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# ROLE OF COMPUTERS IN IMPROVING TEACHING AND LEARNING IN SCHOOLS

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## Abstract

In this paper we are describe the importance in computer system and how to computer system improving teaching and learning system of school. We are also providing the information related to application software which is help to improving to learning in education System.

**Keyword:** Roles of computers in educations system.

## 1. INTRODUCTION

The introduction of computers which is a major and very influential technology made the impact of technology greater felt in every sector, including the education sector. In the education sector, computer technology allows online learning, facilitate effective presentation of information through word processing, assist in storage of information, provide communication tools, allow use of spread sheet when doing calculations, assist in learning of students with disabilities, allow teachers to create their own websites and allow teachers and students to access educational software. This paper therefore seeks to discuss the above mentioned functions of computers in improving teaching and learning.

## 2. WHAT IS A COMPUTER?

According to Parsons and Oja (2000), a computer is a device that accepts input (data) process data, and stores data and produces output (information). Pfaffenberger and Daley (2004) defined a computer as a machine that, under a programme's direction and control, performs four basic functions which are input, processing, output and storage. Shelly, Cashman and Waggoner (1990) also defined a computer as an electronic device, operating under the control of instructions stored in



its memory unit that can accept data, process data arithmetically and logically, produces output from processing and stores the results for future use. From the above definitions a computer can be taken as a device with four functions which are receiving data, processing it, produce output and also storage of output. These four functions of a computer play a major role in the teaching and learning process as going to be discussed below.

### **3. ROLES OF A COMPUTER**

One of the roles of computers in improving teaching and learning is that it allows online learning. This makes education to be no longer limited to classrooms. Even if teachers and students are not in the same premises they can communicate with each other, students can now learn even during holidays and weekends in the comfort of their homes. Online teaching assist children who are slow learners to improve their performance by doing work even when they are on holidays.

Computer technology also facilitates effective presentation of information. According to Kangai (2012), computer software can mix text, pictures, sound and motion to provide a variety of options for learners. This makes process of teaching and learning interactive and interesting improving concentration of students. Concentration may assist students to grasp most of the concepts introduced during the lesson. Information that is supplemented with an attractive interface can result in greater number of students being interested in reading it. The different font styles, colours and sizes provided by the computer software also enable easy reading and understanding. Content on the computer can also be made livelier by eye catching pictures, colours and animations. Presentation software like power point and animation software can also be of great help to teachers during lesson delivery. Students can also use computer software like power point to present information during seminars and this will assist in making their presentations more clearly and easily understood.

Computer also enables access to internet which is an enormous information base. According to Kangai (2012) an internet is a computer network made up of thousands of computers and networks worldwide. Internet helps to link computer users. Information for different subjects can be harnessed and retrieved on the internet; the information can be used by teachers and students during the teaching and learning process. Internet amplifies the resources that can be offered to students by their teachers, they can refer to it for additional information and references on the topics to be taught. Teachers can also get access to websites with suggestions for lesson plans. Internet also helps teachers to set test papers and decide on project topics. Rather than relying on textbook for content teachers can get information from experts worldwide. Internet also assists students to get information written by other students or experts throughout the world. Internet allows students to get some of the information on their own instead of waiting for the teacher to give them all the information during lessons. Their participation during the lessons may also increase because they can read ahead of the topics they will be covering in class.



Computer software also helps in storage of information. Computer enables storage of data in electronic format, this can assist teachers to store their notes so that they cannot get lost. Teachers can also use the stored notes if they teach the same subject at the same level, instead of wasting time writing the same notes each and every year. Students can also use this facility to save and submit homework and their assignments for marking whilst they are at home.

Communication tools like plans and teaching strategies, this assist to improve their teaching process. Students can also communicate and collaborate with fellow students sharing academic information. Electronic-mail also makes it easier for teachers to share information with teachers in other schools and teachers can also communicate with their students' parents. Teachers can also communicate with organizations to get information to use during lessons.

Computers also allow use of a spread sheet in the teaching and learning process. According to Gupta (2004) a spread sheet is a simple worksheet consisting of rows and columns in which data can be entered. Spread sheets can be used by teachers and students to make calculations and comparisons; they are commonly used in subjects like mathematics and science. They can also be used to create visual representations of data such as charts and graphs. The advantage of using spread sheet during the teaching process is that it saves time because they make calculations faster. The calculations are also more accurate.

Word processing can also be integrated into teaching and learning through use of a computer. According to Heltzel (2002) word processing can be defined as creating, editing and printing of data using a computer. Word processing can be used to write reports, keep notes and also facilitate writing of research projects. Teachers can use word processing to prepare their lesson plans in preparation of the teaching and learning process.

Computers have also allowed schools to provide assistance in the learning of students with special needs. Assistive technology such as voice recognition systems, dynamic Braille displays, speech synthesizers and talking books provide learning and communication alternatives for those who have disabilities. Students with disabilities benefit greatly from opportunities to interact privately using drill and practice on a computer and tutorial programmes. Drill and practice assist during the teaching and learning process of students with disabilities because most of them have slow cognitive development.

Computer assisted instruction is also one of the programmes that can only be done if there is a computer. This is a programme that can be presented by types of students. According to Kulik and Banget-drowns (1985), computer assisted instruction produces better results than those produced with traditional instruction. This is mainly because computer assisted instruction provides one to one interaction with a student, as well as instant response to elicited answers. Computer assisted learning also allow students to proceed with learning at their own pace, computers can also be used for drilling purposes. Computer assisted learning also enable teachers to provide more individualized



tailored learning programmes, students who need extra help with practice drills and exercises can work on the computer while the teacher is doing other things like marking in the class. The computer can act as the teacher providing both instruction and feedback. Use of computer assisted instruction motivate learners and improve student to student cooperation than conventional learning. According to Copper and Copple (1987), students retain what they have learned better with computer assisted learning than conventional learning.

Computer assisted learning can also inculcate the idea of self-study in students; because it is easier to search for information than in books and it may also be interesting to students to operate a computer. When students do self-study they can even go ahead of the teacher and they will easily understand the concepts when they are repeated in class.

During computer assisted learning and computer assisted instruction, teachers can also make use of educational software. According to Kangai (2012), educational software refers to computer programmes that can be used for educational purposes. Some of the educational softwares are: classroom aids, which are designed for use in classrooms and can be projected into a large whiteboard at the front of the class and are run on a network of desktop computers; courseware which refer to educational material which can be used as kits for teachers or as tutorials for student usually packaged for use with the computer; assessment coursework which refers to software with a primary purpose of assessing and testing students in a virtual environment, it also allows students to complete tests and examination using a computer and the software scores each test and produce results for each student.

Teachers can also create a web page designed for his or her class. When the web page is designed teachers can post homework assignments, student work, famous quotes and any other educational information. The web page can be used by the students to do school work even if they are at home which will make it easier for the teacher to cover the subject syllabus in time. The teacher can also use the web page for revision purposes when students are preparing for their examinations.

However, the disadvantages of using computers are that, the introduction of computer technology requires a tremendous amount of physical and organizational restructuring for administrators, teachers and students. Teachers need to be trained on how to use computers which may be expensive and there will also be need for an onsite technology expert in case computers crash during the lessons. This will also be expensive for schools. The other disadvantage is that when computers are used effective interaction between teacher and student will disappear. According to Criss (not dated) computers also have a health risk of eyestrain, muscular and skeletal injuries. Students may also visit harmful sites like porn site and hate sites. Students may also have difficulties in separating genuine information and information without facts on the internet and they may also get wrong answers as feedback since it will be difficult to prove if the answers are correct. Some software products may seem to be educational yet they are merely for entertainment.



#### 4. CONCLUSION

By and large computers play a major role in improving teaching and learning. They offer opportunities for enhancing intellectual growth and help students to connect the curriculum with their personal experiences and abilities to learn. Computers can enable students to do online learning on their own with little guidance from the teacher. Computers can also enable learners and teachers in effective presentation of information. Teachers and learners can also improve themselves by accessing information from the internet. Computers can also assist in writing information through use of word processing; spread sheets can also be used for doing calculations faster in subjects such as mathematics and science. Computers also assist teachers and learners to communicate educative information through electronic mails. Learners with disabilities and slow learners can also benefit through use of drilling and practice programmes. Computer assisted instruction and learning can also be used to assist even students who are not disabled when teachers create their own websites. However computers can also have negative effects in the teaching and learning process. The introduction of computer technology at a school and training of teachers may be expensive. Computers will also cause interaction between teachers and students to disappear. Computers may also have a health risk such as eyestrain. Students may also visit porn site and hate sites pretending to be researching on the internet. Although use of computers has its own problems it seems as if computing technology will be a large part of the future, so it is worth to involve computers in the teaching and learning. The skills that will be gained by learners during the learning process will be essential in their future.

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