhere.
- ii) The power supply problem can be solved through installation of functional power generating sets that will be serving the colleges well. In addition, avenue of using solar energy in power supply should also be sought to avoid the huge sum of money that might be involved in the use of the generating sets, with time.

- iii) There is need as well to emphasize a certain level of mastery of IT operations among college teachers on one hand and students on the other hand, for teachers to retain their jobs and for students to graduate. It may be necessary for students to do at least two IT-based courses in their various departments, in addition to the one done as general studies education. Each teacher should as well be assisted to acquire a personal computer with Internet access to facilitate the acquisition of the basic skills in IT operations. In addition, college teachers should have free access to the necessary basic training in IT operations.

Conclusion

Information technology is the most interesting development in the 21st century. Whoever misses its enormous benefits, cannot survive the century.

For many colleges of education not to have applied IT in their curriculum implementation is catastrophic and there will be no defence for that, in this century of progress in IT. Thus, if the colleges must continue to produce relevant teachers, everything possible must be done to facilitate their curriculum implementation through the application of IT facilities.

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