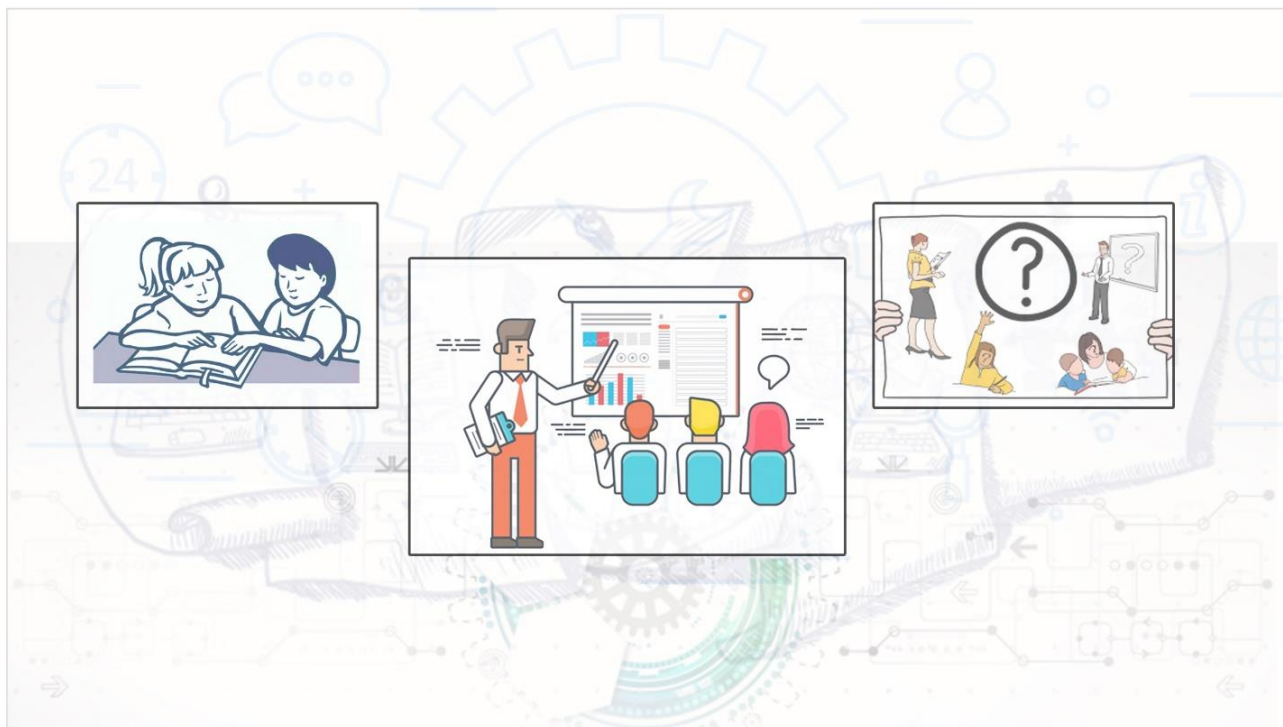


UNIT 4: LEARNING AND INSTRUCTION



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1.4 LEARNING AND INSTRUCTION

LEARNING OBJECTIVES

- ❖ State various terms in Psychologies of Learning and Instruction
- ❖ Explain the Teaching-Learning Process
- ❖ List the Factors Influencing Learning
- ❖ State the Principles of Learning

1.4.1 INTRODUCTION

Psychology of Learning and Instruction comes under the branch of Educational Psychology. A great deal of research has gone into understanding the psychology behind human learning and instruction. The knowledge of psychology of Learning and Instruction is very useful in making the teaching learning process, interesting, inspirational and effective (Aggarwal, 2010).

The following are the basics a teacher needs to be aware, before embarking on psychology of learning:

- 1. Pedagogy**
- 2. Andragogy**
- 3. Teaching**
- 4. Training**
- 5. Learning**

PEDAGOGY

Pedagogy is the method and practice of teaching especially as an academic subject or theoretical concept. Pedagogy is the discipline that deals with the theory and practice of education; it thus concerns the study of how best to teach.

Johann Friedrich Herbart is the founding father of the conceptualization of pedagogy, or, the Theory of education. Herbart's educational philosophy and pedagogy highlighted the correlation between personal development and the resulting benefits to society

Herbart suggested 5 steps as crucial components. Specifically, these 5 steps include:

- Preparation,
- Presentation,
- Association,
- Generalization, and
- Application.

ANDRAGOGY

Andragogy is the method and practice of teaching adult learners; Adult Learning. The term was originally coined by German educator Alexander Kapp in 1833. It was Popularised in US by the American Educator Malcolm Knowles.

It is the science of understanding (theory) and supporting (practice) lifelong education of adults. According to Malcolm Knowles, it is a specific theoretical and practical approach. It is based on a humanistic conception of self-directed and autonomous learners as well as teachers as facilitators of learning.

TEACHING

Teaching is defined as an interactive process, primarily involving classroom talk which takes place between teacher and student and occurs during definable activities, thereby resulting in Learning.

Who is a Teacher?

Teaching is an art, science and Skill

Teacher should have

- the Creative proficiency of an artist,
- the Precise attitude of a Scientist and
- the Perfected Skill of a Craftsman.

Teacher Activities

General Perception is that teacher has work only in the classroom and that too teaches the subject content to the students. Teachers engage in lot of activities such as

- explaining activities
- guidance activities
- demonstration activities
- order maintaining activities
- mental hygiene activities
- record keeping activities
- assignment making activities
- curriculum planning activities
- testing and evaluation activities

TRAINING

Training is an organized activity aimed at imparting information and/or instructions to improve the recipient's performance or to help him or her attain a required level of knowledge or skill. It is basically of a shorter duration. It is expected to give immediate results. The term training evolved during world war

LEARNING

Learning is relatively permanent change in behaviour resulting from reinforced practice

- Learning is process as well as product
- It is the nature or tendency of human beings
- It is the process of mental development- cognitive, affective and psychomotor
- It is both positive and negative
- It is individual in nature
- Learning is creative: Critical thinking

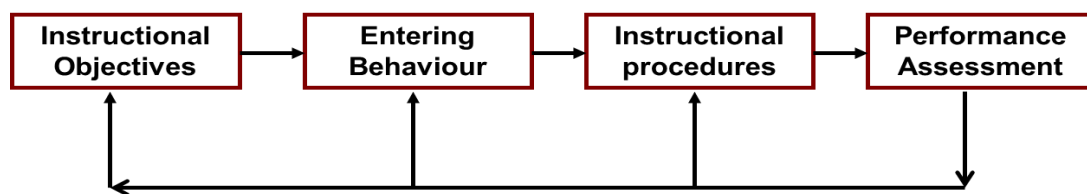
1.4.2 TEACHING LEARNING PROCESS

“A thousand teachers, a thousand methods.”
-Chinese Proverb

INTRODUCTION

The basics of Psychology of Learning and Instruction were detailed in the previous topic. In this module, the Basic teaching model, developed by Robert Glaser (Dececco,1968) is explained. This is one of the most successful teaching models widely in use. Many of the teacher training programmes are based on this model.

BASIC TEACHING MODEL



The Basic Teaching Model consists of four components namely:

- Instructional Objectives
- Entering Behaviour
- Instructional Procedure
- Performance Assessment

Each one of the components is explained below:

INSTRUCTIONAL OBJECTIVES

Instructional Objectives are those the student should attain upon completion of a segment of instruction. It implies in simple terms what the student will be able to do at the end of the instruction

ENTERING BEHAVIOUR

Entering Behaviour describes the student's level before the instruction begins. It refers to what the student has previously learned, his intellectual ability and development, his motivational state and certain social and cultural determinants of his learning ability. To be precise, they are human ability, individual differences and readiness.

INSTRUCTIONAL PROCEDURES

Instructional procedures describe the teaching process; Most decisions a teacher makes are on these procedures. Proper management of this component results in those changes in student behaviour which we call Learning or achievement.

PERFORMANCE ASSESSMENT

Performance Assessment consists of the tests and observations used to determine how well the student has achieved the objectives.

If there is an indication that the student has fallen short of mastery or some lesser standard of achievement, one or all of the preceding components of the basic teaching model may require adjustment.

1.4.3 FACTORS INFLUENCING LEARNING

Personal Factors

- Sensation & Perception
- Fatigue & Boredom
- Age & Maturation
- Emotional conditions
- Needs
- Interests
- Motivation
- Intelligence
- Aptitude
- Attitude

Environmental Factors

- Surroundings : Natural, social, Cultural
- Relationship with teachers, parents and Peers
- Media Influence on learning

MODES OF LEARNING

The following are the different modes of Learning :

- Learning By Observation
- Learning By Imitation
- Learning By Trial & Error
- Learning By Insight

TRANSFER OF LEARNING1

There are three types of transfer of Learning :

- Positive
- Negative
- Zero

A positive transfer takes place when the learning of a particular task facilitates the learning of another task. But on the other hand if learning a particular task interferes with the learning of a subsequent task, it is called negative transfer. If learning of a task makes no difference, it is said to be zero transfer. (Aggarwal, 2010).

DOMAINS OF LEARNING

Learning happens in 3 domains, namely cognitive, affective and Psychomotor.

- COGNITIVE (Theoretical knowledge)
- AFFECTIVE (Feelings)
- PSYCHOMOTOR (Practical Knowledge)

LAWS OF LEARNING

Based on his experiment with cats, **E.Thorndike (1898) proposed three laws :**

- LAW OF READYNESS
- LAW OF PRACTICE
- LAW OF EFFECT

Law of Readiness: According to this, the teacher should prepare the learner ready for learning the knowledge, skills and Aptitudes. This can be done through motivation, arousing curiosity and moving from simple to complex.

Law of Practice: According to this, the teacher should ensure repetitive practice of what has been taught. Drill strengthens the bond of stimulus response.

Law of Effect: According to this, a good environment has to be provided by the teacher. Students should have satisfying and meaningful experiences inside the classroom. The teacher should provide motivation and praise for work done.

1.4.4 PRINCIPLES OF TEACHING AND LEARNING

1. ACTIVE PARTICIPATION – Active Participation of the learner should be ensured by the teacher
2. KNOWN TO UNKNOWN – Whenever a new topic is taught, always teach from what they know to what they do not know. The teacher should provide real life examples before teaching a principle or concept.
3. CLARITY OF OBJECTIVES – The teacher should have clarity of objectives as objectives determine what, when and how to teach
4. KNOWLEDGE OF RESULTS ABOUT PERFORMANCE – The student should be provided information about his performance from time to time so that he/she will be able to know where they stand.
5. MOTIVATED LEARNER LEARNS MOST – The teacher should provide enough motivation about why they have to learn.
6. TRANSFER OF LEARNING – The teacher should ensure whatever is taught in the class is useful to them in the laboratory and also in the workplace.
7. APPEALING TO MANY SENSES – The teacher should avoid monotony in teaching. The student should be allowed to use all his senses, listening, speaking, reading and writing.
8. CONGENIAL ATMOSPHERE – The teacher should provide a congenial atmosphere to the students. Not only the facilities but the teacher should be pleasant. Student should be interested in coming to the class of the pleasant teacher.

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9. REPETITIVE PRACTICE – The teacher should provide enough repetitive practice for lessons taught. It can be in terms of oral repetition, class test, lab demos and home tasks.
10. LEARNING UNDER CONTROL OF REWARD – Teacher should provide good feedback to students on their success. Learners need praise and appreciation.
11. RELEVANT KNOWLEDGE – The teacher should always provide relevant knowledge.

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