
The Undercurrents of ICT Skill Acquisition in Nigeria: Problems and Prospects

¹Ifejiofor, Adaobi Patricia, ²Nwankwo, Cosmas Anayochukwu

¹Department of Educational Foundations, Chukwuemeka Odumegwu Ojukwu University, Igbariam, Anambra State, Nigeria

²Department of Marketing, Chukwuemeka Odumegwu Ojukwu University, Igbariam, Anambra State, Nigeria

ABSTRACT

The continuous changes in technology have led to a revolution in Information and Communication Technology (ICT). This has brought challenges and opportunities in Nigeria especially to all level of educational institutions. This paper reviews the concept of acquiring ICT skills in Nigeria; the problems and prospects.

Keywords: Information System, ICT, Technology, Computer, Problems and Prospect.

INTRODUCTION

Education world over is being redesigned to fit more into the electronic age for the purpose of efficiency as such Information and Communication Technology (ICT) is a powerful tool for enhancing quality education. As human being, one of the major features of man is the ability to acquire knowledge, and what makes this knowledge to excel is also the man's ability to impact this knowledge to others (Sukanta, 2012). This transfer of knowledge is one of the most fundamental social achievements of man. Increase in the development of Information and Communication Technology (ICT) particularly the internet, is the most amazing phenomena associated with the information age because ICT helps in powering access to information, enables new forms of communication, and serves many online services in the spheres of commerce, culture, entertainment and education. Burnett (1994) revealed that Information Communication Technology has been embraced by many developed and developing nations, in both Africa and the world in general of which Nigeria is not exempted. He also observed that efforts have been made by different government to inculcate internet connectivity and technology training programmes, to improve educational research, enhance cultural understanding and skills that youths need to attain the needed computer literacy level. On this note, concerted efforts have been made by many governments to initiate internet connectivity and technology training programmes that link schools around the world in order to improve education, enhance cultural understanding and develop skills that youths need for securing jobs in the 21st century (Aduwa-Ogiegbaen & Iyamu, 2005). Nduka (2003) in Emmanuel & Barau (2012) postulates that computer literacy is now regarded as the new literacy. Based on this, most developing countries including Nigeria has integrated ICT learning in schools with its facilities and qualified personnel in order to produce technology proficient and efficient students. To further buttress on this, Leach, (2005) opined that ICT is 'an essential aspect of teaching's cultural toolkit in the twenty first century, affording new and transformative models of development that extend the nature and reach of teacher learning wherever it takes place'.

According to World Bank (2007), ICTs are computer tools used to meet with the information and communication needs of individual and organization. They further opined that ICT also include the use of hardware, software, networks and media for the collection, storage, processing, transmission and presentation of information (voice, data, text, images) as well as related services. Asogwa (2008) in his contribution observed that Information and Communication Technologies (ICTs) are increasingly shaping educational institutions and the way in which education programmes are

**Address for correspondence:*

caokoro@yahoo.ie

developed, marketed, instructed, delivered, serviced and evaluated are all attributed to ICT. Osakwe (2012) defined ICT as an electronic device for managing and processing information with the use of soft and hard wares to convert, store, manipulate, protect, transmit, manage, control and retrieve information for the enhancement and productivity of personal and organizational activities. Within the ICT domain, there are three major actions of Information Communication Technology that are very important. They are:

- Recording of data and information
- Transformation of the data and information into knowledge which can be shared and
- Communication of the data, information and knowledge.

Fitzgerald & Werner (1996) stressed that computer aids teachers in teaching and learning, which is rapidly becoming one of the most important and widely discussed issues in contemporary education system. There is no doubt that computer can aid the instructional process and facilitates students 'learning. Many studies have also shown that there is a positive effect and relationship associated with technology aided instruction and teaching.

In Nigeria, a lot of efforts have been made by many governments to initiate internet connectivity and technology training programme, such programmes link schools, individuals and organization around the world in order to improve education and research, improve organizational productivity and also enhance cultural understanding and skills that youths need to attain the needed computer literacy level. Computer has the capacity to provide higher interactive potential for users to develop their individual, intellectual and creative-ability. The adoption of ICT and other computerize technology over other teaching aids includes the development of human mental which allows people to both successfully apply the existing knowledge and produce new knowledge that will enhance human capacity and environmental sustainability (Kaku, 2005). As Nigeria go into the exciting and challenging Information Communication and Technology period, it is pertinent to assess how far the country have gone, what she knows or have as well as what she do not have. Nigerians must be objective and realistic about what they have achieved, where they are coming from and where they are going to (Idowu & Esere 2013). It is on this basis, that this study is poised to review the developmental strand, problems and prospects facing ICT in Nigeria.

The Emergence of ICT in Nigeria and the Journey so Far

The emergence of ICT in Nigeria started in the early 50's with the initiative focusing on print and electronic media. At that point, no major policy was achieved because of government laws. Idowu, Ogunbodede& Idowu (2003) observed that the full awareness of the importance of ICT was completely absence within that time, only the private sector demonstrated ICT initiative Imadeye (2002). Therefore in order to strengthen the ICT programme in Nigeria as it was in some developed nations, the former president Olusegun Obasanjo in 2001 established the National Information Technology Development Agency (NITDA) to serve as a bureau for the implementation of National Policy on Information Technology. NITDA in her effort to execute their duty, focus on the introduction of internet technology in almost all the sectors excluding the health sector (Federal Republic of Nigeria, 2001; Idowuetal, 2003).The overriding objective of the National Telecommunications Policy is to achieve the modernization and rapid expansion of the telecommunications network and services, social development, and integrate Nigeria internally as well as into global telecommunications environment.

Deregulation of the telecommunications sector brought about the introduction of Global System of Mobile Communication (GSM) which the providers includes MTN, Airtel, Globacom, Visa Fone, Etisalat, Mtel (Jide, 2014). With the invention of GSM technology in the development of telecommunications, the growth of telecom sector however has been tremendously great, has become the most popular way of voice communication and has provided massive employment opportunities to the masses which have made Nigeria to be ranked as the fastest growing telecommunications market. (Jide, 2014) further observed that telecom sector is the largest generator of Foreign Direct Investment (FDI) since after Oil and Gas sector. According to the former Chief Executive of NCC, EngrNdukwe telecoms investment in Nigeria since 2001 had exceeded USD 18 Billion.

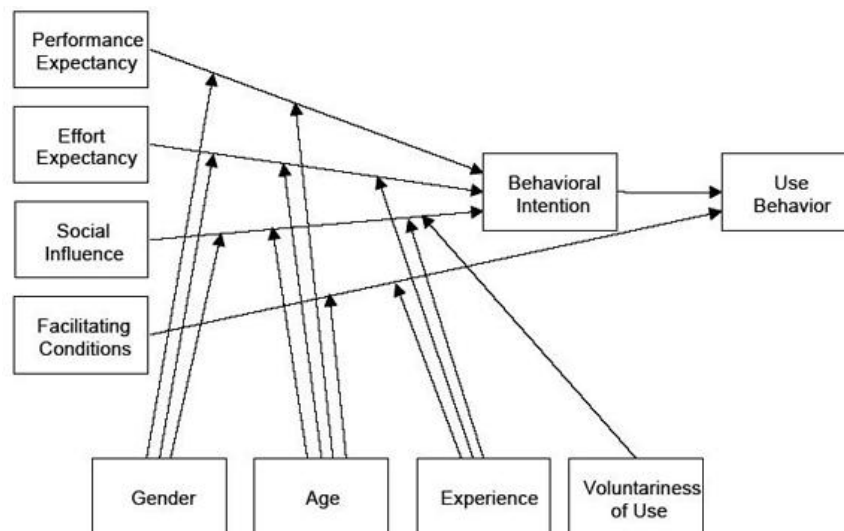
CONCEPTUAL REVIEW

Scholarly, a number of arguments on the concept of ICT have been evaluated from different academic spectrum. According to Adesote & Fatoki (2013) the term ICT was introduced in the early 1990's to replace the term Information Technology (IT). In recognition of the communicating ability and facility offered by modern computer and electronic devices, most people see the term ICT as a veritable tool in uniting the entire universe. People in higher education saw it as Communication and Information Technology which invariably referred to be the same (Salau, 2005). The term ICT covers a whole range of applications, techniques and systems (Clarke, 2006). Lallana & Margaret (2003), in their contribution observed that ICT refers to a broad field encompassing computers, communications equipment and the services associated with them. This implies that ICT is not just considered as applications and systems, but also as skill for life. Clarke (2006), in addition, postulates that the development of ICT is paramount to the well-being of human persons in a contemporary society.

However, Adomi & Kpangbam (2010) described ICT as electronic technologies used for information storage and retrieval. In another vain, Scolt (2002) describes ICT as a range of application, communication and technology which aid information retrieval and research communication and administration. These include online databases, library services and fax machine. It has become a global phenomenon of great importance and concerns in all aspects of human endeavour, spanning across education, governance, business, labour, market, shares, productivity, trade, agriculture, commerce amongst others Agbetuyi & Oluwatayo (2012). To further buttress this, the study views ICT as the collection of applications, softwares, communication facilities and technologies that aid information gathering, storage and retrieval.

Theoretical Model

Table 1. Unified Theory of Acceptance and Use of Technology (UTAUT)



Source: Venkatesh V., Morris M., Davis G., Davis F. (2003). *User acceptance of information*

Technology: Toward a unified view. MIS Quarterly, 27, 425-478.

This study is anchored on the Unified Theory of Acceptance and Use of Technology (UTAUT) developed several years ago out of Technology Acceptance Model (TAM). The theory was developed to explain the reason for ICT/information system in skill acquisition in all spare of human existence. The Unified Theory of Acceptance and Use of Technology is a model designed by Venkatesh, Morris, Davis & Davis (2003). The theory is developed as a comprehensive synthesis of prior technology acceptance research. UTAUT has four key constructs (i.e., performance expectancy, effort expectancy, social influence, and facilitating conditions) that influence behavioural intention to use a technology and/or technology use. These constructs and definitions were adapted from UTAUT in a consumer technology acceptance and use context. Here, performance expectancy is defined as the degree to which using a technology will provide benefits to consumers in performing certain activities; effort expectancy is the degree of ease associated with consumers' use of technology; social

influence is the extent to which consumers perceive that important group (family and friends) believe they should use a particular technology; and facilitating conditions refer to consumers' perceptions of the resources and support available to perform a behaviour (Venkatesh et al. 2003; Brown and Venkatesh 2005). According to UTAUT, performance expectancy, effort expectancy, and social influence are theorized to influence behavioural intention to use a technology, while behavioural intention and facilitating conditions determine technology use. Also, individual difference variables, namely age, gender, and experience (exclude voluntariness, which is part of the original UTAUT), are theorized to moderate various UTAUT relationships. Furthermore, it is pertinent to say that information communication technology which is one of the key tools of modern technology is vital in the training and acquisition of various skills both in business and the whole economics spectrum.

Problems Encountered in the Use of ICT in Nigeria

Several factors have hindered the successful use of ICT in Nigeria. These factors amongst others are lack of government interest in providing ICT skills to Nigerians, High cost of acquiring, maintaining and installing of ICT, Recruitment of unqualified personnel, Unavailability of relevant software, high cost of purchasing of ICT software's, lack of steady power supply.

❖ Lack of Government Interest in Providing ICT Skills to Nigerians

The government of Nigeria has not played significant role in the development and provision of ICT in the country. According to Adomi (2005), ICT development and application are not well established in Nigeria as a result of poor infrastructure and government support in terms of finance. Therefore, the attitude of government to financially motivate the teaching staff through provision of computer even on loan basis or in a subsidized rate is not encouraging and as such, makes it difficult for many people to acquire computers and its services with their meager salaries.

❖ High Cost of Acquiring, Maintaining and Installing of ICT

The prices of purchasing computers in Nigeria are very expensive more than in developed countries. Most homes in Nigeria cannot afford a personal computer and therefore not acquainted with ICT due to high cost of it. Most public schools cannot afford to equip their schools with computers nor have ICT Centers built for teaching and learning of ICT in their various schools. The high cost of ICT facilities has hindered the acquisition and installation of ICT for use by Nigerians.

❖ Lack of Basic Knowledge

Many Nigerians are not aware of ICT facilities especially people from the rural areas and one cannot do magic over what one has no knowledge of. The ICT programmes are not thought in schools and such make it difficult for people to be aware of it. Most people also have little or no knowledge of ICT and as such not expose and familiar to the use of ICT, and this has pose a serious problem for Nigerians not to get acquainted to acquisition of ICT skills.

❖ Epileptic Power Supply

There has been unsteady power supply in Nigeria and this had made people unable to use the ICT facilities regularly, nor at their own 3pace. Inadequate power supply has brought about digression and failure to achieve the expected goal as at when desire.

❖ Unavailability of Relevant Softwares

According to Salomon (1989) in Aduwa-Ogiegbaen & Iyamu (2005), there are clear indications from many countries that the supply of relevant and appropriate software's is a major bottleneck obstructing wider application of the computer. There is need for people to be trained for the production of relevant software's that should be suitable for Nigeria educational system and curriculum bearing in minds the cost and availability of software designers.

❖ Recruitment of Unqualified Personnel

The absence of qualified personnel to train other people and repair broke down computers for continuity and institutions have been a major problem in the acquisition of ICT in Nigeria. For ICT to properly function in the society there must be massive recruitment of qualified personnel and experts to take up the teaching of ICT. To get these personnel to teach in the ICT centers involve costs which most schools and organizations cannot afford. Adomi & Kpangban, (2010) reported that 75 percent of

teachers in the New Partnership for Africa’s Development (NEPAD) e-schools project have no or over limited experiences and expertise regarding ICTs in education.

Many Nigerians are not aware of ICT facilities and one cannot do magic over what one has no knowledge of. Most people are not exposed and familiar to the use of ICT, they do not have the proper knowledge of ICT and this has posed a serious problem for Nigerians not to get acquainted to acquisition of ICT skills.

ICT Prospects

With the numerous problems facing the acquisition of ICT skills in Nigeria, the following prospects have been put forward to proffer solution to the aforementioned problems;

- The use of ICT in teaching and learning has enhanced educational system by using carefully prepared computer programmes to ascertain that learners are well instructed. Government being the controller and driver of economic system should support the train by carefully providing computer and its internet services to all her citizens at a very subsidized rate if not free of charge. These will on a long run encourage the adoption and application of ICT in one daily dealings and acquisition of skills.
- The adoption of ICT in schools has helped in the development of skills in all area of human existence. Due to the high costs of acquisition, maintenance and installation of these devices, many schools have found it very difficult to acquire, maintain and install these device. Therefore, proprietors of schools should seek grants from international bodies as well as government at all level to enable them build a formidable ICT centers that will promote entrepreneurial minds. Government at all levels should invest in ICT by introducing waiver in the importation of ICT facilities. Government can also enter into partnership with computer manufacturing firms as this will reduce the high costs of acquisition of ICT devices.
- Enlightenment programme should be organized by government, private sector and individual in order to create awareness on why people should study on the ICT related courses. Government should organize a curriculum where ICT related subjects should be thought in schools from primary to tertiary level as a compulsory course as this will enhance creating awareness on ICT skill acquisition.
- The provision of steady power supply is very important for the continuous practice of ICT. In fact there is no effective teaching and learning of ICT without steady power therefore government should provide steady power supply to schools or provide alternative to that to help in teaching and learning of ICT skill acquisition to people as this new method of teaching with computer exposes students to explore the internet and gather all information needed to move forward. The role of the teacher in this situation, changes from information dispenser to that of information manager, from authoritative source of information to a guide of self – propelled exploration Smith, (1989).
- The government can enter into partnership with ICT material manufacturing companies to enable them establish their manufacturing or assembling companies in Nigeria and this will make the computers, its relevant ICT software and the accessories cheap for the people to purchase and there is need for qualified personnel to be trained for the production of relevant software’s that should be suitable for Nigeria educational system and curriculum bearing in mind the cost and availability of software designers.
- Finally, there should be skill acquisition centers set up in different parts of the country and qualified personnel’s should be recruited for the training of people in the ICT skill acquisition. This will enhance the teaching and learning of ICT programs such that students after the days lecture can come back to practice on his own pace in order to get to perfection where the computer play the role of the tutor and present the learner with a variety of contents and symbolic modes Aduwa-Ogiegbaen & Iyamu (2005).

CONCLUSION

It is believed that the strength of any nation of the world depend solely on its educational and technological know-how. Nigeria is a nation where technology is needed most to develop both her economy and human resources. But due to the numerous challenges facing the adoption and

application of this laudable programme, the country has continually experienced slow pace of development in all sector. This study examines the emerging trends of ICT in Nigeria, the problems militating around ICT acquisition and the prospects thereof in the development of teaching and learning process.

The study recommends government, students, teachers and all citizens' hand on deck to promote the Nigerian Educational System through the full adoption and application of ICT in all levels of learning. This can be achieved through government subsidizing the price of computers and other internet facilities to enable the low income earners, teachers and students get access to them.

ICT centres should be built in strategic position by government and some private institutions including NGOs (Non-Governmental Organizations), for adequate provision of the required ICT infrastructure and facilities for effective academic globalization. The government should also encourage indigenous production of computer like Zinox by helping them assess loans from banks with low interest for the betterment of Nigerian people.

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