RELEVANCE OF COMPUTER STUDIES IN SCHOOL CURRICULUM

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Abstract

The relevance and role of computer in our educational system cannot be over emphasized. Incorporating computer studies fully in our school curriculum is a sure way for effective teaching and learning. This paper discussed what computer and computer studies are, the philosophy and objectives of computer studies, the relevance of computer in teaching and learning and the role of computer in national educational curriculum. Also recommendation were made.

Introduction

Computer is now reshaping the universe. It has brought education, knowledge to the doorstep of every individual through its Internet services. Computer is deeply involved in the texture and standard of our lives today than any other technology ever was. Initially, computers were basically used to execute those functions that were considered cumbersome, laborious and repetitive but now a new era has been brought to play, where computers can be applied to handle and manipulate all sorts of data and prompt information provided in almost all walks of life. Ranging from business, through various professions and educational institutions to governments.

Computer had already set a greater impact on teaching and learning, especially in the western world, than any other technology known to man. In Nigeria's National Policy on Education (FRN 2004), computer studies was explained as an aspect of technical and vocational education which leads to acquisition of practical and applied skills as well as basic scientific knowledge. It is the knowledge one acquires in manipulating and operating a computer. The relevance of computer technology is so great and its role is so unique that work habit, life patterns, teaching and learning have changed drastically. Therefore, this paper shall deal with the topic: ***Relevance of Computer Studies in the School Curriculum.***

What is Computer/Computer Studies?

Technically, a computer is a tool for representing and manipulating data to obtain information. The term data refers to the raw fact or material while information refers to the product of the raw material. But in this write up, the definition of computer above is deceitful because other tools such as slide rule, adding machines, pocket calculator, pen can, as well, will be used for the same purpose. We would rather define computer as a fast and accurate electronic manipulating system, designed to automatically accept and store data, process them, and produce output under the direction of a stored program of instruction (Williams, 1999).

The computer itself has brought revolutionary changes in the world, giving us a new form of civilization in all aspects of life, including business, recreation, education, news, among other things. Moreso, computer studies/education according to Inkang (2002), was defined as the knowledge, skills and abilities to manipulate and interpret the language of computer. In National Policy on Education (FRN 2004) Computer Education/Studies was defined the same way. Computer science studies/education is skill and craft oriented. It is work-based learning which perceives learning as a continuous process grounded in experience.

The Philosophy and Objective of Computer Science Studies/Education

The philosophy of National Policy on Science and Technology is aimed at developing the people and creating a mass awareness of the people to embrace science and technology. The objectives of science and technology policy are in agreement with national objectives as stated under the section on the philosophy of Nigerian education. These objectives include:

(a) To increase public awareness in science and technology.

(b) To direct the science and technology efforts of the nation along well defined national goals e.g. self-reliance.

(c) To promote the translation of science and technology results into goods and services.
(d) To increase and maintain an indigenous science based on research and development.
(e) To motivate and create output in science and technology as basis of the nation. (NPE 1998, Page 17).

Computer has already set a greater relevance on teaching and learning than any other technology known to man. In the NPE (2004), computer education is explained as an aspect of technical and vocational education which leads to the acquisition of practical and applied skills as well as basic scientific knowledge.

Relevance of Computer Science Studies/Education in Teaching and Learning

Computer as an educational tool, can enhance and complement teaching and learning in every curriculum area: when utilized for instruction that is teaching and learning, computer science studies can:

- Facilitate the acquisition of the basic science, technology and mathematics skills by concentrating on complex real world task.
- Facilitate the acquisition of higher order thinking skills and problem solving skills.
- Enable learners access a wider range of information resources/sources for developing appropriate concept and relationship in any course/subject of study.
- Provide learners with a medium of further learning.

Teachers can also use Computer to:

* Prepare resources for teaching.
* Access and get information and educational software through the Internet.
* Communicate and share knowledge and information with, experts in specific fields with other schools and with other teachers and parents for the benefit and developments of pupils (http://www.cesi.ie/ictaulteach.htinl2003). Meanwhile, teachers and learners could only avail themselves of these benefits of computer if they are computer literate.

Today, in our nation, the lack of computer science education facilities and the generally computer illiterate citizenry has deprived learners of the much desired multi-media learning opportunities (Akudolu, 2001). She opined that teaching computer studies in schools will give learners the means not only for academic excellence, but also for self fulfillment. While suggesting for incorporation of computer education into school system especially teacher education programmes, Lawal (2000), argued that such move would prepare the teachers to utilize computer driven strategies/ facilities to enrich classroom instruction, by facing realities in the classroom.

Computer science education plays the role of equipping individuals with skills, knowledge and attitudes that will enable individuals engage in a life-time of productive work and retraining employees so as to fit into jobs, offering of entrepreneurial skill and development programme. It also creates access to quality job competencies and skills needed for stable employment. Also in awareness of the relevance of computer literacy, the Federal Government has started to issue out policies that covers computer use, including the National Policy on Computer Education, of which the National Computer Education Curriculum is one of its prime offshoot.

The National Computer Education Curriculum

The National Computer Education Curriculum for primary schools was developed by the Nigerian Educational Research and Development Council (NERDC) in 2002. Until now, computer studies courses are based on some unapproved document or compilation of topics that lack pedagogical basis and structure in few schools where it is taught. Thus the National Computer Education Curriculum represents the first deliberate attempt, nationally, to provide guidance to teachers on what should constitute basic computer literacy concepts and skills to be acquired at that level.

The objectives of the curriculum which are drawn from the national objectives for computer education are to enable pupils to:

(a) Use the computer and thereby acquire basic skills such as using the keyboard, accessing and editing a file at the operating system level.
(b) Use the computer to facilitate learning; and
(c) Develop rudimentary skills in the use of computer for text writing, computation and data

entry activities (NERDC, 2002: Unpublished draft).

The skills above are considered by the developers as the foundation for further computer studies in junior and senior secondary schools. The skills are also crucial to the utilization of computer in learning of any discipline.

Recommendations

(1) Federal and State governments should try and make sure that computer studies is fully incorporated in the school syllabus starting from the cradle, not as an elective subject as prescribed in the National Policy on Education (FRN, 2004).

(2) Government should also see that the computer studies curriculum is formally introduced in our school system, so that objectives of computer education would be met.

(3) Standard curriculum should be developed by the body concerned and the monitoring agency set to see that it is being implemented in the school system fully.

(4) Teachers, at all levels and in every discipline, should be encouraged to be computer literate by granting them in-service training and retraining courses for them to be able to use computer in classroom teaching and learning.

(5) Computer studies should also be included in examinations like JSCE, SSCE, NECO, JME and the like. This will help to create the relevance of computer studies in our nation.

Conclusion

The increasing dependency of education on computer is inevitable as it helps meet the needs of teachers and learners. It provides greater opportunity for individualized instruction and relevance to subject matter through Computer Assisted Instruction (CA1). There is consistent evidence from the earliest days of educational computer that when learners are given autonomy to derive and test their own ideas, understanding and achievement, their ways of learning change and there is improvement in the understanding and achievement (Mellar, Boohan, Ogborn and Tempsett 1994). Computer can definitely be used, to raise the level of thinking in teaching and learning allowing exciting activities to emerge. The important role and relevance of computer to change teaching and learning styles is recognized worldwide. Therefore, computer studies should as a matter of urgency be given its rightful place in the National Policy on Education, for meaningful teaching and learning to be achieved.

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