THE CHALLENGES OF EFFECTIVE UTILIZATION OF COMPUTER IN PROMOTING EDUCATION FOR ALL IN NIGERIA

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Abstract

Computers offer enormous potentials and benefits when effectively utilized. These benefits include increased access of citizens to education and increase in benefits derivable from education. Nigeria as developing country cannot be exempted from partaking in the enormous advantages offered by computers. Unfortunately, certain challenges retard the effective utilization of computers in Nigeria as a developing country. It is against this background that this paper explores the definition of computers and its overview in education; advantages derivable from effective use of computers; challenges of effective utilization of computers in Nigeria and recommendations for achievement of progress in the subject matter.

Introduction

The advent of Computers into the Global system has resulted in greater efficiency in doing things. This has resulted in the computerization of most activities that occur in most spheres of national /global sphere. The educational sector has not been left out of this development. Evidence of the use of Computers in education has led to terms and realities like Computer Assisted Learning, Virtual Universities, E-learning and the likes. The exploitation of Computer Assisted learning has great potentials in promoting Education for All. Unfortunately, this could only be achieved if the required factors for exploitation of the potentials of the Computers in education are rightly in place.

Computers which are simply referred to as an electronic device which is capable of receiving information or data, processing, storing the data and giving the desired result (output) had their development from earlier digital systems like calculators. Thus they marked a turning point in technology evolution. This is because the computer is capable of processing information from all other systems once the information is digitalized. The computer combines all the advantages of other information technologies, processes information at high speeds, generates new information and converts information from one encoding system to another. The computer can also be used in combination with other technologies. The main implication of the computer for instruction is its ability to aid further development of all other information systems used in education. For instance photography can be improved by using computerized cameras which can adjust automatically for light exposure and object distance (Samiyu, 1999).

In the 21st century, the ever-increasing needs of individuals and society are placing a heavy burden on established educational institutions. At the same time, traditional structures and modes of teaching appear less and less responsive to the challenges of our turbulent times. Thus, there is now a clarion call for innovation and transformation among educators everywhere. Furthermore, the internal problems of schooling are inseparable from external changes on a global scale, and must be seen in the context of contemporary world problems. These, in turn, will not be solved unless approached and treated educationally, as well as economically, politically, and socio-culturally (UNESCO, 2005).

The World Education Forum in Dakar, Senegal, April 2000, had two of the essential goals aimed at ensuring Education for All (EFA). These are goal 3 which is ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills

programmes and Goal 6 which is improving all aspects of the quality of education […] so that recognized and measurable learning outcomes are achieved by all.

In the United States of America for instance, schools are turning to high tech solutions for more and more of their teaching needs, from computer-aided reading instruction to word-processing to mathematics drill programs. Students are being encouraged to use computers as learning tools in ways that were unexpected just a few short years ago. What then could be said to be the challenges of achieving such trends in Nigeria. That is the crux of this paper. Hence, this paper explores the definition of computers and its overview in education; advantages derivable from effective use of computers; challenges of effective utilization of computers in Nigeria and recommendations for achievement of progress in the subject matter.

Advantages of Using Computers in Education

Setzer (2000) enumerated the advantages of effectively using computers in education to include:

a) Computers are essential for the individual in the professional working place.
b) Students who do not master computers will not keep pace with their classmates.
c) Computers are good tools for learning.
d) Computers improve students' achievements.
e) Computers accelerate children's development, mainly intellectual.
f) Computers may provide a free environment for learning.
g) Computers may promote social (and family) cohesion.
h) Computers provide a fascinating learning environment, one that attracts children and young people.
i) Computers provide for a challenge of traditional educational methods and values.
j) Computers induce a certain vision of the world.
k) Computers make it possible to learn without tensions and pressures.
l) Computers (through the Internet) make students get interested in foreign cultures and people.
m) Computers help to develop self-control in students.
n) Computers may provide for a more humanistic teaching.
o) Computers may enhance imagination and creativity.
p) Computers may be used to make children conscious of their own thinking process.
q) Computers provide for an individual way and pace of learning.
r) Children have to learn computers otherwise they will be afraid of them at adult ages.
s) Children who don't use a computer at home may develop psychological and social problems (e.g. a sense of inferiority).
t) Through the Internet, computers make it possible for students to access all sorts of information not available through other means.

The Link between Computers and Education for All in Nigeria

Nigeria has made various commitments at international fora to provide education for all. Among these fora are the World Conference on Education, on Education for All at Jomtien, Thailand (1990); New Delhi, India, (1993) (to reaffirm the commitments) and Dakar, Senegal, (2000). Framework 8 (x) for instance of the World Conference on Education, Dakar, Senegal, (2000) reveals the commitment to "harness new information and communication technologies to help achieve EFA goals".

Back home in Nigeria, the Federal Executive Council (FEC) of Nigeria approved the National Information Technology Policy in March 2001. The National Information Technology Development Agency (NITDA) was established in April 2001 to implement the Policy. The Mission Statement is: To "use IT" for Education, Creation of Wealth, Poverty Eradication, Job Creation and Global Competitiveness (Education underlined by the authors for emphasis of this paper).

NITDA collaborated with several multinationals and international organizations to deliver specialized training in some train-the-trainer workshops. Other efforts are the Virtual Library and Virtual Laboratory projects for Nigeria (Ajayi, 2003).

Also, the Computerize Nigeria Project was set up in 2001 by the Board of Zinox Technologies Limited to catalyze the adoption of the computer as a major tool of work and play. The CNP has remained in the forefront of ICT penetration in Nigeria - donating laboratories to many schools, obtaining subsidies and passing same to consumers as discounts, working assiduously to change the face of education in Nigeria through the CNP Partnership with the Federal Government (Abii, 2008).

Noting the importance of Computers in education in Nigeria, Integrated Regional Information Networks (IRIN) (2007) revealed that in 2006 Nigeria's government ordered XO laptops, The XO laptop is a cheap laptop. 300 of these laptops were delivered to children at one school in Galadima, a village in the outskirts of the capital Abuja. The laptop is designed to withstand harsh conditions such as rain and dust. It has a screen that can be read under intense sunlight. Its battery lasts for 12 hours and can be recharged with the use of a solar panel or a pull cord. One teacher there in person of Olugbile Oluyinka, said that computers have had a positive impact on the students. "Nice classrooms are important - and indeed the [school] environment here is not the best - but what is more important is the knowledge that we can bring to children".

Challenges of Effective Utilization of Computers in Ensuring Education for All in Nigeria

The following are the challenges of effective utilization of computers in Nigeria:

1. Erratic power supply: Power supply in Nigeria is most often erratic. As a result of which the utilization of computers in most cases rely on alternative sources of power supply. The much reliance on power supply hence results into higher cost required for utilizing computers in providing education for all in Nigeria.

2. Cost of the computers and related software programmes needed to effectively utilize the computer: The exorbitant cost of the computer machines and corresponding software programmes could be said to discourage administrators from purchasing computers for use in educational institutions.

3. Trained and competent man-power needed to effectively train students on how to effectively operate the computer: Sometimes even where the money is available to purchase computers the requisite skills for its operation may not be available. This sometimes led to the computers being packed up (sometimes even in environments detrimental to the proper functioning of computer machines).

4. Attitude towards change: The introduction of computers into education is a great innovation which is associated with a great wind of change. This change is both for the teachers and the students. The attitude of the teachers and students towards welcoming this great change will go a long way in determining how well computers are effectively utilized in Nigerian education. Where there is a favourable attitude towards the change for instance, there is likely to be a better degree of the utilization of computers in education and vice versa.

5. Location: The location of an area based on whether it is an urban or rural area pose a challenge to effective utilization of computers in education. This is because most rural areas lack basic amenities present in urban areas. Moreover, most computer training and Information and Communication Technologies centres are located in the urban centres at the detriment of the rural areas.

6. Finance: This is because finance is needed to purchase the computer machines, fuel, operating softwares, maintenance of the computer (periodically), and in most cases, payment of the manpower to handle the job. Where finance is therefore lacking or inadequate, it could then affect the effective utilization of computers in providing education for all.

7. Age differences: Experience of the authors have shown that children and youth who receive computer literacy are friendly with computers even at old age while adults who lack computer literacy have some skepticism for usage of computers. This leads to ineffective usage of computers among adults.

Conclusion

The enormous benefits derivable from the effective utilization of computers in promoting education for all cannot be over emphasized as discussed earlier. This is because it will go a long way in helping to achieve education for all. The effective utilization of computers in promoting education for all can thus be promoted if the challenges of its effective utilization are effectively tackled.

Recommendations for an Effective Utilization of Computers in Promoting Education for All in Nigeria

Based on the challenges facing the effective utilization of computers in education discussed in this paper, the following recommendations are proffered:

1. The Government of the day should explore and change to other means/sources of providing electricity. This could be either the solar or nuclear power. This is because it will go a long way in helping to bring an end to the erratic power supply faced in Nigeria that affects implementation of innovations in Nigerian education. Where this is difficult, then the Power Holding Company of Nigeria (PHCN) should procure gas supplies in excess including in reserve. This is to avoid failure in power supplies due to shortage of gas supplies to the PHCN.

2. Educational institutions should procure cheap computers from Computer Recycling Projects (CRPs). The organisations involved in these projects offer refurbished computers at cheaper prices to educational institutions at very cheap prices. While as for the issue of computer softwares, educational institutions should request for free and open softwares such as the Linux operating system from www.linux.com. Other free and open softwares associated with education could be downloaded from the United Nations Educational Scientific and Cultural Organisation's website.

3. Individuals with great potentials, intellectual capability and zeal to learn in educational institutions of training should be sent for training in computer literacy. This is to ensure that they can benefit from the training they receive and pass the skills to others who can benefit from it. This will increase competent manpower requirement.

4. There is the need for education for attitudinal change. This is to promote positive attitude of everyone in the educational system towards the promotion of effective utilization of computers in education for all.

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5. There is the need to provide basic amenities / infrastructures in rural areas of Nigeria. This will go a long way in providing an incentive towards the use of computers in rural schools and learning centres in the rural areas. Where this is difficult to achieve, there should be collaboration with computer training institutes in the nearby urban centres for training of individuals.

6. The government should make adequate finance available for effective utilization of computers in education. Educational institutions should also seek partnerships or support with local entrepreneurs and agencies to help provide computers and allied products for use in educational institutions. Also, when funds are allocated for procuring computers, the funds should be judiciously used and not misappropriated.

7. As much as possible computer literacy should be given to individuals as early as possible. This will promote friendly and effective usage of computers among adults in the long run.

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