

**ENHANCING QUALITY IN OPEN AND DISTANCE
EDUCATION THROUGH EFFECTIVE UTILIZATION OF
INFORMATION AND COMMUNICATION TECHNOLOGY
(ICT) IN NIGERIA.**

BY

DR. C.P. AKPAN

**DEPARTMENT OF EDUCATIONAL
ADMINISTRATION & PLANNING.
FACULTY OF EDUCATION
UNIVERSITY OF CALABAR
CALABAR, NIGERIA.**

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Abstract

Open and Distance Education is now widespread, not only in open universities of the world but also in all education and training sectors. It has been accepted and integrated into the mainstream of the Nigerian educational system. Open and distance learning is the process of teaching in which the learners are separated in time and space from the instructor (teacher). It utilizes a variety of media and technologies to provide and enhance quality education for a large number of learners wherever they may be. Information and Communication Technology (ICT) has been identified as a factor that can promote quality in Open and Distance Learning (ODL). This paper therefore examines the concepts of quality in Open and Distance Learning and Information and Communication Technology. The areas where ICT can be used to enhance quality in open and distance learning are highlighted. The merits and demerits of open and distance education and the problems of using ICT are also discussed. The paper ends with some suggestions on the way forward.

Introduction

Open and distance education is not altogether new in Nigeria. It dates back to the colonial period when correspondence colleges in United Kingdom provided opportunities for the education of a number of qualified Nigerians through correspondence courses. Teachers, Lawyers, Doctors and many commercial and secretarial staff were trained through this method of education. Later, correspondence courses extended to the preparation of students for General Certificate Examination (G.C.E) ordinary and advance levels via the opportunities offered by such institutions like the Rapid Result College, Cambridge University and the University of London. These institutions continued to serve the Nigerian populace that was yearning for education until 1976 when the Department for correspondence courses was established in the University of Lagos as a follow-up to the Ashby report on Higher education in 1960. In 1976, the National Teachers Institute, Kaduna was established and it operates the distance learning system. According to Onuorah (2007), this saw the gradual end of correspondence education in Nigeria and the birth of distance education. The Federal Government interest in open and distance learning was rekindled in 1983 when the National Open University of Nigeria was established by the Shagari's administration and in 1984, it was suspended by the same administration. In 2002, the Obasanjo administration revived it and since then the Open University has been very active providing open and distance learning to a large proportion of the Nigerian citizens.

Open and distance education is now widespread, not only in open universities of the world but also in all education and training sectors. It has been accepted and integrated into the mainstream of the Nigerian educational system. Distance education is one of the major pivots on

which the present Federal administration in Nigeria hopes to improve the quantity and quality of instruction in Nigerian schools (Yusuf, 2006). It also serves as a means of providing access to basic and tertiary education for Nigerians. Perhaps, it is to this end that the Federal Republic of Nigeria (FRN, 2004:45) articulates the goals of open and distance education to include:

- Providing access to quality education and equity in education opportunities for those who otherwise would have been denied.
- Meeting special needs of employers by mounting special certificate courses for their employers at their work place.
- Encouraging internationalization especially of tertiary education curricular.
- Ameliorating the effect of internal and external brain drain in tertiary institutions by utilizing Nigerian experts as teachers regardless of their location or work place.

To achieve these laudable objectives, there is need to effectively use modern technologies, especially information and communication technology in open and distance learning in Nigeria. The global development in technology has great impact on all sectors of economy including education. In recent times, educational establishments are challenged to do more with fewer resources as they try to meet the complex and changing demands of the society. 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. We can not achieve quality in open and distance education without sound knowledge of information and communication technology. ICT is viewed as a factor that can promote quality distance education. Johnson (2007) points out that communication is a fundamental act of the education process. Hence, to enhance quality in open and distance learning, proper attention must be given to information and communication technology.

This paper focuses on how to enhance quality in open and distance education through information and communication technology (ICT). The concepts of open and distance learning, quality and ICT are examined. The areas where ICT can be used to enhance quality in distance learning are highlighted. The merits and demerits of ODL and the problems of using ICT are discussed. The paper suggests some ways forward.

The Concept of Open and Distance Education

Different scholars have attempted to give definitions to open and distance education. Mugridge (1991) defines open and distance education as a form of education in which there is normally a separation between teacher and learner and thus, one in which other means – the

printed and written words, the telephone, computer conferencing or teleconferencing are used to bridge the physical gap. This means that ODL provides educational opportunities needed to anyone, anytime and anywhere. To Kaufman, Watkins and Guerra (2001), distance education means the delivery of useful learning opportunities at convenient place and time for learners, irrespective of institution providing the learning opportunity. UNESCO (2002) views open and distance education as representing approaches that focuses on opening access to education and training provision, freeing learners from the constraints of time and place, and offering flexible learning opportunities to individuals and groups of learners. Holmberg (1977) defines open education as a system of education that does not operate through traditional conventions which are essentially restrictive in terms of admission, attendance, and subject combination. Peter (1973) perceives distance education in terms of division of labour and organizational principles. He defines distance education as a method of imparting knowledge, skills and attitudes which is rationalized by the application of division of labour and organizational principles as well as by the extensive use of technical media especially for the purpose of reproducing high quality teaching materials which make it possible to instruct great numbers of students at the same time wherever they live. According to him, it is an industrialized form of teaching and learning.

The Federal Ministry of education (2002) defines open leaning as any form of learning in which the provider enables individual learners to exercise choice over any one or more of a number of aspects of learning and distance learning as an educational process in which a significant proportion of the teaching is conducted by someone removed in space and/ or in time from the learner. Alaezi (2005) refers to open and distance learning as educational patterns, approaches and strategies that permit people to learn with no barriers in respect of time and space, age and previous educational qualification – no entry qualification, no age limit, no regard to sex, race, tribe, state of origin etc.

It can be deduced from these definitions that open and distance learning provides educational opportunities needed by anyone, anywhere and at anytime. It provides increased educational opportunities to a larger population in different situations and needs. Although, 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. Also, to view distance learning as an industrialized form of instruction means that it involves careful planning, preparation and organization to have both technical equipment and quality teachers to work with (Osuji, 2007). This paper, therefore, views

open and distance education as a formalized teaching and learning system specifically designed to be carried out remotely by using a variety of media and technologies for instructional delivery. It is not constrained by geographical location and offers opportunities in situations where traditional education has difficulty operating. Both students and employees with distance problems can benefit because it is more flexible in terms of time and can be delivered anywhere. Premised on the foregoing, the characteristic features of ODL can be summarized as follows.

1. There is separation of learner and teacher in time and space.
2. There is flexibility in the use of multimedia devices and entry requirements for increased access and equity.
3. There is availability of programmes to learners at their chosen locations.
4. It is learner-centred.
5. There is openness with regards to access, duration, age, sex, goals and knowledge delivery technique.
6. It allows students to combine education with work.
7. It allows for a two-way communication between the teacher and the learners.

Merits and Demerits of ODL

Merits of ODL

- (1) It makes education open to many people irrespective of age, sex, religion, location, qualification and time. Thereby providing access to education for all.
- (2) It provides opportunities for employees to combine education and work.
- (3) It provides affordable, cost effective and flexible educational opportunities to many.
- (4) It is a veritable instrument for life-long education.
- (5) It provides opportunities for drop-outs of the formal school system who are still interested in learning to continue their education.
- (6) It increases access to education for women irrespective of cultural and religious background.
- (7) It reduces inequalities in educational services.
- (8) It provides speedy and efficient training for target groups.
- (9) It provides technology for learning and research.

Demerits of ODL

Although the advantages of ODL are numerous, it also has some demerits. Ani (2005) identifies the disadvantages of ODL to include.

- The probability of deceit and fake candidates taking into account the Nigerian system (corruption).
- Poor communication net-work, where the internet is malfunctioning, the speed of the progress of ODL can be retarded.
- Possibility of certificate racketeering in a country where deceit and corruption is the order of the day.
- Prospect of transmitting error to all parts of the country and the world if the preparations of the fundamental documents are not well done.

The Concept of Quality

The concept of quality is subject to relativity, subjectivity and variability (Asim and Okon, 2005). Okebukola (2005) defines it as fitness of purpose, while Fadipe (2005) views quality as appropriateness of resources available to education. Akpan and Esirah (2005) maintain that the concept of quality varies from that of providing special services to conforming to standards or fitness for purpose. Quality is the base line standard in education which can be measured on a scale of reference. It is an expression of standard or the means by which a certain set standard in education can be achieved (Maduewesi, 2005). The concept of quality in education is multidimensional and embraces all functions and activities in the academic system. It involves quality of students, instructors/facilitators, instruction, facilities and equipment, academic programmes, curriculum and students performance assessment. Viewed from this perspective, quality in open and distance learning involves quality of educational inputs, processes and outputs in its entirety.

1) Quality of Inputs

This involves quality of new entrants. The minimum entry requirements should be specified. It also involves the quality of instructors/ facilitator—their qualifications and professional competence should be considered. The quality of facilities and equipment, notably e-learning tools should not be taken for granted. The programmes of the ODL should compare favourable with similar programmes in conventional university system based on the minimum standards stipulated by the National Universities Commission (NUC)

2) **Quality of Processes**

This should take into cognizance quality of instructional delivery and the variety of media used, quality of communication to ensure tutor-learner and learner-learner interaction, quality of students assessment, grading system and specified minimum time needed to cover course contents for a programme. These processes should compare well with the minimum standards for similar programmes in conventional educational institutions.

3) **Quality of Out-puts**

Quality outputs could be viewed in terms of **achievement** i.e. what the students learn in terms of skills, knowledge, attitude and behaviour; **attainment** i.e. number of students who have completed prescribed academic programmes and quality of degrees or certificates awarded; **standard** i.e. the official learning and what the society expects of the graduate of the ODL.

The Concept of Information and Communication Technology (ICT)

Information and Communication Technology (ICT) is made up of three terms, namely, Information, Communication and Technology.

a) Information: This is data that have been processed analysed, interpreted and meaningful to the receiver of a message. It is needed for problem solving and decision making. Message is an essential element in information and should therefore be “accurate, concise and of superior value” (Johnson, 2007).

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

c) Technology: It is the process of using information to have meaningful control over nature in order to survive the challenges and changes in our environment so that a civilized life of higher standard of living can be achieved.

Information and Communication Technology (ICT) which has completely revolutionalized the entire world started as Information Technology (IT) which deals with the aspect of managing, and processing information through the use of electronic computers and computer software to convert, store, protect, process and transmit and receive information. Onuma (2007) views Information Technology (IT) as focusing on electronic generation, storage,

retrieval, utilization and protection of information for future use. The National policy on Information Technology (2001) describes IT as computer, auxiliary equipment, soft ware and firm way and procedures, services and related resources.

In recent years there has been increasing convergence of digital technologies and information technologies gradually converged with telecommunication technologies to give us the new name Information and Communication Technology (ICT). The ICT knowledge, skills and understanding are now more emphasized and integrated into many areas including education. Information and Communication Technology (ICT) is a process of creation, processing, storage, retrieval and dissemination of information and data using computers and telecommunications. ICT allows electronic communication through facsimile, e-mail, voice mail, video conferencing and have led to the widespread use of networking technologies such as internet, World Wide Web, intranet and extranets, online data-bases, integration of information systems and mobile communication. It is to this end that Obanya (2003) described ICT as the sole creation of humankind that has thrown off balance the conventional perceptions of time and space and that has destroyed geographical barriers to the transmission of knowledge, ideas and information. Knowledge of ICT has found wide application in all sectors of human endeavors and education is no exception. 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 of information related to teaching and learning processes (Johnson, 2007). With the emergence of this new technology, the barriers of time, space and location are removed as people have new opportunities to learn through open and distance education.

ICT Tools for Open and Distance Learning

Students of open and distance learning can learn anywhere and anytime across the globe through the use of ICT tools which include.

- 1) **Computer:** This is an electronic device that is capable of receiving, storing, manipulating and retrieving data speedily and efficiently (Asogwa, 2007). The availability of the hardwares and soft-wares helps the learner to choose institutional materials that meet his/her needs. The computer is an educational technology medium for individualizing instruction. Therefore, renders excellence service in ODL both as a tutor and as a tool.
- 2) **The Radio:** The radio is an invention that enables human voice to be transmitted by electromagnetic waves over a long distance without the help of a wire (Matthew, 2007). Open

and distance learning programmes can be transmitted through the use of radio and this helps to create access. Open and distance institutions use radio to disseminate information, counselling and to facilitate their courses at specific hours. Since radio broadcast can be received even in very remote areas, then it becomes an important tool in ODL.

3) Television: Open and distance learning makes use of television as an important medium to disseminate information to learners. Television broadcast can be in the form of live broadcast where educational events are directly telecast or recorded broadcast where pre-recorded programmes are telecast per transmission scheduled for the convenience of the producer and the students.

4) Teleconferencing: The use of the teleconferencing facilities allow many people to be simultaneously connected so that discussion can take place even though the participants do not meet. It is particularly useful when the teacher and the students are widely dispersed and separated because of geographical location.

5) Networking: This is a communication system that links together computers, storage devices, word processors, printers, the telephone system and other electronic devices. ICT networks assist the exchange of information between people and institutions. ICT-based networking that can be employed in open and distance learning is internet/world wide web.

The internet is a global network consisting of millions of computers and data bases. It is a network of many computer networks. The internet has the ability to deliver multimedia materials and this quality makes it highly suitable for ODL. The educational uses of the internet include:

- i) e-mail
- ii) Facsimile (Fax)
- iii) File transfer.
- iv) Browsing and dissemination of educational/academic information e.g. conferences.
- v) Newsgroups
- vi) Chat room (messaging)
- vii) Institution/ classroom home page.
- viii) Research activities.
- ix) e-learning/e-evaluation of students performance

The internet/World Wide Web facilitates people in communicating and accessing remote information from global sources and therefore remove the constraints of time and distance. The World Wide Web (www) is a system of internet servers that allows access to specially, arranged documents formatted in hypertext make-up language (Lucey, 2005).

6) **Interactive Video:** This involves the use of video tapes or video discs designed in such a way that they respond to choices made by the individual users. It is a very effective tool for conveying information (Asogwa, 2007).

Use of ICT to Enhance Quality in Open and Distance Learning

ICT can be used in the following areas to enhance quality in ODL.

1) **Admission of Students:** To ensure quality of students admitted into the ODL programme, admission of students should be done on-line. The Document Tracking System (DTS) can be applied. Through the DTS candidates submit their application on-line, receive acknowledgement of receipt, track the progress of their application and receive results of their evaluation on-line. This helps to check sharp practices by prospective students. Only those who meet the admission requirements should be admitted. The use of the DTS helps the candidates to have access to efficient and more cost effective services.

2) **Registration of Students:** On-line registration allows the students to enroll in courses at their own convenience but within the prescribed registration period. Payment of fees should also be done on-line to help reduce the dubious activities of some account clerks.

3) **Orientation of New Students:** Orientation activities are required to inform students about course prerequisites, course outlines, procedures for adding and dropping courses, grading criteria, tips on where to access study materials etc. Because the students of open and distance learning live far away from the ODL institutions, it is rather difficult to gather them physically at one location for orientation. Therefore, the creative use of low cost, readily available ICT technologies (e.g. yahoo messenger) will help providers of ODL to overcome obstacles of time and space to conduct quality and viable orientation sessions for their students.

4) **Students Records:** A student accumulates a variety of records over his/her academic lifetime. Storage of physical records of student not only take up a lot of space, it can take up a lot of time and effort and can lead to frustration trying to retrieve students' files from the archive. Digitization of students records makes storage and retrieval of information easy and simple.

5) **Instructional Delivery:** This is an important aspect of the open and distance learning programme. The use of multimedia internet-based technologies provides powerful options for teaching and learning at a distance. E-teaching is now seen as a sure way to quality teaching. It is a well designed computer –based course ware that permits students to teach themselves. This method of teaching bridges the gap in course offerings enriches the curriculum and replaces the existing face-to-face instruction (Johnson, 2007). Gbadamosi (2006) avers that e-teaching

encourages the participation of a large number of students and resolves the problem of inadequate teaching personnel. Proper use of this ICT facility enhances quality in instructional delivery. The use of Computer Aided Instruction (CAI) is an individualized method of instruction. Its use in open and distance learning for instruction helps to increase speed, motivate learning and understanding of concepts taught. CAI requires the learner to interact with the computer at his/ her space and so recognizes individual differences. In this way quality of instruction is improved.

The technology used to deliver instructional content can influence the instructional design method used. Although, pedagogy has always been the central consideration, the delivery characteristics of the technology used should be uppermost in the minds of instructional designers charged with the designing of the distance learning materials. To ensure quality in instructional design Pena—Bandalaria (2002) advocates the “quality circle” approach in developing courses and leaning materials. This approach consists of

- A course writer who is a subject matter expert.
- A subject matter specialist who is another subject expert that peer reviews the soundness of the course and its contents.
- An instructional designer who ensures that the “chunking of lessons” is appropriate and the course objectives, contents and assessment mesh logically with one another.
- A language editor who performs copy and substantive editing.
- A media specialist to recommend appropriate delivery medium.

The “quality circle” approach attempts to ensure that standard practice and best practice are used in course development and delivery of instructional content.

6) Assessment of Students’ Performance: With effective use of ICT and appropriate media, supervision of students learning activities and assessment of their performance can be done on-line. End of course examination and assignments can be carried out and the scoring and submission of grades can also be done on-line. On-line access of official students enrolment list are available where instructors can post students’ interim and final grades for immediate release to students. The process of e-teaching allows for e-valuation and this helps to curb examination malpractice. Thus, ensuring quality in students’ assessment.

Factors Militating Against Effective Use of ICT in ODL

- 1) **Power Supply:** Almost all communication and technological tools require steady supply of electricity to function. But unfortunately electricity supply in the country is epileptic and many rural dwellers are yet to have electricity. This creates serious problems in the use of ICT in the delivery of open and distance learning programme.
- 2) **Poverty:** Many Nigerians are still living in poverty. The cost of computers and other ICT resources are far beyond their reach and so there is still low level of computer literacy among the Nigerians citizenry.
- 3) **Lack of Skills in Designing Course-wares:** Some tutors/facilitators for the open and distance learning lack knowledge and skills in designing and delivering their courses in electronic format because they are still not ICT- compliant. This greatly affects instructional delivery.
- 4) **Poor Funding:** Generally, education is poorly funded in Nigeria. This has resulted in low level provision of ICT facilities in schools and for ODL programmes in the country. Investment in ICT educational services is low because the equipment, soft and hard-wares are costly. Success in any educational policy, is contingent on the involvement of all stakeholders and sponsorship of funding agency, the Government (Yusuf, 2006).
- 5) **Internet Connectivity:** Observation has shown that there is low level of internet connectivity in Nigeria. To make both students and teachers computer literate, ICT project should be made a priority by government.
- 6) **Low Teledensity:** This is another major challenge to ICT utilization in open and distance learning programme. Access to unhindered use of ICT tools such as telephone and internet has been very low (Asogwa, 2007). With the advent of the Global system of Mobile (GSM) telecommunication, the use of ICT resources for educational purposes in general and open and distance learning in particular is still very low.

The Way Forward

To ensure quality in open and distance education in Nigeria, it is recommended that

- (1) Teachers in distance learning programmes should undertake mandatory training and retraining of ICT programmes to provide them with practical and functional knowledge of the computer, internet and associated areas of ICT. This will make them ICT-compliant. The AfriHUB ICT project is a right step in the right direction.

- (2) Providers of open and distance education should strive to use quality and reliable ICT hardware and soft ware supported by highly skilled personnel armed with the knowledge and skills needed to ensure that the system runs smoothly.
- (3) The Nigerian government should not only allow the continuation of the open and distance learning, it must be supported with adequate funding
- (4) Government should ensure that the eclectic nature of power supply in the country be greatly worked upon to improve on the supply of electricity. Rural areas without power supply should be supplied with electricity because a vast number of prospective students of the ODL are rural dwellers.
- (5) The quality circle approach should be adopted in the designing of course contents and learning materials to ensure quality in course content delivery.
- (6) On-line assessment of students work and end of course examination should be encouraged in open and distance learning programmes. This will check examination malpractice and hence, gives quality to the assessment of students performance.

Summary and Conclusion

The paper has discussed the concept of ICT as it relates to enhancing quality in open and distance leaning (ODL). Three quality areas, namely, quality inputs, processes and outputs that require special attention in ODL have been highlighted. The management of ODL to ensure quality calls for the application of ICT in all aspects of its operation. Open and Distance learning now remains the possible, accessible and effective alternative way to meeting the educational needs of many Nigerians. To achieve success and maintain quality in teaching and learning, ICT must be used in course content delivery, assessment of students performance, admission and registration of students. The paper calls on the government to properly fund distance education because no educational programme or policy can succeed without adequate funding. Since ICT-tools make use of electricity to function, Government should ensure steady supply of electricity in the country. Quality in ODL can be enhanced if the system adapts many of its functions by making use of ICT facilities.

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