

APPLICATION OF COMPUTER STUDY IN EDUCATION FOR ECONOMIC ADVANCEMENT

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Abstract

The paper reveals that computer study, as a means for self-reliance, could be applied in education for economic advancement. Computer study is useful for it enables one understand and use computer. The paper points out that the use of computer in education promotes teaching and learning. In addition, computer is Useful in education for evaluation of students' performances and in performing administrative and secretarial functions. To achieve economic advancement, ethical values should be observed in the use of computer. The paper contains some recommendations for promotion of computer study.

Introduction

Technology has played a role in aspect of national development especially in area of economic development. One of products of modern technology is computer. Computer has proved to be useful in human endeavours. An aspect of human endeavours that serves as a backbone to development is education. Through education, the norms and values of society are transmitted from generation to generation. Computer study can be applied in education. The study of computer is a great asset in acquisition of knowledge and skill regarding its use for economic advancement. In fact, computer literacy, acquired through computer study, is useful in education for improvement of economic life in society.

The Urge/Need for Computer Study

Computer study enables one to be acquainted with the understanding and appreciation of computer system. One can use the computer system for solving certain problems that confront man. Computer study, simply put, is exposure to computer. However, what is computer? According to Chijioke (2004: 1), " a computer is an electronic machine, operating under the control of instructions stored in its own memory unit, which can accept and store data, perform arithmetic and logical operations upon the data without human intervention and produce output from the processing"

Some of the features of computer are ability to store data/information, accuracy of output results, high speed in operation, reliability in performance, versatility in application, flexibility of data/information. Based on the nature (interesting features) of computer, it is found to be useful and is applied in virtually all aspects of human endeavours.

Today we are in an era of computer age. Human society is now computerized. Thus, there is the urge or need to be computer literate to be in line with the modern age. Computer literacy can be acquired informally through computer schools in our cities or formally through academic institutions. Generally, engagement in computer study provides one with knowledge and skill needed for economic development. An important area where computer study can be applied is in the field of education.

Computer Education as a Means for Economic Advancement

Education is a principle outcome of man's rationality and so distinguishes man from animals. Okafor (1981:8) defined education as " a process of acculturation through which the individual is

helped to attain the development of his potentialities, and their maximum activation when necessary, according to right reason and to achieve thereby his perfect self-fulfillment". Education is a continual process that commences from the home and continues with other social institutions, mainly the school.

One interesting aspect of education is computer education. Computer education brings about modernization or civilization. Through computer education, knowledge can be acquired for development of human personality, human potentials, human talents, skills and attitudes. It can be said that computer education is an instrument of self-reliance. A self-reliant education is a functional education

for it enables one to be productive and earn a living. Computer education being functional implies that there should be appreciation and utilization of acquired computer Knowledge to the solutions of human problems and meeting the needs of people.

Self-reliance education is associated with economic advancement. Economic advancement can be seen as economic growth and development. Economic growth is increment in national incomes over a period. Economic development involves economic growth and a positive transformation of the socio-economic life of society. Uche (1986:87-88) pointed out that economic development is enhanced by increase in human capital through improved technology. Uche also noted that "a nation -is regarded as economically developed when members of its society have to increase jointly their capacity for dealing with the environment as regards production, consumption, social services, manpower, qualitative contrasts and a high improved standard of living".

Computer education is very important in promoting economic advancement because it has the" ability to enhance human development and well-being. When an individual acquires sound computer education, ignorance pertaining to the nature and application of computer system is removed and his/her ideas are more likely to be increased. Computer education provides people with special skills and expertise needed for promotion of a nation's productivity. Output in productivity is greater in-developed society than in less-developed society because developed society has greater number of. skilled and expert work force. Computer education also promotes economic advancement through scholarly and technological researches done using the computer system. It should be recalled that-technology advancement enhances economic advancement.

Uses of Computer in Education for Economic Well-being

Education is useful for economic well being of society. One of the tools that enhance education and its operations is the use of computer. In fact, the areas of computer usage in education are broad.

Computer can be used as a teaching aid (instructional material) for students that enrolled in computer discipline. One of the expectations for effective education in science and technology is ensuring of practical works. Embarking only on theoretical teaching is not effective. According to Adieme (1983:41- 43), for students to appreciate physical science concepts, teaching must be supplemented with appropriate model, demonstration and practical works. With computer, the students can learn practically on programming (a major issue in the discipline of computer science). Programming deals with development of software for the operation of computer. Availability of computer also makes it possible for acquisition of education concerning computer (hardware) pails and functions.

There are certain educational packages (software) in the computer. Teaching and learning can be promoted by the use of educational software packages like Computer Aided Learning (CAL) and Computer Aided Instruction (CAI). According to Anigbogu (2000:97-98), CAL enables a student "re-learn any portion of the subject matter, unlike the case of human teacher, as often as *it* is necessary for total mastery, guiding himself by type of choice he makes during interaction with the computer". Anigbogu noted that CAI is a "situation where the computer itself provides the instructions to the learner, asking him questions (often multiple choice questions) grading the student's performance to determine by itself, whether to take the learner forward, to break new grounds or to repeat the portion of the lecture just concluded¹". Anigbogu also noted that " the oldest best known widely used Computer Aided Instruction network is the system called Programmed Logic for Automatic Technology Operations (PLATO) which has programs designed for all students at all levels." According to Eke (1991:36), CAI enables a student I earn course material at his own pace and after lecture, the student can use CAI to revise the material and evaluate himself; like also pointed out that CAI enable students with special adapters.

Computer is essential in scientific and engineering study. In studies involving engineering design, architecture, town and regional planning etc, Computer Aided Design (CAD) has been found useful. CAD, as a software package, makes it possible to produce models (design drawings) of objects that can be manipulated and tested on video display screen. Computer makes simulation possible. Simulation is the creation of model of a real life system and experimenting or investigating on the

model behavior to determine the performance of the real-life system when built. Through simulation with computer, it is possible to make effective and efficient engineering design needed for economic advancement.

During evaluation of students, computer can be used. For instance, a program can be designed for "objective" questions with multi-choice answers for selection of the correct answer. The computer can score the answers accordingly. External examination bodies like WAEC, NECO, JAMB etc make use of computer in evaluating their candidates. The use of computer for such evaluation helps in economic advancement because accuracy and high operational speed is achieved.

The role of computer in communication /information gathering for excellent education should not be over emphasized. Information Technology (I.T.) has made it possible the existence of INTERNET. INTERNET, as a connection of many computers all over the world in a huge web of network, makes it possible for computers to be accessed for educative information from any part of the world. The INTERNET makes it possible the existence of Electronic mail (E-mail) used in exchange of messages. Information Technology makes Electronic-learning (E-learning) possible. E-learning makes knowledge and information available to students running distance education (or open university) programme. Hence, literacy level of the nation is improved for economic advancement.

Organization concerned with education performs administrative and secretarial functions, Computer aids such functions. For instance, secretarial functions can be performed using: word processing packages (eg Microsoft word), spreadsheets (eg excel). In administration, Management Information System (MIS) is essential. According to Jonnwakalo (1995:129-130), management information system is "defined as network of computer based data processing procedures developed in an organization and integrated as necessary with manual and other procedures for the purpose of providing timely and effective information to support decision making and other necessary management functions.... The system utilizes computer hardware, software telecommunication in some cases, manual procedures, management and decision models, and a database".

Computer serves as a recreational device that aids education. Film on disk can be slotted into the computer and be watched. Thus, computer serves as a theatre, which is useful in intellectual enhancement. According to Nwabueze (1992:223), theatre brings about "the pleasure of extending our knowledge of the people of other lands, learning from other people's experiences, and extending our perception of our own society reflected in a dramatic situation".

For computer to be useful in education for economic well being, ethical values should be observed in its use. Upholding of ethical values helps to prevent computer crime. Engaging in computer crime, such as illegal use of computer to manipulate data, introduction of wrong programs, wrong copying of secret information etc, inhibit progress in society. Nwosu (2003:10) pointed out that the essence of good moral is self fulfillment and actualization as well as achievement of societal beauty ... no nation can progress effectively under moral degradation.

Recommendations

Computer study exposes one on the usefulness of computer system. Hence, computer study should be promoted. For promotion of computer study, the following are recommended:

1. It is necessary that the masses be educated-probably using mass media-on the role of computer in economic advancement.
2. People should be encouraged to enroll in any of the competent computer training schools existing in our society.
3. Schools and institutions should be equipped with enough computers for effective study of computer.
4. Human resources involved in teaching of computer should be very dedicated to duty for achievement of productivity.
5. Workers, especially those in academic environment, should be given basic courses in computer.
6. Students should show great interest in the study of computer and be knowledge-conscious rather than being certificate-conscious.

Conclusion

Computer is a technological product that is beneficial to national development. The use of computer in education enhances economic advancement for it helps to make education meaningful and functional. However, effective use of computer is acquired through computer study. Computer study brings about computer literacy required for appreciation and utilization of computer in education system. It can be said that computer study when positively applied in education is an essential resource for economic advancement.

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