The Role of ICT in National Development: A Study of the Educational Sector in Lagos State

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Abstract - **Many countries including Nigeria regard the use of Information and Communication Technology (ICT) as a driver of economic development. However, without sufficient investment in Technology, this would be a pipe (tall) dream. A quantitative research is carried out by administering questionnaires to educators in some schools in Lagos State to determine the effects and challenges of ICT in the Lagos State Educational Sector. Our findings reveal that most of the schools are not equipped with ICT tools but ICT is being used for teaching and research. A major factor limiting the use of ICT tools is the lack of power supply.**
Our observation is that government is not giving adequate funding for the general use of ICT in Lagos. We advise that both the teachers and the students should develop personal interest in the use of ICT.

Keywords- ICT, Development, National Development, Educational Development, Educational Sector, Schools, Lagos, Nigeria

I. INTRODUCTION

Information and Communication Technology (ICT) is a term that includes any communication device or application such as radio, television, hardware and software and so on as well as services and applications associated with them [1]. ICT is a composite term involving technologies such as the Internet which is used to communicate and gain access to information. The internet is a network of computers that allows communication and passing of information around the world. ICT is defined by the World Bank as "the set of activities which facilitate by electronic means the processing, transmission and display of information"[2]. ICTs support the creation, storage, manipulation and transfer of information.

National development is the means by which the people's welfare can be improved by eliminating illiteracy, ignorance and poverty and providing amenities like education, transportation and health care. This can be done by the use of ICT which helps in achieving development in an economy and ensuring progress in other sectors such as health, education, banking and agriculture [3].

Despite the introduction of ICT in Nigeria years ago, the life expectancy and illiteracy rate of Nigerians and many Africans are still low compared with that of the Caucasians. It is in a bid to address this situation that the African Head of States adopted the Geneva Action Plan designed to help developing countries use ICT to accelerate their economic development [3].

This paper examines the role of ICT in National Development and its impact in Lagos State Educational Sector.

II. LITERATURE REVIEW

Information and Communication Technology (ICT) encompasses related technologies defined by their usage in creating, storing, manipulating, accessing and transfer of information and communication [4]. ICT means different things to different educators and researchers. ICT is an electronic device used for accessing, processing, gathering, manipulating, presenting and communicating information [5]. According to [6], ICT is "the combination of computer and telecommunication system to improve the quality of research, teaching, learning and communication through its gathering, processing, storing, connecting, analyzing data functions and dissemination of information."

ICT has helped in national development around the world by changing the way people live and work [7]. It has helped to link the world together by networking; people are able to interact with each other in real-time without having to travel from one end of the world to the other [7]. Education in far places is brought closer to people in their homes, offices and places where there is availability of internet access.

In an article written by [8], the role of ICT in eradicating poverty is discussed. According to [8], poverty is the challenge facing Nigeria and without the proper use of ICT, poverty eradication cannot be achieved. Similarly, [9] noted that development over the years has been very slow due to the poverty and disease which has a huge effect on the quality of people's lives in Africa. He stated further that the presence of ICT has contributed to the economic development in South Africa [9].

ICT plays a very important role in the educational sector by enhancing knowledge and skills through access to information. Education has been deduced as an important factor for development [5]. Education determines the state of prosperity sustenance of welfare and security of the people [5]. Education enables skill development as this allows individuals live and contribute meaningfully to the complete development of the society in which they live [5].

According to [5], "Since the government regards education as an instrument for facilitating and fostering national development as well as economic growth, it is imperative that, the kind of education to be provided should be holistic and wholesome so as to foster balanced

national development." This requires proper planning, elaborate curriculum and, most importantly, adequate funding. For any nation to boast of educational development, it should have a functional ICT- driven education system in its schools. Students should have access to the online information and digital collaboration opportunities which will help in the transformation and meaningful development of education.

According to [5], the role of ICT in education includes the following:

- It helps to promote fundamental changes in teaching and learning methods thereby helping to overcome the barriers of time and place as technology introduces new choices and opportunities for students and teachers through endless research and learning on the internet.
- ICT provides secondary school students with practical and functional knowledge of the computer, the internet and other associated gadgets that will have positive effect on future experience and make them more competent, rational and comfortable in this era of globalization.
- ICT helps students to react intelligently to future changes, expand information and live successfully in a changing world.
- ICT, through its multimedia facet, creates room for students to acquire new knowledge, fosters enquiry and exploration of facets, and adopt new approaches to teaching and learning.
- This conventional system helps to accelerate the learning process, increase teachers efficiency and effectiveness and provides remedial instruction and enrichment of material, thus guaranteeing higher quality standards in secondary schools.
- ICT facilitates students' acquisition of skills and potentials for active participation the in teaching/learning process and it also helps to enrich the curriculum by replacing the existing face-to-face instruction.
- ICT as a tool for learning that enables secondary school students to efficiently and effectively access digital information for the purpose of investigating issues and solving problems.

So also, [10] stated the use of ICT in education research to include:

- Learning how to optimize the creativity of African Scientists through participation in international networks and working with data sets.
- Accessing various kinds of research information, which would necessitate a link to the libraries group
- Learning new methods for disseminating knowledge produced in Africa and using them.
- ICT applications run through the entire gamut of the educational research process. The advocacy for the indispensability of ICT in educational research can be further strengthened

by the following argument that tends to underscore the values derivable from applying ICT in educational research.

- It reduced time and cost of conducting educational investigation.
- Data sets and library resources can be shared by institutions in different locations
- Educational researchers have easy access to current literature materials
- Data sets, irrespective of size can be stored and retrieved when needed.

While speaking on the usefulness of ICT in sustainable development, [11] advised on the need for well-equipped ICT centers in all educational institutions to enable them live up to their social and political responsibilities.

According to [12], the Educational sector is "the most effective sector to anticipate and eliminate the negative impact of ICT." ICT as an open source tool which cannot be ignored in people's lives especially students [12]. All learning activities should be reformulated to include these open source tools and ICT should be integrated into educational activities [12].

Students have little time to study and sometimes do not want to go to class because of the attractions of ICT tools which they use for negative things such as visiting x-rated sited, playing multimedia and online [12]. There is a lot of challenge as regards this since parents are not there to prevent them from doing these things so also, the teachers are not with them after school. In situations such as this, the educational institutions play an important role by facilitating the students to do edutainment or educational games as recommended and adjusted by their teachers [12]. So also, schools can support and facilitate their students to have their own blogs. Hence, the students can create, think and write on things like they have interest in which enables them to share interest with other people [12].

III. METHODOLOGY

A quantitative research was carried out by administering questionnaires to five hundred respondents out of which four hundred and eighty-two responded. A sample of ten private and ten public schools was taken and used for this study.

IV. RESULTS

Table one refers to the analysis of the questionnaire administered on four hundred and eighty-two people.

TABLE I.   ANALYSIS OF GROUPED QUESTIONNAIRE ITEMS

Items	Analysis %
How long have you been using your ICT?	44.7
Who has access to ICT in your institution?	47.6
Did the school provide you with any ICT tool?	42.6
How often do you use your ICT	48.3

tools?	
Problems encountered while using ICT.	85.5

From the questionnaire, it was observed that many schools are not yet equipped with ICT tools. For those schools equipped with ICT tools, only few are using ICT as an integral part of their everyday subject. Most of the schools teach ICT as an individual subject. About 48% of the respondents indicated that they use ICT to teach. 53% out of these do so about 51-75% of the time. Only 43% of the respondents who use ICT to teach indicated that their institutions provided them with ICT gadgets. According to the respondents, the major problem faced is lack of power supply.

V. DISCUSSION

ICT can be regarded as a vehicle of development in various sectors of human endeavours. It is defined by the World Bank as the ''set of activities which facilitate by electronic means the processing, transmission and display of information.

It is not surprising that almost all the countries the world over are buying into this system which promotes National Development.

This study is carried out to determine the impact of ICT in the educational sector in Lagos, Nigeria.

Our findings revealed that while many schools are not yet equipped with ICT tools, those equipped are using the ICT in a parochial manner. A plausible explanation for this may be the large number of Government and private schools in Lagos. Funding apart, the will and the logistics of establishing ICT in all the Government Schools may be overwhelming. One therefore surmises that the State Government is addressing this issue on a rotational basis

There is ample evidence to show from this study that ICT is being used in most of these schools for administrative and Accounting duties. Students biodata and progress reports are computerised. All that needed to be done is an extension of these facilities to the core teaching area. This requires proper planning, elaborate curriculum and most importantly adequate funding as pointed out in [5].

In summary, our study showed that the many advantages of ICT in the educational sector are yet to be maximally enjoyed in Lagos State.

VI. RECOMMENDATION

We advise that both the teachers and the students should develop personal interest in the use of ICT and the government should provide adequate funding.

ICT should be made compulsory in institutions and the educators should be given proper training on the effective use of ICT.

ICT should be promoted all over the country and be made available and affordable to the people especially the educators and educational institutions.

A stable power supply should be made available for the effective use of ICT in Nigeria.

REFERENCES

[1] S. M. Kundishora, "The Role of Information and Communication Technology ICT) in Enhancing Local Economic Development and Poverty Reduction". Retrieved 15 March, 2015 from http://siteresources.worldbank.org/CMUDLP/Resources/Role_ICT_paper.pdf

[2] L.A. Ogunsola and W. A. Aboyade. "Information and Communication Technology in Nigeria: Revolution or Evolution". Journal of Social Sciences,11(1), 2005, pp 7-14,.

[3] International Telecommunication Union (ITU) Geneva, "The role of ICT in advancing growth in least developed countries Trends, Challenges and Opportunities". 2011. Retrieved 15 March, 2015 from https://www.itu.int/ITUD/ldc/turkey/docs/The_Role_of_ICT_in_Advancing_Growth_in_LDCs_Trends_Challenges_and_Opportunities.pdf

[4] E. Bazini, A. Qarri and D. Ilia, "Barriers of ICT Implementation within SMEs in service sector in Albania". Journal of Information Technology and Economic Development, 2(1), 2011, pp 1-8.

[5] R.N. Osakwe, "Challenges of information and communication technology (ICT) education in Nigerian public secondary schools", Education Research Journal 2(12), 2012, pp. 388-391.

[6] O. Abiodun-Oyebanji and K. Omotayo. "ICT adoption and effective Secondary School Administration in Ekiti-State". European Journal of Educational Studies 4(1), 2012, pp 59-64.

[7] J. Ssewanyana and M. Busler, "Adoption and usage of ICT in developing countries: Case of Ugandan firms". International Journal of Education and Development using Information and Communication Technology, 3(3), 2007, pp 49-59.

[8] Okwuonu, "Role of ICT in Poverty Eradication" 2010.Retrieved 28 February, 2015 from: http://www.thisdaylive.com/articles/role-of-ict-in-poverty-eradication/81229

[9] K. Langmia, "The role of ICT in the economic development of Africa: The case of South Africa". International Journal of Education and Development using Information and Communication Technology, 2(4), 2005, pp 144-156.

[10] A. U. Nwabueze and R. E. Ozioko, "Information and Communication Technology for Sustainable Development in Nigeria". 2011. Retrieved 15 March, 2015 from http://www.webpages.uidaho.edu/~mbolin/nwabueze-ozioko.htm

[11] O. A. Ijatuyi & E. L. Adebayo, "Harnessing an information services in the libraries for the development of a democratic culture". Nigerbiblio 17(1&2), 2008, pp 60-69.

[12] K. Saverinus, "The role of ICT in Education Sector" 2008. Retrieved 5 March, 2015 from https://verykaka.wordpress.com/2008/07/25/the-role-of-ict-in-education-sector/