

## The Indispensability of Information Technology, in a Rapidly Changing Information Society

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### Abstract

The paper examined Information Technology in a rapidly changing information society. Relevant Literature were reviewed. The paper discussed the pivotal role of Information Technology in Industrial Development, Technological Advancement, Educational Development, Sustainable Democracy and overall man's survival. The paper was concluded by reiterating the indispensability of Information Technology to day-to-day activities of man in an electronically oriented society.

### Introduction

Williams and Sawyer (1995) described this age as the digital age, the information age, the age of convergence, the multi-media revolution, the information superhighway, the Infobahn, 1-bahn or Dataway.

The present age has been variously described as the post capitalist society, electrically oriented society, the knowledge society e.t.c., whatever be the nomenclature with which the present age is being addressed, one basic incontestable fact about the present millennium is that information is on high demand by all and sundry throughout the globe.

Since information is a precious commodity, countries of the world and organizations are spending fortunes in a bid to get right, accurate and appropriate information that meets their peculiar needs. This is because according to Opeke (2000) countries that are information poor will experience penury in other areas of life. Therefore, information has become a unique commodity with ready sellers and buyers of information products and services. Ifidon (2006) as quoted by the Guardian argued that development will continue to elude Nigeria if leaders continue to plan without adequate information. He described any development plans that were not information-based as transient, disjointed, duplicated, and without any sense of direction or development philosophy. He argued further that there is a positive correlation between developed countries and high level of information utilization on the one hand and developing nations and information illiteracy on the other hand. He urged the policy makers, rulers and administrators to be skillful in the use of information and data to actualize the much-desired development.

For developing countries to soar on the wing of Technology, leapfrog the stages of development and be at par with the advanced countries, the dissemination and usage of appropriate current and relevant information in the Third World is indispensable. Information Technology is a veritable tool and a powerful weapon with which the gulf of development between the advanced and the developing countries can be bridged. Information Technology is the key that unlock the doors of advancement and all round breakthroughs. To keep up with the pace of global technological innovation is to embrace Information Technology. If one will not be lost in the experience of yester-years, Information Technology is the panacea

To keep up with day-to-day changes across the globe one must be fully armed with an indispensable weapon-Information Technology.

Sharma (1994) defined Information Technology as the application of technologies to information handling which encompass all activities connected with computer base processing, storage and transfer of information to users accurately, precisely and speedily. It involves computers, satellites, telecommunication, CD-ROM, facsimile, machine-readable database, library network e.t.c.

Nwaigwe (2005) while quoting Eihikhamena defined Information Technology (IT) as the acquisition, processing, storage and dissemination of information by means of computer, office machines and telecommunication. It became a separate technology by the convergence of data processing technique and telecommunication. In the convergence, data processing technique provides the capability for processing and storing information while telecommunication provides the vehicle for communicating it.

Nwaigwe (2005) further argued that due to IT, various facilities that enable users access information have been invented. They include the telephone, tele-printers, fax machine, photocopiers, microfiche and films, magnetic tape, scanner, punched card and computer etc. They are used for collecting, processing, storing, transforming and disseminating information at incredible speed. The impact of these facilities have so rapidly changed the world and is affecting the cultural, social and economic aspects of human life including the home, health, education, security, finance, industry, commerce and even training. The IT facilities have helped in no small way in having a better-informed society.

In the same vein, Fayose (2004) as quoted by the Guardian contended that an effective universal and cost effective Information Technology system is pre-requisite to the attainment of rapid economic and socio-political development of any nation. It is one of the vital engine of any economy and a very important infrastructural facility that promote the development of other aspects of the economy such as Agriculture, Education, Industry, Health, Banking, Defence, Transportation, Tourism etc. It is also indispensable at the time of national emergency and disaster; going by its historical development. It can be succinctly summarized from the foregoing, that IT is a veritable, virile, vital and indispensable tool in the new millennium that has been tagged the "Information society" In this electronically oriented society that is characterized by unprecedented multi-dimensional flow in information across the globe, the whole globe now appears like a village while a village has been electronically knitted and face-lifted into a globe.

### **Information Technology –key to Industrial Development**

Information Technology is a precursor to Industrial Development. With IT, it is possible now to do electronic banking. Through on-line banking, a customer with a bank can check his account in other parts of the country in Nigeria through the e-banking services. The idea of carrying large sum of money over long distance is becoming a thing of the past. It is also possible to monitor and supervise work force through IT. Quality control can be determined and ascertained using IT. If industries will want to maintain quality and assured product for their numerous customers, IT is inevitable.

Fayose (2004) as quoted by the Guardian, opined that great impact has been made in the manufacturing industry through the use of computers for co-ordination or management. Fayose stated further that 20 percent of the computer installations in Nigeria are

being used for manufacturing functions and that the application area include stock control, works order processing, production monitoring control and process scheduling.

### ***Information Technology and Technological Advancement***

There is a positive correlation between the application of Information Technology and Technological Advancement. It appears as if there is a seamless divide between information Technology and Technological Advancement. The two are inextricably tied together. With information Technology comes all round development. All professionals-Engineers, Architects, Surveyors, etc cannot operate successfully without IT. The technical sector is heavily indebted to IT.

Fayose (2004) opined that IT has been playing a very significant role in the communication sector, like NITEL and GSM. The role of Information Technology in these organizations is in signal transmission, customer billing, service record and general administration. Computers in the communication sector are used in sensing or detecting fault and damages in electricity supply. Construction companies consider the use of computers very important as they could be used for estimating document preparation and structural design especially with the use of special computer packages like the Auto CAD. In transportation, the airlines, including the national carrier, Nigerian Airways, have computers which are used for flight booking, documentation, weather forecast, security and customer billing etc. In the shipping lines, freight loading and billing are handled in an automated way for accuracy and effectiveness and this has in no small means contributed to the economic development of the nation such as Nigeria.

### **Information Technology and Educational Development**

With IT comes the Information Communication Technology (ICT). With ICT, researches can be carried out with much rapidity than ever. New methods of teaching that would deliver the best service and at the same time save the time of the teacher and student are coming up with ICT. We can now talk of virtual library, electronic books, electronic journals due to IT. Distance learning, open University or what has been called "University without walls" is now made possible with ICT

If Nigeria is to keep pace with the Geneva World Summits on the Information Society (WSIS), the one indispensable and essential thing is the adoption of IT in her educational setting. The one laptop per child United Nations Development programmes (UNDP) initiative in Nigeria is a positive step along this direction (The librarian, 2006).

### **Information Technology –key to Sustainable Democracy**

Information has been described as an empowerment tool. A well –informed citizen is an asset to the leadership of the country. If the followers are to appreciate, support and back the activities and programmes of their leaders, the programme must be well articulated and understood by both parties. Through IT, e-governance is now possible. The activities of the government can be relayed on-line through the electronic media. This has the potency of reducing friction and averting unnecessary crisis in the society. In Nigeria, the present monthly Presidential chart on Nigerian Television Authority is a kind of e-governance programme. The challenge for leadership at local, national and international level is surely that of enabling the individual to contribute to society. This has been described as empowerment or super leadership. With IT, it is possible to embark on electronic voting

which has advantages of enhancing transparency and reducing election rigging, which is a bane of sustainable democracy in developing countries.

### **Information Technology and Man's Survival in the New Millennium**

Information Technology has pervaded all spheres of life. Without Information Technology, man's existence and continual survival is at stake. IT has become part and parcel of life of man. As it is impossible to have electricity without the tiny cables, as it is impossible for man to survive without heart, so it is impossible for man to survive in this new millennium without the world-life-wire- IT. IT is the heart of all man's activities now. It is the pivot on which all man's meaningful activities are hinged. Without Information Technology, man will go back into retrogression, backwardness and misery. Man's future and the future of the world for meaningful and progressive existence are also dependent on IT. Without IT, man's future is bleak and uncertain.

Williams and Sawyer (1995) discussed the versatility of IT in the new millennium in such a way that IT can replace man and perform some activities of man far better and with more accuracy than man could have done. Robot according to William and Sawyer is an automatic device that performs functions ordinarily ascribed to human beings or that operates with what appears to be almost human intelligence. With perception systems devices, human capabilities of sight, hearing, touch and smell can be emulated by the robot. An expert system is an interactive computer program that can apply rules to input in such a way as to generate conclusion, the program helps users solve problems that would otherwise require the assistance of a human expert. With neural networks, the neurological structure of the human brain can be mimicked.

### **Conclusion**

It can be concluded from the foregoing discussion that the indispensability of Information Technology (IT) in a rapidly changing Information society cannot be over emphasized. IT is inextricably tied to man's day to day activities and his eventual survival and perpetual meaningful existence in the new millennium. IT is the hub on which the entire life of man is hinged in the new millennium. It is the pivot on which man's activities revolves. To embrace IT is to embrace progress, revolution and all round development and vice versa. It is an indispensable tool for educational, industrial, political, cultural, technological, structural, and informational revolution etc. IT saves time, cost, energy; enhances peace and progress. It is a veritable vehicle of change and a tool for management of local and international changes.

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