

# INFORMATION TECHNOLOGY AND WOMEN EDUCATION IN NIGERIA

*Dr. T.M. Fapohunda*

## **Abstract**

Information Technology (IT) has been promoted as an important tool in ensuring that marginalized groups, particularly women, are included in the development of the global information society. The importance of mainstreaming gender in national and organizational information and communication technology (ICT) policies and strategies cannot be overstated. While IT alone cannot end gender inequality, it can help catalyze social change and empowerment. This paper focused on the importance of IT for poverty reduction and for the economic empowerment of poor women in Nigeria bearing in mind that in most rural communities in Nigeria; only the most primitive telecommunications infrastructure is currently available. The paper also assesses Internet connectivity in Nigeria, and investigates infrastructure issues that impede access by women to information technologies and other factors such as the language barriers and policy issues. The study also presents case studies on improved women's economic status through information technology.

## **Introduction**

Education is recognized globally as the cornerstone for sustainable development. It is the totality of experience from birth to death which involves the art of imparting knowledge and skills to achieve a change in behaviour of the recipient. Every society whether simple or complex has its own system of training and education. Education is a means to an end and not an end in itself. It engenders the quick development of economic, political, sociological and human resources of any country. In Nigeria, like in most of the world, the woman is responsible for reproducing and nurturing life. Because of this function, she is primarily responsible for the production of the goods and the performance of services that are essential to the sustenance of life. All these tasks are essential to the survival and sustainability of the Nigerian society. However, in terms of adult functional literacy, illiterate women represent 61% of the female population as compared to 38% of the adult men. The Nigerian woman has not pressed hard to derive the full benefit of her economic activism and activities. According to the 2006 census, almost 50% of the total population of the country of 150 million are women. The Federal Office of Statistics (2006) reports that 70% of this population, 105 million women reside and work in the rural areas. This implies that too many Nigerian women

Largely live in poverty, lacking access to basic education, decent nutrition, adequate health and social services which the development process is supposed to provide. In the last two decades however, a consciousness has been developing nationally that unless something is done to empower women, as an interest group, and to combat poverty amongst them by creating incomes and wealth, the entire development of the country stands mortgaged.

Information Technology can simply be described as the acquisition, procession, storage and dissemination of vocal, pictorial, textual and numeric information by a micro-diction is based combination of Computing and Telecommunications.

In the past, information handling involved massive dependence on paper; however, the emphasis now has shifted to the creation, storage and transmission of tiny electrical inputs. Today,

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the amount of information contained on a floppy disk could fill an average sized book. Nowadays, Information Technology forms the basis for administrative growth in any challenging environment and it has become the driving force in the 21<sup>st</sup> century. With increase in innovation and changes in technological applications, it is imperative to adapt to the changing and dynamic information technology environment. Computers have now made their way into every walk of life. With its attributes of speed, accuracy, versatility, flexibility, easy retrieval etc, computer applications greatly improve processes. This paper examines the importance of IT for women education as a means of poverty reduction and for the economic empowerment of women in Nigeria bearing in minds that in most rural communities in Nigeria; only the most primitive telecommunications infrastructure is currently available. The paper also assesses internet connectivity in Nigeria, and investigates infrastructural issues that impede access by women to information technologies and other factors such as the language barriers and policy issues. It presents a case for improved women's economic status through information technology.

Education is recognized as “an instrument per-excellence for effective national development”; it is also the basis for the full promotion and improvement of the status of women. Education empowers women by improving their living standard. It is the starting point for women's advancement in different fields of human endeavour. It is the basic tool that should be given to women in order to fulfil their roles as full members of the society. That women play a central role in development is becoming increasingly recognized. They are the principal producers of food, the managers of household resources, and the custodians of family welfare.

Adedokun (1998) comments that formal education has affected a silent revolution of immense proportions and has changed the face of Nigerian society more decisively than any other force. Adedokun posits that from the beginning, more men than women have access to formal education. Initially, educated women moved into teaching and other care oriented professions however from the 1930's gradually, more women entered into law, medicine, nursing e.t.c. Considerable prejudice affected the relatively few women who sought employment in the 1940's. The labour code then prescribes a lower salary for single women than men, and women had to resign their appointment on marriage. In some cases, the husband had to give his permission to allow his wife to continue in paid employment. Yet, as Ighodalo, (1990) adds these women had to resign their appointment if they wanted to go on maternity leave. Adedokun (1998) notes that in these regards, things have changed a lot since then, the female population in Nigerian universities has risen significantly. This is a significant achievement which tends to give higher economic and social status to women.

**Women Education in Nigeria:** Women constitute a great percentage of the population in Nigeria are expected to contribute their quota to the development of the country. For individual and national development, it is crucial that females acquire formal education. However, a cursory look at the pattern of women's involvement in education in Nigeria reveals abysmal low levels. In spite of all the laudable goals and objectives of education, Nigerian women still suffer a lot of constraints and inhibitions which militate against their personal and national development.

Ojuolape (2008) reports that about 61% of the Nigerian Women's 74 million population (2006 Census) suffer from intellectual poverty. The early history of education in Nigeria indicates that women lacked easy access to formal education. Sanni (2001) observes that by 1965, 37.7% of pupils in primary schools were girls while only 9% of under-graduates were female students. The figure rose to 25.5% by 1974 and the students were mainly enrolled in such courses as teaching and the Social Sciences. The available figures indicate that the total full time enrolment of females in the University stood at 75,548 as against male population of 168,217 in 2005 (Federal Office of Statistics, Abuja,

2006). Achume, (2004) notes that the early educational curriculum was designed to train women as teachers, nurses, and clerks. They were not in medicine, politics, engineering, law and environmental studies. This obviously resulted in shortage of qualified women for top level leadership posts. In other words, majority of women/females are still not being trained and employed in areas that will enhance their chances at competing for positions in public life. As can be expected, this low level of female education worsens the imbalance of power that has been existing between the sexes. One of the legacies of this is the absence of the female equivalence of the male political class. The plight of women's education in Nigeria is such that provisions for improving women's participation had to be made in the Nigerian National Policy on Education. Section 3, paragraph 11 of the national policy states that:

*With regard to women's education, special efforts will be made by Ministries of Education and Local Government Authorities in conjunction with Ministries of Community Development and Social Welfare and information to encourage parents to send their daughters to school.*

The Nigerian Government took a practical step to improve women's participation in education by establishing a full-fledged Women's Education Section under the Federal Ministry of Education in 1986. Alao and Ajayi (1989) however observe that after more than twenty years of the existence of the Women's Education Section in the Federal Ministry of Education, women's education is still in dire need of improvement.

**The Objectives :** This paper aims to: (i) argue for the introduction and nurturing of information technology assisted educational programmes which will galvanize the education of women as a means of empowerment of women in Nigeria (ii) highlight the factors inhibiting women's education which have contributed significantly towards female mass illiteracy in Nigeria (iii) examine the specific benefits and constraints of IT assisted education and (iv) proffer suggestions for the establishment and running of IT assisted educational programmes for the Nigerian women which would definitely lift them up from the abyss of ignorance, poverty, total dependency on spouses, inferiority complex, lack of self confidence and depression etc.

### **Methodology**

A descriptive survey method was employed in order to investigate the role of information technology as a catalyst for women education and empowerment in Nigeria. The data was generated through interview and documentary analysis. Also, documents and previous studies on IT, education and women empowerment were reviewed. A qualitative data analysis technique was employed in order to analyze the responses from the unstructured interview and related documents.

### **Hindrances to Women Education**

In both developed and developing societies, males have been shown to be better educated than females. Therefore education is the single most institutional barrier to women empowerment. Several factors have been identified as hindrances to female participation in education. One of these is socio cultural restraints such as limited parental resources, early marriages, pregnancy, childbearing, sexual harassment etc. In many societies, the education of women is considered unimportant since girls do not normally pay back in full measure the money invested in them. Again, religious practices of keeping women in Purdah and the Shariah system (in the northern part of Nigeria) hinder women from participation in education. In addition special protective measures aimed at protecting women and enhancing their effective participation has turned round to work against them. For example ILO conventions ban women from night work, underground work and stipulate maximum weight to be

carried by women. It also provides maternity protection and welfare facilities at the work place. Some employers have capitalised on this to discriminate against women and spend less on educating them. Added to the foregoing some have suggested that women are their own worst enemies. Women married to wealthy men sometimes have lukewarm attitudes to education. Some women are lazy, lack proper education and are not making positive efforts to improve themselves.

### **Women Empowerment**

Empowerment is investing legally or formally with power, authorizing, licensing, enabling, permitting, giving people more control over their own life. Women empowerment is a call to action and it involves a process of fundamental change in quality of life of any material being. It is the ability to effect change and make meaningful choices. Sako (1999) defines empowerment as

The process of strengthening the existing capacities and capabilities of disadvantaged groups in society so as to enable them perform towards improving themselves, their families and the society as a whole. It involves the provision of enabling environment for their productive and intellectual abilities to be realized.

Ighodalo (1990) views women empowerment as *a process of enabling women to develop the capacity to actualize their potentials. ...those women should be looked at as individuals that possess some hidden potentials for greatness and so should be encouraged to develop such to the fullest. The process must necessarily also include the expansion of women's access to educational opportunities, facilities for skills acquisition and positions of authority.* There are three basic measures of empowerment. The first is the ability to live a long and healthy life. The second is the ability to be knowledgeable and the third is the ability to have access to the resources needed for a decent standard of living. The focus here is on those achievements that indicate a greater ability on the part of the women to question, analyze and act on the structures of patriarchal constraints in their lives. It involves issues like (a) How women perceive themselves and are perceived by intimate and distant others in society. (b) How women treat themselves and are treated by others. (c) Ability to make key decisions on matters relating to themselves and their children. (d) The kind of say they have in other aspects of decision making in the family. It must be noted here that all these are virtually impossible without education.

### **Contributions of Educated Women in National Development**

Education brings about enhancement of the quality of: living, food, housing, health, clothing, transport, communication, entertainment and gainful use of leisure. If the vast majority of the women folk are educated, their personal development can be enhanced remarkably. Children and husbands also stand to gain tremendously. Women are likely to have more confidence in themselves and their ability to contribute effectively to national development. Education helps in the fulfilment of women's marital obligations. Ability to read about health care, nutrition, body changes, modern household equipment, etc, will improve the performance of her responsibilities to the home and society at large. An educated woman will be able to help her children with their school assignments. This will ensure blissful homes, well-educated and well-behaved children and contented husbands and an endowed nation.

In the area of agricultural development, Adeyeye (1987) observes that half of the world's populations are women and two-third of the work is done by them. About 75 percent of agricultural output in Africa is produced through women's efforts. Ironically, the people that participate most in agricultural production are the least educated. Therefore, provision of basic literacy and skill acquisition for illiterate females will no doubt ensure bumper agricultural production. Added to the

foregoing is the all important area of health. Mothers help in no small measure in securing perfect health for the children and by so doing for the entire community and nation. Educated women have knowledge of basic health care and are able to help others to maintain and improve their own health.

As regards National Reconstruction, educated women are usually better able to assist in nation building and reconstruction. A few women are currently holding powerful positions in our country and in the world. In the area of social development, the improvement of society could be effected through the development of the potentialities of the women folk. The 1978 General Conference of UNESCO meeting noted that:

Increasing educational opportunities for women boosts equity and foster national development. The potential contribution of educated and trained women to labour force and the importance of their education in the improvement of family welfare and planning are factors still under-estimated in national development.

It is also pertinent to mention here that the higher the level of education, the greater the likelihood that a women will stay in the labour force. In the economic sphere, most women engage in small scale or large scale businesses. Also, women who are married to entrepreneurs and big time businessmen will be able to help such husbands if educated. Such women will be able to deal with their husbands' business partners, friends and other highly placed associates without the slightest feeling of inferiority or shame. Educated and gainfully employed women can assist their husbands in financing the home and the education of their children and consequently contribute to economic development.

### **Information Technology in Women Education**

The impact of Information Technology on performance and work practices and procedure is considerable. Slow paper based systems relying mainly on manual operations (e.g. typewriting and listing) are gradually being replaced by micro-electronics based systems relying mainly on telecommunication. Particularly important areas of micro-electronics applications are to be found in information systems which aim to assist by providing information and tools needed to accomplish their tasks efficiently. It assists in decision-making by providing information. It standardizes data collection procedures and caters for people's need to process documents and messages. IT also makes information readily available in interactive form to users.

The inventories of the computer brought about a new dimension in the solution of virtually all human problems. Though the level of computer application in the country has not gone much beyond data processing, the speed and accuracy of the computer has given it an edge over tools. Areas of computer application in education are considerable. Computer plays a vital role in the education especially in areas such as E- learning characterized by programmed computer assisted (CAI) instruction, audio visual aids, interactive video, the internet and the intranet. Armstrong (2006) quotes Pollard and Hillage (2001) as defining E- learning as the delivery and administration of learning opportunities and support via computer, networked and web based technology to help individual performance and development. E- learning enhances learning by extending and supplementing face to face learning rather than replacing it. It is about learning based on technology. The different types of E- learning include:

- (i) self-paced learning when the learner is using technology but is not connected to instructors or other learners at the same time
- (ii) live e-learning in which by the use of technology, the instructor and the learner are together at the same time but in different locations and

- (iii) collaborative learning which supports learning through the exchange and sharing of information and knowledge among learners by means of discussion forums, communities of practice, bulletin boards and chat rooms

As earlier mentioned E-learning is delivered through websites and the intranet; CD-ROMs programmed computer assisted (CAI) instruction, audio visual aids, interactive video, the internet and the intranet are also used extensively.

The programmed computer assisted instruction is one of the fastest growing training and education technique. Although rudimentary machines were used as early as 1924, the widespread availability of computers has greatly furthered the use of programmed education. Computerized education systems are available for a wide range of jobs and topics. Computer simulations of situations are of particular importance. Tasks can be simulated with the aid of computers to allow practical equivalent of on-the-job experiences. The computer permits training in which the trainee interacts directly with the computer programme. A trainee for instance, can read questions on the computer screen supply the answer and immediately receive a grade or a corrected answer. The immediate feedback is quite beneficial especially where the mastery of one unit of material is a requisite for proceeding to a new material.

Audiovisual materials such as videodiscs, videocassettes, and films are also used in educational programmes. The wide availability of video cassette recording (VCR) has encouraged greater use of audiovisual training. A potential valuable use of this is that training sessions conducted by veterans can be taped and distributed widely as instructional materials. This yields the benefit of quality training without the expense of sending people to remote sites. Two way satellite transmission or video conferencing is another advance in audiovisual technology brought about by developments in information technology. Although it is relatively expensive, it allows interaction between trainers and trainees at remote sites such as the northern parts of the country. It provides interactive training worldwide. The development of the interactive video (IAV) further overcomes some of the lack of interaction in the use of audiovisual materials.

Increasingly, computers can be used to access databases and learning programmes from public networks like the World Wide Web using the internet or the intranet. The benefits of this include its consistency; pull vs. push approach, interactivity, ease and low costs of updates, user-friendly interface, centralisation, simplicity in creation and maintenance, flexibility, and its potentials.

The objective is to provide for learning that is “just in time, just enough and just for you.” It enables learning to take place when it is most needed (“just in time as distinct from, just in case”) and when it is most convenient. Learning can therefore be provided in short segments or bites that focus on specific learning objectives. It is “learner- centric” in that it can be customized to suit any individual woman’s learning needs. This means women can learn at home and at their own pace.

E – learning offers up-to-date information to learners who are widely spread geographically. E-learning can enable flexibility of access and interrogation of high volumes of diverse learning resources in different locations. This is particularly useful for women in purdah and those in the Shariah states. Armstrong (2006) asserts that e-learning can speed up the learning process by as much as 50% and focus on critical learning needs. Armstrong adds that the cost of training can be halved by decreasing the number of instructors. Self –paced e-learning can be taken anytime and is therefore a just-in-time approach. It can be taken at any place which eliminates travel needs and costs. The acquisition of skills will take place at any pace and any path, since the learning experience is solely driven by participant and is therefore much personalised.

### **Constraints to Information Technology in Nigeria**

Several inhibiting factors have hindered the development of IT in Nigeria. First is that of poor and inadequate telecommunication facilities. Next is a poor infrastructural facility the most serious being the gross unreliability of public power supply resulting in huge costs of private power generation. Next is grossly inadequate computer facility and low level of computer literacy. In addition there is the poor level of awareness among policy makers and government officials as regards the power of information network in the socioeconomic development of the country. At the national level there seems to be lack of coordination and cooperation for the various initiatives aimed at promoting IT. Furthermore, excessive government regulatory measures create monopolies which in turn create unfriendly environment. Moreover, loss of revenue, security and cultural erosion are issues often highlighted by government agencies to oppose the promotion of information network. Also poor reward system, unattractive work environment among others enhances the outflow of skilled human resources from the country and thereby erodes the degree of capacity building.

### **Recommendations**

Arising from the foregoing this paper recommends one that it must be ensured that information and communication networks are made accessible to a greater number of women and more applicable to their various areas of endeavour. Next, government should create an information friendly environment through the improvement of infrastructural and telecommunications facilities. In addition, there should be computer literacy campaign and education throughout the country. Internet awareness campaigns should be conducted. A conducive environment should be created for capacity building and reduction in brain drain. Lastly there is the need for a national information policy taking into consideration new technology and ensuring effective coordination of information, communication facilities and activities nationwide. Power continues to be a major challenge in the country both in the urban and rural areas and since this is a compulsory requirement for effective information technology, concerted efforts must be made to ensure availability of power nationwide.

Finally, massive investments must be made in Information Technology.

### **Conclusion**

With the emergence of IT which is enhancing access to almost limitless information worldwide, the global village is becoming smaller. Unfortunately Nigeria has virtually been excluded from this phenomenal technological progress. While many developed countries have entered the era of electronic revolution, many developing countries including Nigeria have scarcely mastered the rudiments of the first industrial revolution. To operate effectively in the growing world economy and to ensure the full contribution of women to national development massive investments must be made in IT. The basic principle of IT and E-learning is “connectivity” and this is still very limited in Nigeria.

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