

TAKING THE "DISTANCE" OUT OF DISTANCE EDUCATION: THE INFORMATION TECHNOLOGY (IT) APPROACH.

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Abstract

At the time when distance education was hardly heard of and when it was regarded as second rate to face-to-face education, Nigeria was at the forefront of the use and promotion of distance learning methods several decades ago (Olugbemi, 2000). Arguing in favour of the Distance education/ Open and distance learning, Muda, (2001:2) suggested that "Distance", should be taken away from Distance Education". The most enduring and best modern way of achieving this is through the application of computers and related technology, particularly, in this information age. In this paper, the authors discuss the implications, issues and prospects of this modern learning style.

Introduction

Known differently as 'correspondence study', 'home study', 'off-campus study', 'distance education', 'extra-mural system', etc. Open and Distance Learning (ODL) has been of the same goal over time. In this regard, Olugbemi (2000), saw distance education (DE) as the provision of education by modes other than the conventional face-to-face method but whose goals are similar to, and just as noble and practical as those of On-campus full-time, face-to-face education. It is characterized by the separation of the teacher and learner, the use of media, the provision of two-way communication, and the permanent absence of the learner group.

This learning method was occasioned because according to Babalola (2001), every year and for the last 20 years, our tertiary institutions were only able to admit a mere 20% of all the applicants for higher education. This implies that the conventional methods of education are far below the rapidly expanding demands, which gave rise to the outreach/satellite campus study centers (Hubert, 2001). The ever-changing pattern of learning also makes full-time training within the timetable constraints of the classroom suitable only for the few (ibid). For many people, who are already working or older people with families and social responsibilities wishing to embark on professional training, learning must occur at a time and place of their choice (ibid) and thus Distance Education is the answer.

In 1988, the Federal Government of Nigeria made the NCE (Nigeria Certificate in Education) the minimum qualification for teaching in primary schools (Adeniron, 2000:3). This obviates the need for the serving/would-be teachers to upgrade their certificates to meet with the new requirements.

To enforce this via the conventional classroom method would mean closing down the whole primary schools for the period of the retraining. Perhaps, the latest development is the establishment of satellite campuses in city centres that are now moribund. The teeming population that enrolled for programmes in these campuses opened the nation's eyes to the hunger and thirst of its citizenry for higher education.

Reasoning alongside of the application of computers/information technology in the area of ODL/Distance education, Adeniron (2000), posited that a potent tool for achieving this especially in a depressed economy like ours, is that which provides optimal advantage at minimum cost; i.e. that (Information technology/computer) which increases and widens access without compromising quality and content.

What is Information Technology?

The Central Bank of Nigeria (CBN) (1990) defined information technology (IT) as the ability for you to create, access, manipulate, store and transmit information in the form of text, data, image and voice through the application of computing, electronic communication and related technology. In relation, computer is an electro-mechanical device that can accept input, process it and relinquish the result at a fantastic speed (Ezeano and Onoh, 1992).

We have used four words to describe "communicate and process": create, access, manipulate, transmit

and store. Also four words have been used to describe "Information; Data, Text, Image and **Voice.** **Consequently, we can use a grid to describe IT.)**

	Create	Access	Manipulate	Transmit	Store
Data			EXCEL e.g. Spreadsheet		
Text					
Image					
Voice					

Certainly, there is a challenge in using IT/computer in ODL. Explaining this, Richards A. (1988:13) observed, "... learning computer skills is not achieved by spending \$100 or \$300 or \$700 on a home computer system.... You do not buy a small child a work of literature until after his reading skills are developed. You need not buy an expensive computer system until the child knows enough about both using programs and writing them". Supporting the above view, Mayford, Roark (1986) explained, that the Personal Computer (PC) increases productivity, ... using a computer requires, first, that one learns how to. Almost anyone can learn to use a computer... the art of learning is addictive. In 1984, some Apple Macintosh dealers, ... offered to let prospective customers take a computer home to "test-drive" it for twenty-four hours; as many as 50% of the "drivers" bought the machines, thereafter". Furthermore, the constraints facing ODL using computers also include: -

- The problem of illiteracy/ignorance towards the benefits of information technology.
- The average Nigerian is embattled by poverty and hence cannot afford the use of a personal computer needed.
- The epileptic power supply/lack of it incapacitates the use of computers.
- There is the problem of user-resistance to any change (Ezeano et al, 1993).
- No proper/enforced legislation in favour of IT.
- Dearth of sufficient experts to develop the course-materials in the different disciplines.
- Lack of continuity in government policies towards IT.
- Lack of network security, incidents of virus attacks, sabotage by strikers etc.
- In case of equipment breakdown some of them require the intervention of the engineers, who often are foreigners and hence, not immediately available.

Problems of ODL without Computer Application

Arguments against ODL/Distance education speak of:

- The de-humanizing nature of the relationship between teacher and learner.
- Loss of academic freedom and autonomy.
- Erosion of academic creativity.
- Fear of commoditizing a noble human endeavour of long standing tradition.
- Loss of quality and absence of opportunity for debate, discussion and collective reflection, on which good education is founded (Gajaraj, 2000).

Benefits of ODL Using Computers

These benefits include:

- Production of presentable course materials on the basis of exception reporting using the Hyper text Markup Language (HTML) software facility and Hyper-link.
- To link different geographical areas or users towards making the world a global village through the Internet technology, Global System Mobile Phone (GSM), and Micro-electronic methods.
- Xo make information/course materials available and affordable at the most economical cost via Internet browsing.
- To process information more accurately and up-to-date.
- Easy access to information/course materials through the visual library facility.
- Document delivery through facsimile (FAX), electronic-mail (e-mail), Messaging systems and teleconferencing for group interaction and discussion.
- Increased self- confidence/satisfaction among teachers/learners that they are once again part of

- the modern scientific community (John, Fox, Jerry and Eddy, 1990:5).
- To produce timely information and project education image ahead of other conventional methods of learning.
 - To database educational data/information for the purpose of data/information sharing via the Internet facilities.
 - To broaden the wealth base of the education industry.
 - To achieve more student/teacher patronage,
 - Less number of computer experts can be used in curriculum writing to reach larger number of students via networking or Internet.
 - The multi-media facility where visuals/(text), sound/audio and video/pictures can be combined to animate still objects which are absent in the conventional approach. The learner can load and access the computer-disk (CD) or diskette and study at his/her pace and leisure. He can also download and print out any course materials he desires.
 - Accommodates diverse learning style e.g. single-mode, dual-mode and mixed-mode, information and communication technology (ICT) methods.

For instance, in Computer Conferencing (fig. 1), EUROTRA, a computer-aided translating system will make it possible to juggle with the nine official languages of the European Community (Emmanuel, 1993:7).

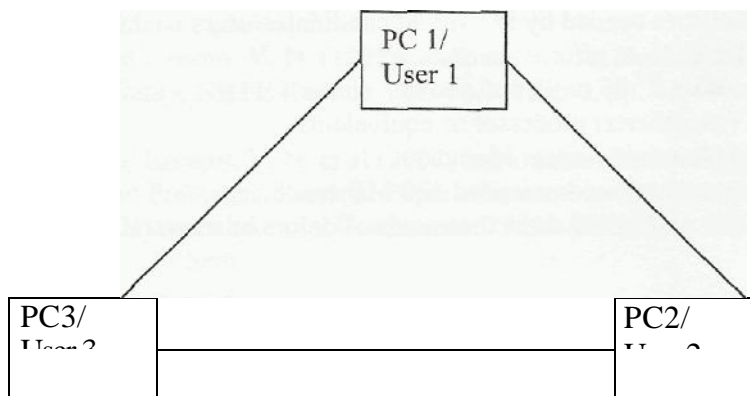


Fig. 1: Computer Conferencing in ODL

The vocabulary of aeronautics, for instance, contains no fewer than 200,000 terms. No human translator is able to retain them all, even in his own mother tongue. Computers can alone quickly process such a stock of words and much more. Rather than producing 72 different dictionaries and grammars (which is absolutely enormous), 'Eurotra' uses a kind of artificial and simplified pivot language which links all the languages together. You can enter a text into your computer, in English for instance, and then ask for its equivalent in French; the answer is received in few seconds. First of all the system analyses your prose, tracks it down into sentences and then sorts out the words according to their nature (noun, adjective, pronoun, etc). It is even able to distinguish different meanings of the same word depending on the context in order to avoid ambiguities (Ibid).

Specifically, John et al (1990) observed that computer usage has raised students' interest in the science through the study of open-ended experiments that permit the students to explore their own ideas. The Nigerian nation faces the problems of our secondary and tertiary laboratories that are equipped with outdated and surplus apparatus. The Nation, the technical leader of the African continent, has left its children to study science using the equipment of earlier generations. The answer is that a science teacher can use Personal Computers (PC), whose prices have dropped drastically, to turn an old and outdated laboratory into a modern, well-equipped, hi-tech facility ready to explore at new depths and to challenge the brightest students with new insights. Consequently, over the years, business and science departments

in colleges and universities have increased rapidly in student enrolment (ibid). A computer in science laboratory extends the senses of the students, allowing the students to measure what cannot be seen e.g. using EXCEL, ACCESS, and PowerPoint etc. through simulation and modeling. It promotes creative and independent thinking. This is because the students always want to go back and do the experiment (again).

Wilson and Redish (1989:20), writing about workshops on the Computer interfacing supported by the American Association of Physics Teachers, state that "... these computers have shown remarkable promise in helping students to understand the concepts of velocity, acceleration, temperature and heat. Far from being 'black boxes' that obscure the physics, under investigation, these materials are powerful spotlights for illuminating topics that are often difficult for students when presented in more traditional ways.

Hardware/Software Requirements

Hardware Requirements (Minimum)

The minimum hardware facilities needed by individual candidates/users wishing to own personal computers (PC) for ODL at affordable costs are: -

- A PC running Microsoft windows™ 95 or 98 and above.
- An Intel Pentium 120 MHz (megahertz) processor or equivalent,
- 64 MB (megabytes) of RAM (Random Access Memory).
- 80 MB hard-disk (HDD) and an extra recommended 120 MB space.
- A monitor to display 800 x 600 pixels and show thousands of colors or more (1024x768) pixels.
- 4X - CD - ROM drive.
- Audio facility.
- Diskettes.
- a printer
- Modem

Software Requirements (Minimum)

The minimum software needed to run the PC are:

- A powerful operating system (OS)/Windows software.
- Microsoft Word, WordPerfect, Excel, Access etc.
- Office professional.
- Virus shield software to automatically check incoming documents.
- Back up facilities e.g. CD-ROM, 3.5 diskettes.

Summary

The application of computers and other IT facilities like the Global System Mobile (GSM) phone are enduring ways of removing "Distance" from distance Education. This will encourage more students to ask questions, submit assignments, 'meeting' other students via the Net, reading notes and exchange of information through the virtual library technology. It will also enhance computer literacy in this country and age, hence, making the citizenry participate in this information super high way global village. Certainly, this is a catalyst boom to our education system.

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