

The Application of Computer in Education System and its Significance to Teaching and Learning

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ABSTRACT

Over the years, computers have changed the way the world works. They have wound up being an advantage for the corporate part, and in addition in diverse zones, for instance, prescription, basic designing, correspondence/communication, investigation, recreations and teaching. Discussing which, PCs or computers have accepted control over the field of teaching, getting over its effect each possible way. These especially machines, which were once used generally as a piece of investigation labs and government work environments have now transformed into a regular sight in schools over the world. Today, computers have touched the lives of many students living in the remotest bit of our planet, be it particularly or otherwise. There is no denying the way that computers absolutely control the life of a typical student in any part of the world, be it as hand-held devices, or printed course readings. In this paper we outlined the applications or uses of computers and its noteworthiness or significance to teaching and learning in worldwide education system or schools.

Keywords

Computer, ICT

1. INTRODUCTION

A basic trait or facet of teaching is to engage understudies/schooling to go into innovative knowledge worlds, for instance, the world of history, of English, of foreign languages, of mathematics, of music, or of science. Computers in the classroom fuse any modernized development brought into play to enhance, supplement, or supplant traditional informative instructive projects. As computers have ended up being more accessible, shabby, and extraordinary, the enthusiasm for this development has extended, inciting more ceaseless utilization of computer resources within classes, and a reduction in the student-to-PC extent within schools. Starting late, the world has seen a brisk addition in technological advancements. This period presented the happening to the electronic computing system among other current advances. At present the computer technology or advancements has soaked all facets of human managerial responsibilities and education. Computer incorporates all facets of human accomplishments. So much has been made on it and its relatedness to all domains of human disciplines or restraints, which takes in ICT, agribusiness/agricultural, engineering et cetera. On the other hand, much work has not been done on computer and its application and significance to direction. Today, computer development in schools is a champion amongst the most clearing and rapidly creating headways in education or teaching. Like maize in a cultivated area in the midst of a whirlwind, countries all over the place all through the world are winding towards the pattern of computer/ICT education [8][7]. Change in science and development has brought into lime light the key aspects of computer in the scope of information advancement or IT. It is another instructional structure. The incursion of the electronic computer system into the educational discourse, as

demonstrated by Sherman (2005) gives the guts to deal with teaching and learning concerns or problems impressively more rapidly and definitely than so far envisioned. This has at last made the computer system the doyen of humankind as it continues applying more conspicuous affirmation. PC or computer, as showed by [18], has transformed into the nowology in our overall population and possibly cutting edge years ahead. In schools, computers are by and large brought into play; and the necessity for computer development and capability in the educational system has ended up being more critical. Computer has been seen to be an effective contraption/device for demonstrating an instructional framework. According to [15], computers can be brought into play to separate, make and upgrade the educational association of teaching and learning. Furthermore, creative change must be updated through suitable securing of exploratory knowledge: which must be recognized through huge planning in Mathematics, Science and Computer Education. It was in this light the national policies on computer literacy have been dispatched in some countries, tertiary and secondary levels of education with the following general focuses:

(i) For the computer to change the instructive framework, as there is extended merger between the computer development and correspondence/communication

(ii) To set up the individual or understudy/student with thorough computer understanding to on top form into the subsequently century.

The National task on computer education as put set up by different countries e.g. Nigeria was gotten with open arms and saw as a technological advancement in informative practice in the educational institutes inside the country. Computer education was seen as another instructional structure that was expected to upgrade the way of education or teaching and learning and to help IT and monetary progression. This was further upheld by the then federal minister of education, Professor Jubril Aminu in his area to the adhoc committee on computer literacy in Nigeria that the destinations of the nation's computer education program, notwithstanding different things, were according to the accompanying:

- (i) To accomplish a computer skilled society in Nigeria within a short space of time.
- (ii) To engage the present period of school youths at all levels, esteem the conceivable outcomes of the computer.
- (iii) To facilitate them to have the ability to make use of the computer in distinctive works of life and later on profession.

With these phenomenal intentions, all state governments all through Nigeria take after the federal government course of action to present computer education and literacy in secondary schools in late 1997 with the subsequent all-purpose points:

- (i) To accomplish a computer capability in each state.

- (ii) To craft the exercise of computer as demonstrating instrument in each branch of learning and to adapt understudies or students with the use of computer advancement.
- (iii) To engage the present time of school youths at the secondary school level esteem the conceivable outcomes of the computer and have the ability to make use of the computer in diverse parts of life and later on profession. (iv) To reveal the teachers and the understudies/students to the latest scientific knowledge and aptitudes.

2. COMPUTER UNDERSTANDING

As far as computer is concern so it is a technological improvement or progression under the control of set away or stored program that can perform a bit of the intellectual/cerebral traits of man even away from human faculty. It is a power driven machine outfitted with consoles, electronic circuits, storage compartments, and recording contraptions/devices for the quick execution of logical operations. [5] Portrays PC or computer as an electronic device which stores information on magnetic tapes or disks; scrutinize it and produces information as required from the data on the tape. Having the same viewpoint with [5][2] considers computer to be a electronic device that recognizes data in one form and strategies it to make data in another structure. [12] portrays computer as a mix of related devices fit for tolerating to deal with issues data, performing described operations on the data, and supplying the eventual outcomes of these operations. Hence, computer could be said to be a human-made machine made up of electronic components that works information at a quick to convey results that are noteworthy to the customer. It is basically a processor of information. Computer is a machine proposed to make life less requesting in view of its speed, exactness, and ability to store significant measure of information and to finish extensive and multifaceted operation devoid of individual mediation. Computers, paying little respect to sort and size have five basic parts in particular, Input Unit, Memory Units, Control Units (CU), Arithmetic and Logic Units (ALU) and Output Units. Both ALU and CU are joined into one piece of gear/hardware known as the Central Processing Unit (CPU) which is the computer cerebrum. According to [12], the key components of PCs are:

- (a) To store the input or information.
- (b) Process the input or information.
- (c) Show the output of the information processed.

The computer recognizes data through its information devices, for instance, the mouse, screen, keyboard, light pen, scanner, joystick, microphone et cetera. It shapes data, stores it and processes it and shows through the output devices for instance, monitor, printer headphone etc. There are some sorts of computers among which the central sorts are the analog, digital and hybrid. Analog computers are brought into play for measuring changes in incessant physical or electrical states. These fuse voltage, pace, weight, temperature, length and volume. Whereas digital computers are brought into play to perform estimation by counting number certainly while data are identified with by discrete states of the computer electronic equipment. digital computers change over data to binary form. Last but not least the hybrid computers are the blend of analogue and digital computers and acknowledged to have found much relevance in control and feedback processes. Headways showing up today exhibit that the word is dependent on computer development [11]. The computer is

not only an entertainment or word processing and accounting single-handedly, it is an amazing learning tool for people of all age, fields and professions.

3. THE NEED FOR COMPUTER EDUCATION

The world is advancing at a quick rate. Events have moved to the electronic stage with the computer at the center. This change has brought a lot of advancement and change into education/teaching and learning. The 3R's which structures the center of the old game plan of education has seen course of action of capability/reform changes. The world is presently in the time of information development or ICT age, thusly, there is a need to stay avant-garde with time. One of the routines for finishing this is through the presentation of computer guideline in our establishments of learning. Computer education is the effort or the ability to put forth the complete expression of the all inclusive community computer skilled. Computer literacy infers ability to tell the computer what you require it to do and fathom what the computer says. To be computer skilled entires/amount to have the ability to examine, create and talk the computer language [11]. Computer education represents computer training, Computer Assisted Instruction (CAI), and Computer Appreciation. Among the terms used to portray computer in a learning area are Computer - Based Education (CBE), Computer Managed Instruction (CMI), Computer Supported Learning (CSL), Computer Assisted Learning (CAL), Computerized Instruction (CI), Computer Assisted Teacher/instructor (CAI) et cetera. Also, the prerequisite for computer education in secondary schools lies in the conceivable outcomes of computer instructional purposes and its utility worth. The computer is a assiduous, consistent, evaluating teacher which has a couple of systems for instruction at its disposal. According to [16], a computer can show words to be spelled, sound to be made, instructions to be taken after, pictures and symbols to be responded to by touching. Computer can be brought into play to survey understudy's performance and direct understudy backward, forward and sideways to fit learning activities. Its understanding, memory and unending farthest point for unobtrusive components are assets that oppose contention from traditional educator. Carrying an unequivocal stand with [16] says that computer might in like manner be brought into play to handle the incredibly complex ventures that are key for more individualized learning. The computer can present definite test, give extended programmes to suit solitary needs, and outfit prescriptive assignments that may suggest the understudy/student to a course book, an examination of laboratory or an advice with the teacher. According to [4] the computer is determined and consistent in its strategy for operation, as it doesn't encounter the evil impacts of tiredness or nonappearance of attentiveness like people. Computer carries out multi-valuable parts in teaching and learning strategies at all levels. At the vital and helper levels of education students or understudies can research and make learning through computer program. At the tertiary level, it can be brought into play to store the step by step or week by week impression of examinations in science. It can be exercised to mix and separate shading or colors, scan, draw, layout diverse things and make graphs and outlines for instructional purposes [11]. As showed by [12], information can be secured in manual records in the computer magnetic disks and recouped when required. It can also bestow an invaluable framework to arranging and building up an instruction course. It can pretty much as give vibrant interface amidst understudies/students and instructional venture

unreasonable with most media. Other computer aptitudes in course recognized by [10] are:

- (i) It lends a hand to students to learn at their own specific pace.
- (ii) It produces great time saving over conventional classroom instruction or teaching.
- (iii) It consents to students control over their learning rate and progression.
- (iv) It bestows fitting feedback.
- (v) It progresses individualized instructions through personalized responses to learner's action to capitulate a high rate of stronghold.
- (vi) It bestows a more encouraging helpful environment particularly for slower learners.
- (vii) It bestows suitable record-keeping and along these lines screens progression of students.
- (viii) It puts more information in the hands of teachers.
- (ix) Peculiarity or innovation of working with a computer built up student's inspiration.
- (x) It grants tried and true rule from learner to learner in spite of instructor/learner at whatever point of the day and territory.
- (xi) It endows with instructions to learners at comparative expenses as compared to other media.

4. RESPONSIBILITY OR ROLE OF THE EDUCATORS IN EMPLOYING COMPUTER FOR TEACHING

As showed by [17], the classroom teacher will never be supplanted by self-instruction arrangement. Possibly, he/she will be freed to guide the learning of his understudies or students in ways that only a man can. Bringing into play computer for instructions, the educator's part is put forward as changed basically from that of witness to learning facilitator. His/her commitment of passing on lectures changes to that of helper and issue solver. In the outflows of [13], the teacher is freed from dreary assignments as collecting, coordinating and checking tests, has space plan shrewd to work autonomously with the subjects. At the schools, the educator is the manager of the learning technique. The teacher picks when the understudies bring into play the terminal, read the course book, or work with equipment. This is to say that the educator is lessened from unadulterated instructive assignments. He may perhaps bestow himself to the planning or handing out of this information. The educator's task in employing computer for instructions are further conceptualized as putting his/her vitality in driving social event examinations and in working with understudies/students independently and in little get-togethers using exploration focus work where suitable. The teacher is not a passerby of incredulity yet rather deals with the understudies/students in the huge number of upgraded reports to settle on noteworthy choices. He is a backer of adaptation and facilitator to offer learners some aid with utilizing and get to data as a part of computer education. From now on, the instructor's perspectives, feelings and slants will be changed and be balanced. According to [1], the destinations of Computer Education are not controlled by understudy's needs, side interests or trust alone. The destinations are settled upon in meeting with the instructor. The understudies and the teacher together pick what the understudy/student should realize and figure out the student's goal can best be accomplished. Computer as a unit is not

completely self-ruling. To fulfill the set focuses of bringing into play the computer for instruction, the educator should check what each understudy/student is doing, and pretty much as rethink with the understudy/student the destinations/objectives, schedules, content, level and pace. Where an understudy with low limit tries a troublesome material, it is essential for the instructor to pick the possible results of doing in that capacity. The instructor ought to confer the procedure and content of such troublesome material with the understudies to engage such understudies or students appreciate the material content. [3] attests that teachers and their accomplices have the commitment to offer each understudy/student some aid with discovering the best way to deal with learn, to lend a hand them with their work, to test out their work and to channel them to more valuable learning. Having the same point of view with [3][6] says that the teacher can't be detached from fruitful instructional positions he/she has free of the level of the development in light of the focal part he/she plays in teaching and learning progressions. The augmentation and nature of teacher's dedication to teaching and learning technique ought to be well thought-out in familiarizing another development to instruction. The teacher/educator is a gigantic figure in teaching encroachment. No informational system can go up on top of the instructor level.

5. COMPUTER EDUCATION DEFIES IN SCHOOLS

As phenomenal and basic the computer is, it has not by any stretch of the creative ability got its root in schools, also the whole civilization. Its brunt is not earnestly felt by all, in particular by our understudies our students. This is because of there are a couple of troubles going up against its utilization in our overall population. The defies of computer education are both pedagogical and authoritative. The recognizable among the administrative concerns is cost. Consistently, the computer cost has been on the high side. This has been an obstruction to the computer determination for instructional purposes in most schools. Joined with this is the over the top expense of programming; it takes after the same case as that for the hardware. Where attempts are made to pay for computer for instructional purposes, the costs of foundation, backing and substitution are unavoidable. The demoralized money related situation in some countries has incapacitated the council to subsidize education efficiently. The miserable financing of education consolidated with low technological level has been an obstruction to the acquirement of instructional materials and computer utilization for instruction at all levels of education. Besides, decrease of qualified staff militates against the computer utilization for instruction. Pros with the specific ability of computers are few beside the computer dealers who are advantage discerning. Subsequently, there are no computer heads, keypunch chairmen, examiners, computer analysts, computer engineers and masters to maneuver service and put up computer course item for use on a broad scale in education [14]. Another snag to computer utilization in the classroom could be credited to the turmoil of confrontation to change among the teachers. They see the computer utilization for teaching as a system for removing them from their regarded occupation rather than an instructional material to promote teaching and learning. Moreover, they perceive the computer usage as an augmentation in their endeavors in the classroom without attractive reimbursement. Immutably related to impenetrability to change is the issue of poor technological change in developing countries. Some countries are developing where the rate of nonattendance of training and poverty is high among young and old. Incalculable are

incognizant of the colossal positive circumstances of advancement. Commenting on the level of creative growth in developing countries, [9] says that the state of Nigeria's progression will in all likelihood fuel the level of disappointment that their students are inclined to experience on computer education. Additionally, inadequacy of instructional workplaces militates against computer education in schools. Facilities, for instance, adequate air condition, appropriate computer milieu and building are not bestowed. Plus, electricity which is the fundamental wellspring of power supply to the computer is not stable. There is epileptic power supply and unending power surge when there is light. This reasons damages to the computer structure. In addition, the cost of generator is taking off. Consolidated with this, is the deficiency of computer additional parts and the compelling cost of keeping up and brining into play the computer for basic speculation and information storage or accumulation. Following are some of suggestions or recommendations for efficient implementation and utilization of computers in education.

1. Subject specialist should be hired to teach such computer subjects in the schools.
2. The government officials ought to approve a bill on settling the computer expenditure in the business part to construct it less tricky for people to secure at a lessened expense.
3. Computer spare parts or hardware should be arranged to refurbish the damage ones.
4. The organization ought to bestow enough backings to schools to procure computers for instructional purposes and construct open apt computer milieu in schools.
5. Workshops, conferences and symposium should be dealt with to get ready people and make clear to them on the prerequisite for computer education.
6. Instructive courses developers should make computer education one of the inside subjects to be offered in schools.
7. Proper screening of the execution and practices of computer education program in schools.

6. CONCLUSION

Given the late region of advancement in schools, developing countries have the commitment to offer computer education in schools, as well as rather in like manner to empower an affinity for permeating arrangement of courses in which computers can be joined in teaching learning amongst the end customers of these gadgets. The test of advancement joining into teaching is more human than it is technological. In this manner, the examination of the ways and level of computer use gets the chance to be critical to the advancement execution organizes. The world is a global village. The present time of technological progress has brought changes into in every way that really matters all human take a stab at including the teaching and learning methods. Headway in spots of works and securing a liberally remunerated profession/job are all affixed to computer capability, in this way the overall population should get more illuminated through computer education.

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