
MATCHING TOWARDS EFFECTIVE USE OF ELECTRONIC TECHNOLOGY FOR AN IMPROVED ECONOMY IN NIGERIA

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Abstract

The economy of Nigeria is poor and so the nation needs to make effective efforts towards ensuring sustainable socio-economic development. Electronic technology can play a role in ensuring an improved economy in Nigeria. The paper focused on utilizing the benefits which electronic technology provides to achieve an improved economy in Nigeria. Issues discussed in the paper are meaning of electronic technology, importance of electronic technology in socio-economic development, and fostering the use of electronic technology in Nigeria. The paper pointed out that electronic technology has led to the existence of computer, Internet, telecommunication and security devices which are useful in socio-economic development. Fostering electronic technology in Nigeria demands effective education in science and technology, focus on indigenous technology and embracing of good moral. Certain recommendations were made as regards the importance of electronic technology in ensuring socio-economic development in Nigeria.

Key Words: Electronic technology, computer, Internet, improved economy, socio-economic development.

As a developing nation, Nigeria has a poor economy as shown by her low standard of living. There is great need for the nation to improve her standard of living. Ibenta (2004) asserted that Nigeria and some developing countries do not experience enormous economic benefits brought about by technological process as seen in industrialized nations and, as such, there is wide spread poverty, hunger and disease, inadequate shelter and environmental squalor, lack of good motorable road network, portable water, electricity and telecommunication facilities.

Among the reasons for poor socio-economic development in Nigeria is low level in acquisition and utilization of knowledge and skills in science and technology. Adedeji (2004) asserted that “developing countries cannot but employ technological skills, technical training and technical education in order to catch up with the current trends of the global economy and development”. Danaan (2006) opined that developing countries are poor and weak in their level of technology involvement including

information and communication technology (ICT). An aspect of science and technology needed to ensure development in Nigeria is electronic technology.

This paper discusses how focus on electronic technology can help to achieve an improved economy in Nigeria. To enhance understanding of the paper, issues looked at are: meaning of electronic technology, importance of electronic technology in socio-economic development, and fostering the use of electronic technology in Nigeria. Certain recommendations were made as regards the use of electronic technology for an improved economy in Nigeria.

Meaning of Electronic Technology

Radio, television, computer, telephone, video machine and Internet are the systems or devices that easily come to the mind whenever electronic technology is mentioned. Nwosu and Chijioke (2004) pointed out that electronic technology has led to production of solid state devices such as diodes, transistors and integrated circuits and the devices have helped in the development of electronic systems such as computer system, communication system and security system.

Simply defined, electronic technology is practical application of knowledge of electronics. According to Pitt (1977), electronics is “the study, design and use of devices based on the conduction of electricity in a vacuum, a gas or a semiconductor. Modern electronics is principally concerned with semiconductor devices; vacuum and gas filled devices are becoming obsolete apart from a few specialized uses”. Sinclair (2004) defined electronics as “the science and technology concerned with the development, behavior and application of devices that use moving electrons, ions or holes”. Chiwetalu (2004) also asserted that electronics involves the study, design, construction and application of devices whose operations are based on the conduction of electricity in vacuum (vacua), or gases or semiconductors. It can be said that electronics deals with electrical charges in relation to vacuum, gas, and (especially) semiconductor.

The existence of electronic technology has brought modernization in human society. In fact, it can be said that electronic technology has contributed greatly to the socio-economic well-being of human society.

Importance of Electronic Technology in Socio-economic Development

A great product of electronic technology useful for sustainable socio-economic development in Nigeria is the computer. Computer is a device that uses an intellectual map called programme to make decision, process word, publish, create graphics, choose, copy, move, compare, and perform other non-arithmetic operations on the many alphabetic, numeric and other symbols in a desired way (Johnwakolo, 1995).

Computer system is being used in the world to carry out tasks initially done manually; so, it is an essential technological device that has helped man in his activities towards personal welfare and national development (Okwoche, 2004). Sadiq, Nnebe and Momodu (2004) noted that computer is useful in human endeavor for it is a machine used for fast generation, calculation as well as storage of information; and its invention serves as a useful assistance to manual labour since it quickens data processing activities or functions, and also computer can be used as mediators in facilitating communication, interaction, comprehension, stimulation, simulation, evaluation, assessment, synthesis, recreation, etc.

Due to the presence of computers, there is the existence of information technology (IT) - a term used interchangeably with information and communication technology (ICT). Information technology is an integration of computer technology and telecommunication technology; and it deals with generating and distributing information for the well being of the human society. According to Anand (2006), information technology is “the application of appropriate (enabling) technologies to information processing. The current interest centres on computing, telecommunications, and digital electronics.” Idogho (2007) viewed information technology as “the creation, gathering, processing, storage and delivery of information; and the process and devices that make all this possible”, Mbam (2006), in quoting Sambo (2001), stated that “IT enhances the amalgamation of data, images (including photographs and illustrations), texts, documents, voice and many other items intelligently to make a meaning in the process of communication”.

A prominent aspect of information technology is the Internet, which is the world’s largest computer network that has many advantages in its use. The Internet makes communication from any part of the world possible and has enabled globalization of knowledge and ideas. Nwosu and Chijioke (2005) noted that the Internet provides information that enables its users to enhance their socio-economic activities. By browsing through the Internet, educative information and knowledge can be obtained for improved economy. It is an axiom that education is a vital activity for human and national development. The Internet is an electronic technology that makes electronic learning (e-learning) possible and e-learning facilitates and enhances distance education for it enables acquisition of knowledge and skills, without face to face contact with teachers, students and/or researchers.

The use of the Internet for communication brought about electronic mail (e-mail), which provides fast, economic and convenient means of sending and receiving information among people. Other uses of The Internet in communication are its use in facsimile, electronic bulletin board, data base record, files transfer and online phone. Internet makes e-commerce possible for business transactions needed to boost socio-economic activities. With e-commerce, it is possible to bring together customers,

vendors, suppliers and employees online, thereby dismantling distance and boundaries in business transactions. The ability of people to communicate and interact with one another without travelling indicates that the Internet helps in minimizing transportation hazards like road traffic congestions and road accidents; and hence, shows how an electronic system is used to promote socio-economic development in a nation.

Electronic devices are used in telecommunication for improving the economy of a nation because large human population can be effectively communicated. Usually, telecommunication deals with the transfer of information using electromagnetic waves and it involve the use of electronic systems like radio, television and telephone. Nwosu and Chukwuebuka-Nwosu (2007) asserted that “the advantage in the use of telecommunication is that it covers a large audience because it addresses the problems of time and space by breaking physical barriers of distance”. According to Idogho (2007), “the introduction of mobile phones has increased the spread of information from one person/business to another with a net result of increased productivity”. Mbam (2006) acknowledged that “satellite television network links the entire world through the satellite system such that whatever is happening in one part can be seen or watched in other parts.”

Electronic technology plays some role in protection of life and property. For an improved economy, there is need to safeguard life and property. Various electronic devices can be built for the purpose of security. A security device is built to indicate the presence of an illegal person, an intruder or a criminal. The security system can be a computerized one such that a computer is applied in its operation. Also the Internet can serve as a medium for securing intellectual property. With the Internet vital information documented in a secured website can be retrieved for continuous usage even if such vital information, documented physically in print, are lost or damaged.

Electronic technology also helps in fostering socio-economic development for it creates avenue for employment. It is well know that employment helps people generate income for comfortable and healthy living and avoid idleness that leads to social vices which are detrimental to socio-economic development. Employment opportunities in electronic technology can be for maintenance and repair, design and construction, lecturing/teaching, marketing/sales, and management. These employment opportunities enable people, especially unemployed youths engage in entrepreneurship for income generation.

Fostering the Use of Electronic Technology in Nigeria

It is observed that the level of exposure and application of electronic technology in Nigeria is not appreciable. Pablo (2005) noted that Nigeria as a less developed nation has a low level of computer literacy and so she has not fully benefited from ICT and such benefit will not be experienced in the near future. It is the view of

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Inyiama (2004) that Nigeria is poor in the use of information technology, thereby making a low impact towards the evolution of appropriate learning process for the future. Ibenta (2004) opined that Nigeria has not fared particularly well in the growth of her own national telecommunications, computing and information technology networks to acceptable standards of performance.

To build a strong orientation towards electronic technology for an improved economy in Nigeria effective education in science and technology is required. Nwosu and Nnabuenyi (2006) asserted that it is essential that every society should desire for a solid orientation towards science and science-based education for it plays a vital role in technological advancement. With effective education in science and technology, there can be a strong base for advancement of electronic technology such that there can be an enhanced economy and actualization of self-reliance.

The issue of self-reliance calls for focus on indigenous technology. Development of indigenous technology requires the spirit of patriotism. Patriotism can be useful in conceptualizing on how to foster indigenous-based electronic technology. It is expected that scientists, technologists and engineers in Nigeria should work hard and engage in researches for the advancement of indigenous-based electronic technology.

Another way to foster the move towards use of electronic technology in Nigeria is embracing of good moral by the citizens in their human endeavours and activities. Nwosu (2003) pointed out that the rationale for good moral life is for the wellbeing of individuals and the entire society; and so good moral life aids national development but immoral acts negate or inhibit advancement in a nation. Nkamuo, Ezeilo, Nwosu and Onwughalu (2011) asserted that immoral acts and corruption can negatively affect the development of electronic technology in Nigeria. Idogho (2007) opined that parents/schools, government agencies and even NGOs need to organize intensive enlightenment campaigns/programmes for students/young users on the potential educational benefits of observing moral/ethical issues in the use of information technology facilities like the Internet, and avoid spending their after-school time largely on computer games, computer chit-chats, pornography, internet surfing, etc at the expense of their home work.

Conclusion

For an improved economy in Nigeria, there is an urgent need to have a strong focus and orientation towards electronic technology. Electronic technology serves as a resource for poverty alleviation. This is because electronics can serve as a facilitator for provision of information, acquisition of education, economic empowerment, social and political interaction.

Based on the relevance of electronics for an improved economy, there is need for Nigeria to match towards effective research and education on electronic technology.

In this era of the world becoming a global village, there is the need for Nigeria to queue in and be active in electronic technology. In fact, individuals, organizations and government should make serious efforts and give necessary supports towards advancing in electronic technology for a sustainable socio-economic development in Nigeria.

Recommendations

To encourage the use of electronic technology for an improved economy in Nigeria, it is recommended that:

- ❖ government should ensure that there is a boost in the power supply for effective energizing of electronic systems.
- ❖ government and stakeholders in education should ensure effective teaching-learning process in electronic technology.
- ❖ government, organizations, and well-to-do individuals should give technical and financial support to the training and development of people who have technical ingenuity in acquiring knowledge and skills in electronic technology.
- ❖ Nigerian students and youths should desire quality education in electronic technology more than mere possession of academic certificates.

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