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Development, Service and Application of Information and Communication Technology (ICT) in Education

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ABSTRACT

ICT have come into education to improve learning and teaching. Every person involved in the preparation of our youth for the 21st century work environment has unreserved obligation to learn to apply appropriate ICTs for the teaching of skills which modern day employers require of their entry level employees. We need to update ourselves in respect of knowledge and ability to utilize ICTs in our daily lives so as not to be made obsolete. To address the challenges hindering the application, development and services of ICT the Governments (Federal, State and Local) should, in collaboration with stakeholders: Revise the national policy for information technology to include vision and specific mission statements on ICT schools. Prepare school leaders for ICT. Invest in ICT. Revise the teacher education curriculum. Find appropriately ICT mediated project in school.

INTRODUCTION

Education both formal and informal is a major contribution to the mainstay of any society. Formal education takes place in an organized school environment. It is the deliberate attempt by one or more persons to effect changes in the behavior of one or more person (the student) presented with certain experiences. Informal education, on the other hand, may be thought of as the process whereby behavioural changes occur as a result of experiences in situations, which do not fall into the previous category. It is important to note that all these aspects of formal education are interactively working together in a given education system to fit perfectly into the ICT network. The introduction of the ICT into the discipline of education, as in other areas, became an antidote to effectively solving education problems. That would have been difficult if not impossible to solve via human natural effort.

ICT has been defined as the scientific methods of storing and processing information and corresponding sharing, exchanging and sending or moving such information from one place to the other.

The term information and communication technology can be defined to mean computers, ancillary equipment software, hardware, services and resources interconnected together to form network that is used in the automatic acquisition, storage, manipulation, management movement, control, display, switching interchange, transmission or reception of data or information.

The significance of education in National Development cannot be over emphasized as Psachraopolos (1986) notes “knowledge and human capital are vital aspect of growth and development with high socio-economic return on investment, education in particular brings about productivity improvement that drive economic growth” (CF Chijoke J. Eroh: 2007), Chinimen (2003) named different types of ICTs in common use for teaching and learning to include audio cassettes tapes, radio, video tapes, CD-ROM, the internet wire line technology, wireless technology audio conferencing.

The use of ICT can help learners to ask questions, observe, measures, record and manipulate variables, interpret their results and evaluate specific evidence, and present and communicate their findings in a variety of ways. Education will not be confined to the four walls of classroom but to wherever and whenever the learner deems appropriate. ICTS have the capability of providing personalized, just-in-term, up-to date and user-centered education activities. This study was meant to assess the development, service and application of ICTs in education.

What is Development?

Development has been viewed from different academic lenses by various scholars from differing ideological persuasion. According to Walter Rodney (1972) who notes that under development is not absent of development because every people have developed in one way or the other and to a greater or lesser extent. Development has been defined purely as economic growth in a country that is where there has been a rapid and sustained rise in real output per head and attendant shifts in the technological, economic and demographic characteristics of a society (Mabogunje, 1980). Development in this sense connotes persistent increase in the productivity sector of the economy, which could only be measure in a gross and macro-structural sense.

However, in Nigeria all the socio-economic problems live unemployment, educational crises, poverty inefficiency, mismanagement, corruption etc are mere symptoms of development crises generated by historical fact of years of exploitation and present situation to structural dependence of Nigeria economy on capitalist developed economy. As reflected in the assertions of Claud Ake (1986) who observed that: they are not only mismanagement, inefficiency and corruption as is usually conceived but the structurally dependence of our economy and other features associated

with it, especially dependence of our economy and other features of distribution rather than production and productivity base that is mainly external, it is because of these structural deformities and contradictions that our development strategies do not work (Ake 1986). However, ICT has been acknowledge as a catalyst that has the potential of transforming most sectors of other economy for rapid development processes.

ICT Application in Education

There are well-defined levels of education in our country, pre-primary, primary secondary and tertiary levels. The increasing development and sophistication of our educational system at all levels bring greater demands on practitioners, curriculum planners, evaluators and teachers to move in tune with the information technology of our age.

PROBLEMS STATEMENT/JUSTIFICATION FOR THE STUDY

The following are some of the identifiable research problems towards using IT tools in the selected organisations in Gusau metropolis.

High cost - The strategic information technology application and knowledge management could be expensive in a country rich in resources but bedeviled by corruption.

Lack of understanding information technology strategies could disrupts implementation unlike countries where IT systems have been developed and are extremely performing well.

Cultural difference - Perception of people to adapting changes, resisting changes even technological changes could be a barrier to implementation

OBJECTIVES OF THE STUDY

The aims of this research are to investigate how Information Technology could assist the development education. Other specific objectives are to investigate the role of ICT and how it has prominence in those areas of education. There is no claim to an exhaustive listing of all available area of application in education.

1. Education policies processes and products. The computers and telecommunication facilities are used right from the time policies are being proposed till the final outcome of such policy. Decision alternative are modeled into programmable bits with the computer assisting in prioritizing viable alternatives and reordering policy directions. Information storage and retrieval and relevant decision making processes are also accomplished with the use of the computer.
2. Each subject areas or discipline in education take advantage of the use of the computer. The computer has direct application in each of the subject areas.
3. Computers are used for desktop publishing in education for typesetting, jobs used for the publishing of textbooks, journal periodicals.
4. Education institutional have network connections between the functionaries to aid operation with effective ICT operation.
5. Payrolls, students' personal and academic records and staff personnel record are processed with the use of the computer.
6. Library automation and computerized laboratory equipment enhance academic activities and make learning more accessible to students.

LITERATURE REVIEW

The ICT is an invaluable invention of our time. It is commonly defined as the scientific method of storing and processing information and corresponding sharing, exchanging and sending or moving such information from one place to the other. Research on the other hand, is a systematic investigation into phenomenon, a process of solving knotty educational problems and a scientific enquiry into educational issues. Educational evaluation is an integral part of our everyday activities. It is the systemic process of determining the effectiveness of educational endeavour in the light of evidences. This definitions introduce a link between what the ICT and the activities prevalent in educational research and evaluation.

The Role of Practical Training

It is a general believe that practical work can only be taught by face-to-face approach the learning of practical skills is most often associated with workshop and laboratories, specialist materials and equipment, small class sized and frequently longer blocks of time for practice and rehearsal (Hampton 2002). For many years, educators believed that Open and Distant Learning (ODL) was only suitable for teaching cognitive skills (Olivera & Rumble, 1992). Sparkes (1982) argued that it might be more effective to teach practical skills using video rather face-to-face instructions.

Print-based illustration and step-by-step procedures can be used for learning practical skills and video, interactive multimedia, CD-ROM and online learning approaches in current use in education programme that have embraced ICTs are online. Learning simulators and virtual reality according to Eze and Okoye (2008), simulators are examples often used in structural classes to address safety concern during the virtual phase of training. It is used to offset cost of renting equipment used in training students on heavy-duty machine operation, crane operations application of pulleys etc.

ICT in general terms refers to processing, storage are transfer of information, sometimes describe as information technology (IT). It can be broken down into IT hardware and communication Carlaw and Lipsey (2005) argue that ICT is a general purpose technology (GPT) that has a major impact on process technologies, organization technologies and product technologies also has social and political implication. If ICT can be integrated into the educational system there would be fundamental economic and social transformation in the society such as new kinds of skills, capacity and attitudes.

ICT should be used to enhance classroom teaching-learning through the flexible classroom pedagogical interaction with the use of communication technologies to enhance learning classroom assignment and submission of such can be given through internet. Project supervisor can interact with supervisee through internet telephone etc.

RESEARCH METHODOLOGY

The research will be conducted in Gusau Metropolis of Zamfara State. The population for the study will comprise staff in selected public and private educational institutions. The research will further focus on the application of IT tools in in the selected institutions. It will assess the level of awareness of IT and its overall impact to the development of education.

CONCLUSION

The evolution of the computer and its capability to handled diverse kinds of problems cushioned the mounting activities created by the staggering development in education. The introduction of the ICT into the discipline of education as in other areas became an antidote to effectively solving education problems that would have been difficult, if not impossible to solve via human natural effort.

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