

UTILIZING INFORMATION COMMUNICATION TECHNOLOGIES FOR FACILITATING BUSINESS EDUCATION INSTRUCTIONS IN NIGERIA

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Abstract

Owing to the continuous increase in human knowledge and technological sophistication, it has become obvious that in order to cope with global standards, school instructions must be facilitated by the use of Information Communications Technologies. However, while some regions of the world are already transformed by remarkable ICT sophistications in almost all their sectors, especially education; it is ironical that some other regions are yet to begin. Hence, this paper attempts to highlight on the status of business education with regard to ICT adoption and utilization in Nigeria.

Keywords: Nigeria, ICT Policy, ICT Adoption, Business Education.

Introduction

In a report by (ITU, 2012), it was observed that one of the strongest indicators of ICT adoption is internet access and use. But out of the estimated population of 7 billion people in the world, 2.7 billion have access to the internet, and are using it. However, for Africa, despite its enormous population, being the second largest in the world, it is the least region in terms of internet access and use - with only 16% of its population (fewer women than men) using the internet as at March 2013. Congruently, in Nigeria, despite her wealth, the percentage of individuals using the internet as at December, 2012 is only 28%, while Malaysia has 61% and Qatar has 86% being the highest among developing nations (ITU, 2012; UNESCO, 2012).

Over the past few decades a wide digital divide has continued to exist between several regions of the world. Whereas, some regions are characterized by highly integrated ICT transformation on the other side of the coin some regions are just gathering momentum to begin (UNESCO, 2010). Have you ever imagined that while several teacher-educators in business education across the globe are utilizing highly sophisticated computer hardware and software, plus interactive learning tools like the 'collaborative blackboards' (Larkin & Belson, 2005), in Nigeria teacher-educators in business education are still utilizing manual typewriters (Isiyaku, 2009; Ugwuogo, 2013) and the traditional 'classroom blackboards' for traditional learning? This digital divide, is crucial for research, and it is the central concern of this paper.

The Meaning of ICT

In the late 1970s Information Technology (IT), was the term used for computers and computer peripherals like printers, floppy disks drives, scanners and the early digital cameras; whereas the term Information Communication Technology (ICT), describes technologies of the internet along with computer networks, World Wide Web, e-mail and search engines used in producing and sharing information (UNESCO, 2010). This means ICT refers to those technologies that enable us receive information and communicate or exchange such information with others.

ICT Utilization Model

To ascertain the stage of ICT integration, reached by a region, a country, a district, an individual school, or even a class within a school, (UNESCO, 2010) has utilized a model that serves like a scaffold or framework for interpreting stages of ICT adoption and use. The model is a representation of the stages of ICT integration in education.

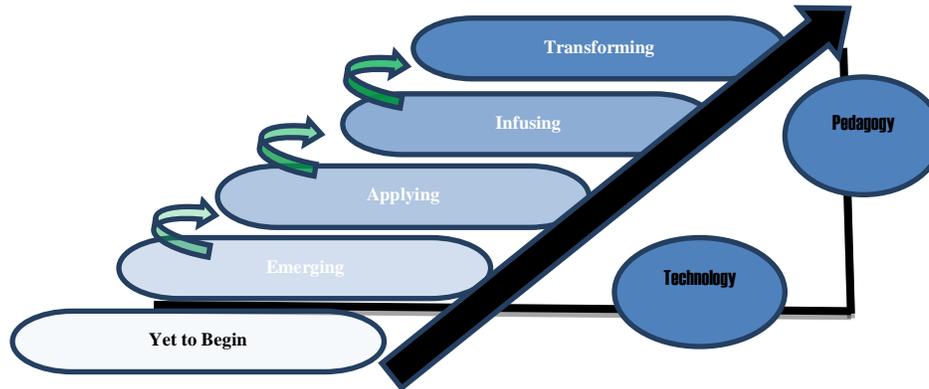


Fig 1 (Stages of ICT Adoption and Use)
Source: (UNESCO, 2010)

Interpreting the Model

The dimensions and stages in UNESCO's ICT Adoption model are interpreted as follows:

Technology and pedagogy dimensions: According to UNESCO (2010), the above model represents two dimensions of ICT integration, namely technology and pedagogy. The technology dimension represents the systematic acquisition of all the tools that ICT comprise; whereas the pedagogy dimension represents a continuum of changing teaching practices owing to the adoption of varieties of ICT tools. According to them, there is a general consensus that ICT integration in education proceeds progressively in a series of broad stages shown in the model as emerging, applying, infusing and transforming.

Emerging stage: As claimed by UNESCO (2010), at the emerging stage of ICT adoption and use, teachers frequently use available equipment for personal and professional purposes of word-processing and spreadsheet tasks, e-mail, internet and the likes.

Applying stage: UNESCO (2010) also claimed that at the applying stage, schools have acquired vast ICT equipment and have adopted policies and strategies that support the implementation of ICT content curricula in different subject areas, leading to the application of a wide range of ICT tools for designing, modeling and simulations in their teachings. Accordingly UNESCO (2010) stated that at this stage the teachers' opportunity to apply ICT is only limited by lack of ready access to ICT facilities and resources.

Infusing stage: The infusing stage of ICT adoption is characterized by a scenario where almost all classrooms are fully equipped with computers, and all school offices and the library are connected to internet; plus a wide range of other ICTs in laboratories and administrative offices across the institution. Hence, teachers are now able to integrate ICTs in all aspects of their professional lives to improve their own learning as well as the learning of their students (UNESCO, 2010).

Transforming stage: UNESCO (2010) has proposed that the stages in the above model are not necessarily hierarchical, but rather, they are stages that teachers typically experience in developing competence to confidently use ICTs with ease, while their pedagogies and the learning of their students are positively transformed. Hence, UNESCO (2010) claimed that the infusing stage is what leads to transformation, where ICTs are fully integrated in all regular classroom learning activities in

a way that symbolizes a rethink and renewal of the overall institution in creative ways. Accordingly, (UNESCO, 2010) claimed that the symbol of this transformation is the complete adoption and utilization of ICTs as part of the daily life of the institution.

ICT Policy in Nigeria

For Nigeria to fit into the technological world, it has no option than to think of integrating and utilizing ICTs in every facets of human endeavor in the country. Thus, according to (NPIT, 2001) the necessity for a policy on national Information Technology (IT) was marked out after the participation of the Nigerian delegation in the first African Development Forum on the Challenge to Africa on Globalization in the Information Age, held in Addis Abba in October 1999. Sequel to this, a national workshop on the National Information and Communication Infrastructure (NICI) was held in Abuja in March 2000.

In this regard, professional bodies including Computer Association of Nigeria (COAN), Information Technology Association of Nigeria (ITAN) and the Institute of Software Practitioners of Nigeria (ISPN) submitted various draft proposals for the Nigerian IT policy. Afterwards, more efforts were put together and at the end of the day a master plan for the development of a national ICT program “ICT 2000” was produced. This program was nicely articulated and documented in the same year – 2000, as the *“Nigerian National Policy for Information Technology (IT), with a cliché that says “Use IT”*

The National Information Technology Policy (NITP) as it was called, underpinned the utilization of a highly efficient IT system to drive the nation towards becoming a key player in the emerging information age, ((FRN), 2004). To achieve that goal, a vision statement was adopted - *“...to make Nigeria an IT capable country in Africa and a key player in the Information Society by the year 2005, using IT as the engine for sustainable development and global competitiveness.”* In addition to that, a mission statement was also adopted - *“...to use IT for education, wealth creation, poverty eradication, job creation and global competitiveness.”* According to ((FRN), 2004), some of the fundamental objectives of the policy were as follows: (i) to integrate IT into the mainstream of education and training; (ii) to empower the youth with IT skills and prepare them for global competitiveness; (iii) to ensure that Information Technology resources are readily available to promote efficient national development; (iv) to empower Nigerians to participate in software and IT development; (v) to encourage local production and manufacture of IT components in a competitive manner; (vi) to establish and develop IT infrastructure and maximize its use nationwide. (vii) To create IT awareness and ensure universal access in order to promote IT diffusion in all sectors of our national life. (viii) To create an enabling environment and facilitate private sector (national and multinational) investment in the IT sector; (ix) to develop human capital with emphasis on creating and supporting a knowledge-based society; (x) to build a mass pool of IT literate manpower using the NYSC, NDE and other platforms such as “train the trainer” (TTT) scheme for capacity building; (xi) to set up Advisory standards for education, working practices and industry; (xii) to establish appropriate institutional framework to achieve the goals; (xiii) to generate additional foreign exchange earnings through expanded indigenous IT products and services.

Furthermore, according to ((FRN), 2004), the following were some of the strategies mapped out for the achievement of the objectives of the policy: (i) establishing a coordinated program for the development of a National Information Infrastructure (NII), State Information Infrastructure (SII) and Local Information Infrastructure (LII) backbone by using emerging technologies such as the satellite, including VSAT, fiber optic networks, high-speed gateways and broad band/multimedia technologies; (ii) providing adequate connectivity to the Global Information Infrastructure (GII); (iii) restructuring the education system at all levels to respond effectively to the challenges and imagined impact of the information age and in particular, the allocation of a special IT development fund to education at all levels; (iv) utilizing IT opportunities to restructure government, citizens and business interfaces for better governance, improved trade and commerce and administrative effectiveness.

Finally, according to ((FRN), 2004), to achieve the short and medium term objectives of the policy with maximum effectiveness, it was decided that Government should establish a National Information Technology Development Agency (NITDA) to implement the IT Policy and regulate, monitor, evaluate and verify its progress on an on- going basis, under the supervision and coordination of the Federal Ministry of Science and Technology. Also, to ensure the adequate funding of the ICT policy and projects, it was strategized that a National Information Technology Development Fund (NITDEF) be established, under the aegis of the National Information Technology Development Agency (NITDA), to be funded with a startup grant of at least \$150m and two percent of the national budget to be allocated to the fund until the articulated vision is attained. Also, 3% tax on all imported finished IT products was suggested to be directly paid to the fund. So far so good, it would seem as if everything in the Nigerian IT Policy was said fairly well, at least. But, one question remains – how is the Nigerian ICT status as of today?

Status of ICT in Nigeria Today

The (ITU, 2012) had used an ICT Development Index (IDI) to rank the performances of 155 countries across the world with regard to ICT infrastructure and uptake as well as an ICT Price Basket (IPB) – a unique metric that tracks and compares the cost and affordability of ICT services. Their report has shown that out of the 155 countries ranked, Nigeria took the 124th position in 2010 and moved forward a bit to 122nd position in 2011. South Korea was ranked first in 2010 as well as in 2011; whereas Chad Republic took the last (155th) position in 2010 while in 2011 the last position was switched over to Niger Republic. The report also showed that Malaysia was ranked 57th in 2010 but moved back a bit to the 58th position in 2011. Below is a table extracted from (ITU, 2012) that shows the IDI for Nigeria, Chad, Niger, Malaysia and Korea:

Country	<i>Korea</i>	<i>Malaysia</i>	<i>Nigeria</i>	<i>Chad</i>	<i>Niger</i>
Year	2011	2011	2011	2011	2011
Rank	1 st	58 th	122 nd	154 th	155 th (Last)
IDI	8.56	4.82	1.93	0.94	0.88
Year	2010	2010	2010	2010	2010
Rank	1 st	57 th	124 th	155 th (Last)	154 th
IDI	8.45	4.63	1.75	0.85	0.88

Another key factor in determining ICT diffusion is the spread, cost and acceptance of wireless and fixed line communications systems (Oghogho & Ezomo, 2013). Accordingly, (ITU, 2012) has developed a unique global benchmarking tool that provides insightful information on the cost and affordability of fixed telephone, mobile-cellular and fixed broadband services, called ICT Price Basket (IPB). The tool has been used in helping to monitor the affordability of ICT services in 161 countries across the regions of the world, owing to the significant impact that the price of ICT services has on the demand and spread of ICTs (ITU, 2012). The table below shows the countries with the first and second rankings, as well as the last ranking country, along with the rankings of Nigeria and Malaysia for 2010 and 2011. Congruently, the table shows the Gross National Income of those countries (in dollars) per capita income, for the two years:

Country	<i>Macao - China</i>	<i>Norway</i>	<i>Malaysia</i>	<i>Nigeria</i>	<i>Madagascar</i>
Year	2011	2011	2011	2011	2011
Rank	1 st	2 nd	51 st	135 th	161 st (Last)
IPB	0.3	0.4	1.8	31.1	64.6

GNI	45,460	88,870	8,770	1,280	430
Year	2010	2010	2010	2010	2010
Rank	1 st	57 th	124 th	155 th	161 th (Last)
IPB	0.3	0.5	1.8	28.0	64.6
GNI	34,880	84,290	7,760	1,180	430

From the foregoing, it can be deduced that Nigeria is still lagging behind in terms of ICT adoption, even though it is over a decade now, since the Nigerian ICT policy was launched. Nevertheless, it cannot be denied that some significant strides have been made especially in the banking and finance sectors, but it is obvious that less have been achieved in agriculture, health, governing and education in terms of ICT adoption. Below are some of the areas of impact by ICTs in Nigeria:

E-banking: According to (CBN, 2003), it was on August 2003, that the Central Bank of Nigeria (CBN) issued a guidance entitled “*Guidelines on Electronic Banking in Nigeria*”. The Guidance focused on future conduct of financial institutions (the commercial banks) in e-banking and electronic payments delivery. The guidance applies to both retail and commercial customers and financial institutions (banks) use it as guidance when evaluating and implementing authentication systems and practices whether they are provided internally or by a service provider. Accordingly, it was stated in (Ibitola & Longe, 2013), that the electronic banking and payments services of commercial banks have made a significant headway in recent years, as banks are already offering various financial services through the internet, mobile telephony and ATMs.

E-financing: The Nigerian Financing system is in the process of being digitalized. Electronic payment systems are vigorously advocated in government financial transactions with the adoption of electronic payment system across all government agencies in the country. There is also a strong drive for the attainment of a cashless society which has continued to increase (Olusola, Oludele, Chibueze, & Samuel, 2013). Hence, the policy has already commenced in Lagos State, early in 2013, and on 1st July, 2013, the policy has extended to Kano State, Abia State and Abuja – the Federal Capital of the nation.

E-Governing: In a study conducted by (Asogwa, 2013) on electronic governing in Nigeria, it was stated that Nigeria has set up an e-government initiative, termed the “National e-Government Strategy” (NeGSt) for the purpose of using ICT infrastructure to enhance public services. It was expected that e-government would enable the Nigerian government at all levels to render efficiencies in the public sector, ensure higher productivity and economic growth, foster national competitiveness and lead to the attainment of the vision 20-2020. However, according to the study, it was regrettable that the e-services envisaged seem not to be impacting much on public service delivery in the country.

Distance Education: It was posited by (Ololube, Egbezor, & Kpolovie, 2008) that, the ICT status in Nigeria has not been capable enough of enabling colleges and universities in the country to succeed in the effective implementation of distance education programs; thereby incapacitating the drive towards the development of a knowledgeable society. But, a number of researchers such as (Howell, Williams, & Lindsay, 2003), have confirmed the growing importance of distance education programs in the development of knowledge. And accordingly, (Ifinedo & Ololube, 2007; Ololube, 2006), posited that one of the key essences of distance education is that it provides for the opportunity of higher education without necessary attending conventional institutions of learning.

ICT in Nigerian Educational System

According to (Yusuf & Yusuf, 2009), Nigeria has identified the potential benefits of utilizing ICTs in its school system. This is evidenced in its educational reform policies aimed at integrating

the use of ICTs in the Nigerian school system. However, Yusuf (Yusuf, 2005) noted in his analysis of the Nigerian national policy for information technology (FRN, 2001) that the policy was inadequate for positive impact on the Nigerian education system. According to him, this stems from the fact that the policy's philosophical frame of reference was market driven, and that there was little emphasis on the integration of ICT in instruction. In addition, (Yusuf, 2005) claimed that the strategies outlined in the document were not followed.

Hence, in 2004, the Federal Ministry of Education ((FME), 2004) came up with another document on ICT, which was the Ministerial Initiative on e-Education for Nigerian Education System. (Yusuf, 2005), stated that unlike the previous documents, the initiative was drawn based on input from major educational and human development commissions and boards such as (National Universities Commission (NUC), National Colleges of Education Commission (NCCE), National Board for Technical Education (NBTE), Education for All (EFA), and Universal Basic Education (UBE). However, according to Yusuf, the document could not be successfully implemented along the line, and since then, no other national document had been developed on the integration of ICT in Nigerian educational institutions until in the year 2007. Nevertheless, there were some few governmental and non-governmental agencies that initiated ICT-driven projects and programs to impact on all levels of the educational sector, such as the Education Tax Fund (ETF), the Nigerian Communication Commission (NCC), the Digital Bridge Institute (DBI) and Zinox Technologies (Ogunsola & Aboyade, 2005). Hence, it was in February, 2007, that the Ministry of Education created its ICT department (Agyeman, 2007).

ICT Adoption in Nigerian Education

In reference to UNESCO's model of ICT adoption and use in education, (Iloanusi & Osuagwu, 2011) postulated that 90% of Nigerian educational institutions are in the emerging phase of ICT adoption and use, while only 7% are in the applying phase, and only 3% are in the infusing and transforming phases. This signifies the infancy stage of Nigeria in the adoption of ICTs in its educational sector. In this wise a lot of research and literature indicate high levels of poverty and corruption as the causes of poor ICT adoption in Nigeria, despite its wealth. Hence, (Asogwa, 2013; Delaviz, Andrade, Pouwelse, & Epema, 2012; Ololube et al., 2008), posited that much of the difficulty faced in Nigerian education lies generally in the ICT infrastructural deficiencies and the weak economic situation of the country that has for long been characterized by gross embezzlement, theft, bribery and corruption, shortage of skilled manpower, poor electricity and serious neglect of the education sector.

Accordingly Ololube et al., (2008), have noted that academic standards have fallen tremendously over the years and educational achievements amongst students are purely self-guided with a little or no significant assistance from the teachers. Congruently, (Aduwa-Ogiegbaen & Iyamu, 2005), noted that instructional materials that aid teaching and learning, such as textbooks, classrooms, laboratory equipment, access to the Internet (computers) and other ICT equipment, are grossly in short supply. This scenario has grossly incapacitated the growth of Nigerian education sector along the pace of the trending changes in technology. The story remains the same when narrowed down to the business education faculty.

Business Education and ICT in Nigeria

Business education has emerged over the past 400 years, from the status of hands-on application of existing knowledge to an apprenticeship system; to a classroom setting and to a research-based method (Benson, 2004). Today, it has become a big business across the globe – with a dual nature of being theoretical and practical.

Business education is an offshoot of vocational education that is concerned with the acquisition of productive skills in business, as well as the intellectual processes involved in earning a living. Business education, has to do with preparing individuals for advancing into the business world

to function intelligently as employees or employers and as consumers or producers of goods and services, able to cope with possible challenges and changes in future developments.

According to (Nanassy, Malsbary, & Tonne, 1977) business education is education for and about business. That, business education for business is geared towards enabling beneficiaries to develop occupational skills such as recording, retrieving, coordinating, analyzing, organizing, and reporting data used for business decisions as well as skills for marketing and managing the flow of goods and services. On the other hand, (Nanassy et al., 1977) posited that business education about business, is geared towards enabling beneficiaries to improve their understanding of business and its relationship to the total economy, thereby developing personal consumer competence and skills that relate to business success.

From the foregoing, business education, has to do with preparing individuals for advancing into the business world to function intelligently as employees or employers and as consumers or producers of goods and services, able to cope with possible challenges and changes in future developments. To buttress this view, (Renshaw, Trott Jr, & Friedenber, 1988), described business education as an indispensable part of liberal education, stating that as long as man indulges in endeavours geared toward earning a living – man cannot do without a vocation or a business – hence business education is fundamental for human survival.

Earlier definitions of business education such as (Crank & Crank, 1977) had bordered along the lines of skills acquisition for employee or employer roles, in aspects of marketing and distribution, economic literacy and personal business activities. But definitions such as (Anao, 1986; Fafunwa, 1983; Ulinfun, 1982; Williams, 1981) had included concepts such as data processing, automation and technology in the scope of their definitions for business education. Hence, (Isiyaku, 2009) posited that although business education has no universal definition, it should not be constrained within the clustered walls of skills acquisition for working in an enterprise; but rather, it should incorporate all aspects of intellectual development and capacity building for educational as well as technological and business competence. Hence, to think of business education without ICT in the present dispensation is like perforating an egg and keeping its shell for dinner.

Congruently, (Rienties & Townsend, 2012), observed that according to research, traditional forms of business education do not provide an optimal learning experience for business students. Hence, the way teachers in business education design, teach, implement and assess their courses must continue to change owing to the expanding possibilities of ICTs like the web 2.0 that allow for online collaborations and lifelong learning and research. However, (Isiyaku, 2009; Ugwuogo, 2013), have noted that the quality of business education in Nigeria has been grossly impeded by lack of adequate ICT infrastructure, unqualified teachers, and obsolete technologies - with manual typewriters, shorthand and traditional blackboards still being utilized in the business education classrooms. Hence, going by the model of (UNESCO, 2010) for gauging ICT adoption and use, the Nigerian business education scene can be assumed to be at the emerging stage - characterized by recent introduction of computers, mainly for learning basic ICT skills and identifying ICT components. Teachers frequently use available equipment for their word processing or spread sheet tasks, here and there, and the classroom practice is still very much teacher-centered.

Changes in Global Business Education: Extant research has revealed dramatic changes in business education across the globe. A study by (Mountjoy, 2007), has indicated a shift in business education over the decades, from teaching typewriting, shorthand and transcription to teaching micro-computer related courses. Accordingly, such changes have brought remarkable growth and developments in business education across America, Europe and Asia. Hence, Africa, and Nigeria in particular has no choice than to join the trend and embrace the changes that technology has brought because it is unrealistic to expect that several generations of students would benefit from the same teaching and learning approach and content without an alteration, considering the emerging trends of our

knowledge-based society(Kulshrestha & Pandey, 2013; Redecker, 2008; Simplicio, 2000; Zhu, Wang, Cai, & Engels, 2013).

Conclusion

Although it is obvious that the Nigerian ICT status is generally in its infancy stage with the education sector at an emerging stage of ICT adoption, the fact cannot be denied that giant strides are in process towards dramatic growth and developments. With the report of (ITU, 2012) showing that between 2009 and 2013, Africa has recorded the fastest internet penetration and the highest growth rates in mobile-broadband penetration across the world, there is much hope that the Nigerian story will soon change for the better. However, the country must fight bribery and corruption while taking advantage of its vast wealth of human and natural resources to employ the most trending technology that will guarantee meaningful developments, in its various sectors, especially education.

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