INTEGRATION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN THE OPEN DISTANCE LEARNING IN THE 21ST CENTURY NIGERIA

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Abstract
Open and distance education (ODE) is the teaching and learning process in which students are separated from the teachers by a physical distance which is often bridged by communication technologies. It incorporates a variety of media and technologies to ensure that quality education is given to a larger number of learners irrespective of their age, sex, tribe and location. The integration of information and communication technology (ICT) in ODE is all about transforming the methods, means and technique by which education is provided and accessed by learners. The integration of ICT in ODE entails the use of media with high interactivity, that is media which can promote both teacher-student and student-student interactions. The nature of ODE and the need to provide opportunity for a learner to interact with instructors and other learners makes it necessary for the integration of ICT which can help foster effective delivery. This paper examines the concepts of ODE and ICT, the different ways ICT can be utilized in ODE and the challenges of ICT application. Finally, some suggestions on how to improve the integration of ICT in ODE are made.

Keywords*: Integration, Open Distance Learning, Information and Communication Technology.

Introduction

Open and distance education (ODE) is not new in Nigeria, its origin could be traced back to the colonial era. Comet Newspaper (2002) asserted that, banished Emirs from Northern States used distance education techniques to keep regular contacts with their respective subjects at home. Tait (2003) also agreed with Bell and Tight (1999) that the University of London was the first Open University which made students all over the world to look for tutorial support to supplement the bare syllabus which they received on registration. Omolewa (2003) noted that Nigerians enrolled for the first time in the University of London Matriculation Examination as external candidates as far back as 1887. Many other institutions served the Nigerian populace that was eager to get quality education until 1976 when the department for correspondence courses was established in University of Lagos as a follow up to the Ashby report on higher education in 1960. However, the emergence of National Teachers' Institute (NTI) distance learning in 1976 marked a turn around to distance education. As noted by Onuorah (2007), the coming on board of NTI, distance learning program made correspondence education in Nigeria to stop. But the interest of the federal government in open and distance education was brought back to light in 1983 when the national open university of Nigeria (NOUN) was established and rekindled in 2002 by Obasanjo administration

Open and distance education is a major way of providing quality access to basic and tertiary education for millions of citizens. The objectives of open and distance education in Nigeria as stated in the National Policy on Education (2009) include:

- Providing access to quality education and equity in educational opportunity for those who otherwise would have been denied.

- Meeting special needs of employers by mounting special certificate courses for their employees at their workplace.
- Encouraging internationalization especially of tertiary education curricular.
- Ameliorating the effect of internal and external brain drains in tertiary institution by utilizing Nigerian experts as teachers regardless of their location or workplace.

If Nigeria will realize these objectives, there is great need for continuous use of modern technologies, especially information and communication technology in open and distance education. According to Yusuf (2006), distance education program is dependent on good information and communication for successful learning. He also maintained that this is because interaction is essential to students' learning and to the overall success and effectiveness of distance learning. In the words of Akpan (2008), the traditional method of managing distance education and transmitting knowledge and skills through print materials that were self-instructional is gradually giving way to internet- based materials. He maintained that Nigeria cannot achieve quality in open and distance learning without sound knowledge of information and communication technology. ICT is viewed as a factor that can enhance quality in the operation of open and distance education. According to Johnson (2007), without effective communication, the education process is hampered. Hence in order to ensure quality in the education delivery via open and distance learning, the issue of integration of ICT must be adequately addressed.

Meaning and Nature of Open and Distance Education

Scholars have defined open and distance education in different ways. Dhanayaran (2001) defines it as the means by which the teacher is taken away literally from the student. Perraton (2001) sees it as an educational process in which a significant proportion of the teaching is conducted by "someone" and the learner is therefore necessarily provided for by different means of communication and instruction. Also, Glen (2005) identifies open learning as policies and practices that permit entry tolerating with little or no minimum barriers with respect to age, gender or time constraints and with recognition of prior learning. According to Yusuf (2006), distance education means the delivery of useful learning opportunities at convenient place and time for learners irrespective of the institution providing the learning opportunity. One can therefore sum up that ODE is a very flexible and accessible means where by one irrespective of age, sex or work type can confidently acquire education. It is characteristically different from the conventional mode of education. In other words, it is a departure from the traditional method of education.

Though distance education shares the goals of conventional education, it also aims at providing access to historically under-served, place-bound and highly-motivated population. Contacts between the students and institutions are provided through interactive and non-interactive media (Yusuf, 2006). Akpan (2008) maintained that though distance education emphasizes independent study as a way of liberating the learners from the fetters of school routine, it does not imply self-study because of the two way communication. This suggests that the separation of the teacher from learner in time and space does not mean complete communication cut-off. As such, open and distance education is a formalized teaching and learning system specifically designed to be carried out remotely by using a variety of media and technology for instructional delivery (Akpan, 2008).

The Concept of Information and Communication Technology

Information and communication technology which started as information technology (IT) has completely revolutionized the entire world. It outstanding in the area of information management and processing through the use of electronic computers and computer software to convert, store, protect, transmit, and receive information (Akpan, 2008). According to Onuma (2007) in Akpan (2008), information technology is focusing on electronic generation, storage, retrieval, utilization and protection for future use. The national policy on information technology (NPFI) (2010) describes information technology as computer, auxiliary equipment, software and firm way and procedures, services and related resources. It allows electronic communication through facsimile, e-mail, voice mail, and video conferencing and has led to the widespread use of networking technologies such as internet, World Wide Web, intranets and extranets, online data-bases, integration of information system and modeled communication (Olonikawu, 2006 in Akpan, 2008). According to Obanya (2003), ICT is a sole creation of humankind that has thrown off balance the conventional perceptions

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of time and information. The knowledge of ICT is now widely incorporated into many areas including education.

In education, ICT can be viewed as the application of digital equipment to all aspects of teaching and learning. It involves a combination of technologies for collecting, storing, processing, communicating and delivering information related to teaching and learning process (Johnson, 2007). Some age long barriers to quality education such as time, space, location, convenience etc have been brought to an end through the integration of ICT to teaching and learning. The three key terms of ICT have been defined by Johnson (2007) as follows:

Information: is data that have been processed, analyzed, interpreted and has become meaningful to the receiver of the message; it is very useful in problem solving and decision making.

Communication: is the process of transferring information from one source to another or from one person to another or group or persons (audience). Information is closely related to communication.

Technology: is the process of using information to have meaningful control over nature in order to survive the challenges and changes in the environment so that a civilized life of higher standard of living can be achieved. For effective utilization of ICT in open and distance education, a number of accessory tools are required. According to Yusuf (2006) and Akpan (2008) such tools include among others: computer, radio, television, tele conferencing, networking, and interactive video devices.

The role of ICT in Open and Distance Education

Information and communication technology has played a vital role in bridging the gap of distance, age, time, among others. It has been successfully applied in the following areas to ensure quality in educational delivery:

Students' admission: the admission of students which was hitherto shrouded by malpractices and fraudulent activities has been streamlined. Some foul practices of students can be checked through the on-line facilities provide by ICT.

Fees payment and course registrations: Online payment of fees and registration of courses have been improved. This has to a large extent reduced the incidence of fraud and hassles students' undergo through during such processes. This has provided an enabling environment for them to register at their convenience.

New students' Orientation: Orientation programs are designed to acquaint new students about their courses, and other rules and regulations guiding the program. Gathering the students in one location for this purpose has always been huge task due to the scattered nature of ODE students. The use of e-mails and other social platforms, an opportunity provided by ICT facilities, this persistent problem has been alleviated.

Students' Records: with ICT, students' records have been digitized. Storage and retrieval of information has been made a lot easier. The stress of checking files, wasting time and money going to the offices for one document of information has become a thing of the past.

Instructional Delivery: The nature of distance education makes it mandatory for the use of multimedia internet based technologies for effective teaching and learning. Gbadamosi (2006) opines that e-teaching encourages the participation of a large number of students and resolves the problem of inadequate teaching personnel, space, and instructional materials. Proper use of ICT facilities enhances quality instructional delivery because it encourages adequate and proper instructional design and development.

Students' Assessment: ICT application in ODE has brought sanity in students' assessment. Since instructional delivery is done on-line, similarly, with effective use of ICT and appropriate media supervision, assessment of same can be done on-line. In the words of Akpan (2008), the process of e-teaching allows for e-valuation and this helps to curb examination malpractice which has posed a threat to Nigerian education system.

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Challenges of Integrating ICT in Open and Distance Education
Despite the numerous prospects of the use of ICT in open and distance education to ensure quality education delivery, several factors have continued to militate against its proper integration. Key among them include the problem of resistance to change, the attitude of both learners and teachers towards ICT, work ethics, competence and training in ICT and financial constraints (Kidombo, 2009). Similarly, other factors according to Yusuf (2006) include problem of electricity, poor economic situations, and poor ICT penetration. Other contending forces include lack of skills in designing course wares, poor internet connectivity, and low tele-density Akpan (2008).

Conclusions
Education worldwide is largely influence by ICT as the world has become a global village. Teaching and learning has become more interactive and interesting with the introduction of ICT into the classroom. This has made ODE to be more accessible to learners irrespective of their location within and outside the country. ICT is being used in many imaginative ways to teach higher order reasoning skills. Evidence abound that computer assisted instruction improves on traditional mode of teaching.

Recommendations
To enhance proper integration of ICT in open and distance education, the following are recommended:
1. Tutors in open and distance learning programs must have a compulsory good training in ICT programs. They must be ICT compliant.
2. High quality and reliable ICT facilities should be provided together with skilled personnel to ensure smooth system runs.
3. The Federal government should ensure adequate funding of distance education programs in Nigeria.
4. The government should improve on the state of power supply in Nigeria.
5. Orientation programmes should be conducted for all teachers and students of distance learning programme on the importance of ICT.

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