

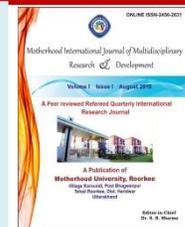


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**Role of Technology in Education**

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**Abstract**

*These days technology plays an important role in Education. With the help of Technology complex things have been made easy and simple to understand rationally and logically. Various medias like internet, audio-video, images, CDs, PowerPoint, projector, Computer software etc have been thrown open that one can read anywhere anytime at convenience. Earlier classroom was the only mode of Education by reading books and taking down notes. But in today's era education is becoming paperless through technology. Problems are solved quickly with the help technology and make the education very interesting. One can gain access to any topic instantly just by click of a mouse. Now there is no dearth of knowledge in the universe. Through the help of technology man is trying to know what is beyond the world or universe.*

**Education**

According to some learned people, the word "Education" has been derived from the Latin term "Educatum" which means the act of teaching or training. A group of educationists say that it has come from another Latin word "Educare" which means "to bring up" or "to raise". According to a few others, the word "Education" has originated from another Latin term "Educere" which means "to lead forth" or "to come out". All these meanings indicate that education seeks to nourish the good qualities in man and draw out the best in every individual. Education seeks to develop the innate inner capacities of man.

**“By Education I mean an all-round drawing out pf the best in child and man’s body, mind, spirit.**

**-Mahatma Gandhi**

## Technology

The word 'Technology can be used to refer to collection of techniques. In this context it is current state of humanity's knowledge of how to combine resources to produce desired products, to solve the problems, fulfill needs or satisfy wants; it includes technical methods, skills, processes, techniques, tools and raw materials". Now a day's modern Technology plays a remarkable role in the every sphere of life.

The word technology refers to the making, modification, usage, and knowledge of tools, machines, techniques, crafts, systems, and methods of organization, in order to solve a problem, improve a preexisting solution to a problem, achieve a goal, handle an applied input/output relation or perform a specific function. It can also refer to the collection of such tools, including machinery, modifications, arrangements and procedures. Technologies significantly affect human as well as other animal species' ability to control and adapt to their natural environments. The term can either be applied generally or to specific areas: examples include construction technology, medical technology, and information technology.

Technology is generally divided into five Categories:

**Tangible:** blueprints, models, operating manuals, prototypes.

**Intangible:** consultancy, problem-solving, and training methods.

**High:** entirely or almost entirely automated and intelligent technology- that manipulates ever finer matter and ever powerful forces.

**Intermediate:** semi automated partially intelligent technology that manipulates refined matter and medium level forces.

**Low:** labor-intensive technology that manipulates only coarse or gross matter and weaker forces.

### Definitions of Education Technology

The term 'educational technology' has been defined by several persons but most important definitions are given below:

G. O. M. Leith has given a comprehensive definition of 'educational technology' : "Educational technology is a systematic application of scientific knowledge about teaching learning and conditions of learning to improve the efficiency of teaching and training. In the absence of

scientifically established principles, educational technology implements techniques of empirical testing to improve learning situations."

### **Types of Education Technology**

Accordingly A.A Lumsdaine has classified educational technology in three distinct types or approaches as below:-

Educational Technology (1) - Hardware Approach (Machines)

Educational Technology(2) - Software Approach (Men)

Educational Technology(3) – Instructional Designs

First Educational Technology or Hardware Approach

It is known as 'hardware approach' to education or audio-visual aids. Its origin lies in the application of physical sciences or engineering to education and training systems. It has the major assumptions that technology or a machine is closely related to technology of teaching. It is important to note that teaching machine is the mechanical aid to be deliberately designed and invented to fulfill instructional requirements. All other audio-visual aids are designed and manufacturer for improvising communication systems not for educational one. But now we are using them (radio, televisions, tape-recorder, and record-player) for instructional purpose. Initially these machines were developed for market rather than education.

In this way, the process of teaching learning has been gradually mechanized through the use of teaching machines, languages laboratory, radio, television tape-recorder, and record-player. The mechanization is being introduced by preservation transmission and advancements of human knowledge. The teacher can deal with larger and larger group of students by his discourse on radio and television. Indeed, the educational and training systems are able to deal with an increased number of students and training systems has been reduced by the hardware approach to education.

Silverman (1986) called this type of educational technology "Relative Technology". This refers to borrow and to apply technology, machines and devices in the process of teaching and learning. This educational technology performs a simple service function in education.

### **Second Educational Technology or Software approach**

This second educational technology is called 'Software approach' or instructional technology. It refers to the application of teaching learning principles to the direct and deliberately shaping of

behavior. Its origin lies in the application of behavioral sciences to the problems of learning and motivation, whereas mechanization of teaching learning is seen purely as problems of learning of presentation. This view of educational technology is closely associated with the modern principles and theory of teaching, model of teaching, theory. It is characterized by tasks analysis, writing objectives in behavioral terms, selection of appropriate teaching strategies, reinforcement for correct responses and constant evaluation.

Silverman (1986) called this type of educational technology “Constructive Educational Technology”. In this technology

Some constructive work is to be performed. It is the basic educational application dealing with : (1) the analysis of instructional problems, (2) the selection or construction of measuring instruments required to evaluate instructional outcome, and (3) the construction or selection of strategies and tactics to produce the desired educational outcome. It concentrates on the analysis, selection and construction of whatever is necessary to meet educational needs.

These two meanings of educational technology, the first concerned with teaching aids like teaching machines and the second with learning aids like programmed instructions are functionally related to each other.

### **Third Educational Technology or Instructional Designs**

This new technology is known by several names. It is essentially a new management approach, influencing management decision making in business, industry, government, military and education. One term that has gained reasonable standardization is system analysis.

Technology has influenced the educational administration and organization to a great extent. It refers to the analysis and development of system. One assumption is that that no comprehensive system development can take place without prior system analysis. The term system analysis includes utilization of scientific mathematical techniques applied to organizational operations and problems of management as a part of decision making activities.

During the last few years educational administrators have become sensitive to the potential use of the new system technology in the educational operations. It has brought to educational management a scientific-quantitative approach for solving for educational administrative problems.

The third educational technology is not only the system analysis or Management Technology, but involves three instructional designs: 1. Training Psychology 2.Cybernetic Principles or Theory of enforcement and 3.System Analysis.

### **Advantages of Modern technology in Education**

There are a number of benefits of introducing technology in the field of Education. There has been apposite impact of technology on education. Here are some of the benefits of educational technology.

#### **Technology develops learning capabilities:**

One of the benefits of educational technology for students is that it helps them improve their learning capabilities. Since it is one field which is constantly changing, new updates can be easily introduced to the students and class plans can be prepared with the help of the software.

#### **Use of technology in Classes:**

In the classes teachers use technological tools like Video, Audio programs, graphics, images, CD and power point presentation to impart education to the students which increase students' learning efficiency and quality of physical education.

#### **Technology improves motivation of students:**

When students are given meaningful interaction with computers, software and the internet, they are more motivated, engaged and involved in their own learning.

#### **Technology improves creativity, problem solving skills and self image:**

The latest digital tools can therefore serve as a vehicle to help students learn content of knowledge as well as problem solving and higher level thinking skills.

#### **Technology improves the quality of student work:**

With the introduction of the software it becomes easy to teach students with special needs, the appropriate study materials are so designed that learner becomes comfortable and effective. The students overcome their deficiencies by the use of modern devices and techniques.

#### ***Technology Improves Student Achievement on Tests:-***

There is mounting evidence that technology improves student achievement on tests. Brain eating problems of mathematics and statistics can be easily calculated through calculators.

***Technology Benefits Students with Special Needs:-***Technology can improve capabilities of learning, understanding and expression of the children with special needs. They can play games and enjoy the support competitions can use software to write essay significantly better than fellow students. They can be interact ally sound physically flexible with the help of teaching and learning materials.

***Technology Benefits:-***Drawing a play fields. Knowledge of support materials is given to the players by technical methods, video cameras. Recording of sports competitions help the players to pick up the sport skills.

***Technology Acts as a Catalyst for Change:*** Technology plays a role as a catalyst for change in educational activities. Teaching methods are made effective. Learning becomes enjoyable transmission of information is easy Teaching learning process is simplified. Time is saved which can be utilized for other pursuits.

***Technology Prepares Students for the Future:-***By having and working with technology in schools, students gain the skills that they will need to be marketable in the future workplace and to operate in a high-tech world.

***Technology increases Knowledge and Opportunities:-***Through the use of various digital tools, teachers and librarians can also offer students increased access to knowledge and innovative opportunities.

***Technology reflects our current lifestyle and the working world:*** By incorporating meaningful use of technology into a curriculum, educators ensure that students will begin to these critical thinking skills such as creativity collaboration and flexibility.

### **Conclusion**

With the inclusion of technology, the concept of education is undergoing a modification, for the betterment of the students as well as the teachers. Hence, the introduction of technology is important in education. Now learning and teaching has become an enjoyable experience. We can say that technology has changed the era and the time in which we are living. It gives us information on any subject and anywhere at any place. It increases the knowledge and experiences in our existing knowledge.

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