

HND: SCIENCE OF EDUCATION : LEVEL II= SECOND SEMESTER

COURSE TITLE: INTRODUCTION TO EDUCATIONAL TECHNOLOGY (4 CREDITS, 60 HOURS (2 HOURS PER WEEK)

COURSE INSTRUCTOR: MBING GLEAN TAWE (Ph.D Fellow)

GENERAL COURSE OBJECTIVES: The course treats the design, implementation and evaluation of the process of learning and teaching in terms of specific objectives and using human, material and financial resources to bring about effective teaching and learning.

GENERAL TEACHING STRATEGIES OF THE COURSE: The course is highly interactive and mostly students and group centered. The lecturer is just a facilitator and acts as a reference.

COURSE EVALUATION STRATEGIES: Course attendance (5mks), classroom participation (5marks), assignments (5marks), presentations in class (5marks), practical(s) (10mks) and semester exams (70marks) Total= 100marks.

Course content

1. The concept of educational technology
2. Instructional models in educational technology
3. Technological applications in teaching
4. The life teacher versus media
5. Using community resources
6. Distance teaching strategies
7. Print and audio visual workshop
8. Computer workshop
9. Community resources workshop

MODULE ONE

GENERAL INTRODUCTION

THE CONCEPT OF EDUCATIONAL TECHNOLOGY

Contents

- ❖ What is Education?
- ❖ What is Technology?
- ❖ Definitions and Nature of Educational Technology
- ❖ Assumptions of Educational Technology
- ❖ Scope of Educational Technology
- ❖ Utility of Educational Technology
- ❖ Summary
- ❖ Review Questions

OBJECTIVES

Introduction: ‘Educational Technology’ is made up of two words—one is ‘Education’ and another is ‘Technology’. First we will look at the meaning of education and then technology and based on this, will try to define the subject.

What is Education?

Education is synonyms of the Latin word ‘Educatum’ which is meant in English ‘Education’. It means—‘The art of teaching’. According to Universal Dictionary of English Language, Education means—(1) To educate, To provide training, (2) Developing brain and character, and (3) A particular state education systems. These words indicate various learning of education and educational procedures.

Education is meant to bring the desired change in a child’s behaviour. Basic trends of child are refined by education. Psychology, technology and science education provide valuable contribution in refining the basic trends. Thus, education in itself is not a self-sufficient suffix but it is related to technical science.

Technical science education helps in the study of the behavior of children and provides instructions to scrap and modification for them.

What is Technology?

Technology or Technological Science is a synonym of an English word 'Technology'. Technology means—Methods of using scientific knowledge in daily life. There are two major characteristics of Technology—

- (1) Systematic application of scientific or other organized knowledge to practical tasks.
- (2) Forming the division and sub-division of any such task into its component parts.

Jacquetta Bloomer defined Technology in 1973 as —“Technology is the application of scientific theory to practical ends”.

So it can be said that the scientific mechanisms and experimental techniques as well as technical or technological sciences.

The term 'Technical' in Greek is 'Technikos' which means—art. This is the synonym of the Latin language word 'Texere' which means for weaving or construction.

Educational Technology

Some acceptable definitions of educational technology

- (1) G.O.M. Leith—“Educational Technology is the systematic application of scientific knowledge about teaching learning and conditions of learning to improve the efficiency of teaching and training.”
- (2) Shiv K. Mitra—“Educational Technology can be conceived as a science of techniques and methods by which educational goals could be realized.”

Assumptions of Educational Technology

Educational technology is based on following assumptions—

(1) Every human works like machines. Therefore, in education scientific principles can be successfully used to scrape and finish this human behaviour.

(2) Education is both the art and science. Therefore, education can be analysed and can be divided into small learning facts, elements and ingredients. Then training, instructing and learning these facts, elements and ingredients is possible. Therefore, Education technology is based on systematic approaches.

Factors Influencing the Application of Education Technology

(1) **Political Factors**—The development of educational technology depends on various factors in any country. Political factor is one of the most important. Political factors are such that are related to nation's political circumstances, political policies, political objectives and scientific investigations. How is the policy of existing government of country in the field of development of education technology? If the ruling party finds the possibility of benefits of using any technology then perhaps it make necessary efforts to develop them.

Therefore, it can be said that political factors do influence the educational technology. It plays an important role in the hidden innovation in the field of television and telecommunications and their dissemination.

(2) **Psychological Factors**—Psychological factors includes interest levels, trends etc. of teachers, students and institutions. Motivation of teachers, learning to teach, wills, attention and interest, etc. are included under the influence of psychological factors.

In educational technology, a lot of things depend on the individual interest of teachers and students, aptitude and efforts. If both the parts have the latest knowledge and information of educational technology, get the necessary instruction to use them, can have the benefits of various local and other sources for their use and finds it appropriate to use in the college environment then educational technology can play an important role in the important in the development of education.

(3) **Educational Factors**—these factors prove to be very useful with the psychological factors. Teacher's education and training are the main factors among educational factors. Teachers can

be proved to be a milestone in the field of educational technology if they are provided the well-organized instruction.

These teachers can be able to work in lab for using various approaches of education technology. These new experiments can provide effective leadership and healthy direction to innovative inventions and new dimensions by effective refinement and exploration.

(4) **Economic Factors**—Economic factors too have a great importance in the development of educational technology. Money is the backbone of any experiment, exploration or invention. Development, dissemination and training of any technology are not possible without money.

Economic grant is necessary for audio-visual aids and other equipment in the field of educational technology and for the development of its lab. Without money, neither equipment can be bought nor experiments can be done and it is possible refine and explore.

(5) **Social and Cultural Factors**—Society and culture are mirrors of education. As there will be the society and culture, the same will be education. No doubt, one can have a bright future in the field of educational technology if there is awareness in the society, there is dominating leadership and impact of technical terms is visible in the veins of culture. Then the school environment will be forced by people, parents and education experts to enact technical aspects. As a result of which educational technology can play its role in the temple of education.

Scope of Educational Technology

Various scholars have interpreted various fields of educational technology in different manner such as the following.

- (1) Marking the goals and objective of learning.
- (2) Employment of learning environment.
- (3) Searching and structuring the courses.
- (4) Selecting the appropriate teaching strategies and learning media.
- (5) To evaluate the effectiveness of the learning system.

(6) In future, getting desired discernment to improve the effective based on feedback.

Utility of Educational Technology

Educational technology course gives the appropriate importance to the teaching theories rather than learning theories. The utility of Educational technology can be explained easily by the following points—

(1) **Utility for a Teacher**—Teacher having educational technology command can study the student's behavior, can understand them and can try to make desired changes. Teachers should have knowledge of behavior, study and behavior improving methods along with course materials.

Educational technology enables the teacher in this area. Educational technology provides scientific knowledge to teachers about the teaching approaches, teaching array compositions and teaching methods. At what time, which audio-visual aids should be used to clarify which phase, which types of radio vision and cassette vision should utilized for radio and television and which types of programmed instruction materials should be prepared for students to learn at their own pace—teacher learns all these things from educational technology. Educational technology provides directions for using various methods of micro teaching, simulated teaching and T. Training etc. in order to prepare an effective teacher.

The fact is that - Educational technology directs and helps teacher at each term, in every aspect and every point of his work whether creating a teaching strategies, selecting a teaching point, selecting the good method of teaching or understanding the students or solving his own teaching issues or improving his teaching as a career. Today, even a single step can't be taken without the help of educational technology.

(2) **Utility of Educational Technology in Learning**—Education technology provides us the knowledge of learning method and principles, studies the different methods to make the learned courses permanent and motivates the students to learn and helps them in maintaining their interest. It follows student's rule of learning at their own pace in the area of learning. Educational technology maintains teaching learning processes by their scientific interpretation. Also, educational technology is responsible for the creation new paradigm which explains us the nature

of teaching and learning. In this way, educational technology can be made useful for teachers, students and everyone by making teaching and learning process more effective and meaningful.

(3) **Utility to Society**—The words said in the context of the educational psychology by Garrison etc. also applies to educational technology—We know in advance if we are..... (educational technologists), that certain methods will be wrong. Therefore they save us from mistakes and clarify human motives and thus make it possible to achieve understanding among individuals and groups (teaching and learning).

In society, people have the facility of radio, transistor, tape recorder etc. which can be used in the areas of education by means educational technology. Educational technology develops the cognitive, impressionistic and psychological aspects of teachers and students as well as people. For countries with limited resources, educational technology gives the gift of such methods which will help to promote, disseminate and expand the mass education. Educational technology through an influential teacher, politician or social reformer of the knowledge and skills can be easily transported to every section of society by using television, tape, radio and addresses etc.

Therefore it can be said that “Educational technology in today’s technological age increases the usefulness of teacher, teaches students and pupil teacher with effective methods and is very helpful in the accumulation of knowledge, promotion, dissemination and development of society.”

Summary

- Educational technology is composed of two words—education and technology.
- The meaning of education—To educate. In other words, learning or academic - to achieve through the creation of rituals and practices is called education.
- Technology or Technological Science is a synonym of an English word ‘Technology’. Technology means - Methods of using scientific knowledge in daily life.
- Educational technology is the application of scientific knowledge about learning to practical learning situations.

- Practical educational problems of the psychology of learning, educational technology investment is intense.
- “Educational technology is a subject based on science, its objective is to make teachers, education and the student’s task continuously simple. Together these three parts are well-adjusted so that they are competent and capable to attain their objectives through systematic approaches. Input, Output and Process—all three aspects should be taken into account.”
- The field of educational technology is analogous to its concept. If educational technology is considered in terms of audio-visual aids then its field is limited to only audio-visual aids.
- The utility of educational technology is increasing day-by-day. Every country in the world is adapting it.

Review Questions

Section A

- (i) Which is the most importance among the factors influencing the educational technology?
- (a) Economic Factor (b) Political Factor (c) Psychological factor (d) Educational factor
- (ii) Day-by-day the utility of educational technology is
- (a) Decreasing (b) Increasing (c) Same (d) All the above
- iii) Which approach can be used by teacher to study the issues related to educational administration and management?
- (a) Origin (b) Productive (c) System (d) None of the above

Section B

1. What are the assumptions of educational technology?
2. What do mean by “Technology”?

3. What is education?

4. Explain the utility of educational technology.