



## Study of Approaches of Educational Technology

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### Abstract

Education is a very important and integral part of society that governs the social functioning. It deeply connects with the wants and ambitions of every society. This is the reason that education cannot remain unaffected by any social change that takes place around us. In general, there is active participation and involvement of radio, television, computers, machines, films, and now the Internet and multimedia, in providing education and educational material to students. Smartboards, personal laptop computers, online classrooms, video technologies, and projection equipment have all been implemented in the classroom throughout time. The use of technology in classrooms is fraught with controversy. Some argue that technology is a distraction in the classroom.

**Key Words:** Education, Technology, Internet, learning etc.

### Introduction

These terms denote a variety of educational learning and practises. Education allows a kid to accommodate himself to the environment and the full development of his strengths and innate qualities so that, if eligible, he may contribute to his family, society, and country in a certain field. Education is intended to bring about the desired behaviour change in a youngster. Education changes a child's basic patterns. Psychology, technology, and scientific education all contribute to fine-tuning the fundamental patterns. As a result, education is not a self-contained suffix, but it is linked to technological science.

### Definitions and Nature of Educational Technology

#### • Simplistic Definitions

“Varied researchers have different definitions of educational technology. The following are some significant definitions. These definitions aid in comprehending the nature and significance of educational technology—

(1) **Jacquetta Bloomer 1973**—Educational Technology is the application of scientific knowledge about learning to practical learning situations.

(2) **Richmand 1970**—Educational Technology is concerned to provide appropriately designing learning situations, holding in view the objectives of the teaching or training, bring or bear the best means of instruction.

(3) **Robert A. Cox, 1970**—Application of scientific process to man’s learning conditions called Notes Educational Technology.

(4) **Dececco** —it is in the form of detailed application of the Psychology of learning to practical teaching problems.



(5) **Robert M. Gagne**—Educational Technology can be understood as a mean for the development of a set of systematic techniques and accompanying practical knowledge for designing testing and operating schools as educational systems.”

### Scope of Educational Technology

An educational technology field's notion is a good analogy. In terms of audio-visual assistance, educational technology's scope is limited to that medium. Programed teaching is the only way to describe educational technology as it pertains to students. It's a large field if we take a methodical approach to it. Audio-visual aids and computer-aided teaching are no longer part of educational technology; rather, they are the components of educational technology. A complete science has made educational technology one of the largest fields in the world. Various educational technology fields have been viewed in diverse ways by various researchers. Technology in education has been discussed by Derek Rowntree, 1973, in the following “fields—

- Marking the goals and objective of learning.
- Employment of learning environment.
- Searching and structuring the courses.
- Selecting the appropriate teaching strategies and learning media.
- To evaluate the effectiveness of the learning system.”

### Approaches to Educational Technologies

A group of educationists divide educational technology into two approaches:

#### 1. The Hard-ware Approach:

Electro-mechanical devices like motion pictures, videotapes, computers and closed-circuit television are all dependent on the application of engineering concepts. The scientific and technical advancements of the twentieth century led to this approach to instructional technology.

This hardware-based approach to instructional technology is becoming more prevalent in today's classrooms. The hardware method automates the teaching process, allowing instructors to educate more pupils for less money.

#### 2. The Soft-ware Approach:

It employs psychological concepts to help people change their behaviour. It stems from Skinner's and other behaviourists' pioneering work. The programmes that such technology generates are often referred to as software. Soft-ware may also include newspapers, books, periodicals, programed learning, micro-teaching, team teaching, and other educational games, among other things. Task analysis, setting clear goals, selecting suitable learning procedures, prompt reinforcement of replies, and regular assessment are all hallmarks of the soft-ware approach.



### 3. Systems Approach:

A systematic endeavour to coordinate all components of an issue toward certain goals is known as a system approach. "A regularly interacting or autonomous set of components constituting a cohesive whole," according to Webster's definition. The properties of a system may be discussed using an example: different sections of the digestive system can be referred to as digestive system components. Every component of the digestive system has a role in the overall operation of the digestive system.

In the context of education, a system is a total unit that includes all of its characteristics and pieces, such as students, instructors, curriculum, material, and assessment of instructional goals. The teaching-learning process is considered as a system's components communicating and controlling each other. In this scenario, the system consists of an instructor, a student, and an instructional software, all of which interact in a certain way.

#### Components of Educational Technology

In his book Educational Technology, S. P. Ruhela (2002) identifies three primary components of educational technology as a concept, each with a distinct function to play in the educational process. The three elements are as follows:

**Methods:** Using a few devices in teaching—learning settings, such as programmed learning, team teaching, micro-teaching, and individualised system of education.

**Materials:** Instructive resources such as programmed textbooks, manuals, guidelines, texts, and other written/printed materials are included in this category.

**Media:** Using audio, visual, or combined audio-visual media as teaching tools to support successful teaching and encourage improved learning, such as radio, tape recorders, charts, maps, posters, films, and instructional television. Furthermore, labour is an important component of educational technology, which encompasses a complex network of techniques, resources, and media. Given this list of educational technology components, the notion of educational technology must be understood in the context of education as a whole. It is a broad technology that encompasses all aspects of the educational process, including method selection, teaching strategies, selection of appropriate/relevant learning materials, use of appropriate aids, and instruction in the operation/handling of various equipment to ensure better learner performance. "Educational technology is a wide term embracing teacher and student, as well as the process and result of learning," according to AECT (1977). Educational technology serves as a mission with the primary goal of reaching a broad segment of the population through all available methods. Greater psychological and pedagogical readiness, a scientific mentality, and a coordinated approach to the educational process as a whole are all part of educational technology. It demonstrates a professional



enthusiasm and energy for experimenting and innovating for education's growth and success.

### Conclusion

The words "educational technology" are made up of two words: "education" and "technology." 'Shiksha' is the Hindi word for education. It's a verb that meaning "to educate." In other terms, education is the process of learning or academic achievement via the formation of rituals and practises. A synonym of the English term 'technology' is technology or technological science. Technology is defined as "methods for applying scientific knowledge in everyday life." The application of scientific information about learning to real-world learning circumstances is known as educational technology. Educational technology investment is high due to practical educational difficulties of learning psychology. "Educational technology is a science-based topic whose goal is to make instructors', educators', and students' jobs easier. These three sections are well-adjusted as a whole, making them competent and capable of achieving their goals via methodical techniques. All three dimensions of input, output, and process should be considered." The notion of educational technology is related to the field of educational technology. If instructional technology is defined only in terms of audio-visual aids, then its scope is confined to that.

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