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ENGLISH TEST & STUDY MATERIAL

UNIVERSITY GRANTS COMMISSION

UGC/TNSET/NET

PAPER-1-

Teaching and Research Aptitude

UNIT-1-

STUDY MATERIAL WITH TEST

Teaching Aptitude

LEARNING OBJECTIVES

After completing the chapter, you will be able to:

- **Education:** Basic Elements
- **Teaching:** Concept, Objectives, Levels of teaching (Memory, Understanding and Reflective), Characteristics and basic requirements.
- **Learner's characteristics:** Characteristics of adolescent and adult learners (Academic, Social, Emotional and Cognitive), Individual differences.
- **Factors affecting teaching related to:** Teacher, Learner, Support material, Instructional facilities, Learning environment and Institution.
- **Methods of teaching in Institutions of higher learning:** Teacher centred vs. Learner centred methods; Off-line vs. On-line methods (Swayam, Swayamprabha, MOOCs etc.).
- **Teaching Support System:** Traditional, Modern and ICT based.
- **Evaluation Systems:** Elements and Types of evaluation, Evaluation in Choice Based Credit System in Higher education, Computer based testing, Innovations in evaluation systems.

EDUCATION

Definitions and Meaning of Education

The word 'education' has a wide meaning, and it is difficult to define it in precise terms. As per NTA Exam pattern, there are no direct question pertaining to definition, still some of the statements are here for better retention of concept of education.

The terms education, teaching and learning are closely related. The objective of education is learning, not teaching. Teaching is the way to make students learn, but then, it is not the only way. Teaching is called as 'facilitator of learning'. Education is the key to everything that is good in our world today. Education is not only about the past and present, but it is also the key to the future. Education not only teaches our children facts but also teaches them how to think and learn on their own.

Swami Vivekananda defines education as the manifestation of perfection already in man.

Aristotle defined education as a 'creation of a sound mind in a sound body'.

According to Heinrich Pestalozzi, 'Education is the natural harmonious and progressive development

of man's innate powers'. This definition means each human being has immense natural, inborn talent or talents in him. Education provides development conducive atmosphere to him or her.

John Dewey defines education as the power by which man is able to control his environment and fulfill his possibilities.

According to Froebel, 'Education is a process by which the child develops its inner potential in a manner so as to participate meaningfully in the external environment'. 'The purpose of education is to expand the life of the individual in order to participate in its all pervading spirit which manifests and realizes itself in and through the whole universe'.

Major Philosophies and Approaches in Education

Philosophy is a vast subject. All aspects of education such as aims, objectives, curriculum, teaching methods, teacher, text books and discipline are influenced by philosophy. Keeping in view that an examiner now tends to ask multidimensional aspects in a single question, philosophies become important.

1.2 CHAPTER 1

1. **Three basis of education:** The educational process is decided on the basis of three questions – ‘Why’, ‘How’, and ‘What’. Here, the question of ‘Why’ is most important. This is answered by philosophy. The ‘How’ is decided by the psychology and ‘What’ is decided by the social needs. Hence, education is based on the basis of philosophical, psychological, and sociological basis.
There are many philosophies of education, some of the important philosophies of education have been mentioned below.
2. **Idealism:** The word ‘idealism’ has been derived from ‘Ideal’. It is basically about ‘Mind and Self’, that is actually spiritualism. The universal mind or God is central in understanding the world. God is the source of all creation and knowledge, spirit and mind constitute reality.
Values are absolute, eternal and unchanging.
Real knowledge is perceived in mind that is more important than knowledge gained through the senses.
Man has a superior nature that is expressed in the form of intellectual culture, morality and religion.
Froebel, Kant, Plato, Swami Dayanand, Vivekananda and Sri Aurobindo are main proponents of idealism.
3. **Naturalism:** Contrary to idealism, naturalism is a philosophy with the belief that nature alone represents the entire reality. Human life is a part of nature; it is a self sufficient entity having its own natural matter, natural force and natural laws. Its emphasis is on matter and the physical world. It does not believe in spirituality and supernaturalism.
Our senses are the gateway to knowledge, and nature is the source of all knowledge. Mind is subordinate to nature. The educative process must be pleasurable and set in natural surroundings.
The main protagonists of naturalism are Tagore, Rousseau, and Herbert Spencer.
4. **Pragmatism:** ‘Pragmatism’ is basically a greek word that means practice or action. Here, the key word is ‘utility’, whatever is useful is good and whatever is good is useful. A pragmatist lives in a world of facts.
Pragmatism focuses on activity or doing. There are no absolute values of life. Truth is created during the course of experience. Humans are active beings and have the ability to solve their problems through the logic of experiments and scientific methods.
The main thinkers are John Dewey, Kilpatrick, Mead are some of the exponents of this philosophy.
5. **Constructivism:** The learner actively constructs knowledge. Jean Piaget and J. S. Bruner believed that learning involves an active processing of information and that each individual activity organizes and constructs knowledge for itself. Educational psychology believes that there are developmental stages for knowledge organization.
According to Jean Piaget, ‘accommodation’ and ‘assimilation’ are basic to learning. A learner develops new ‘schema’ through accommodation. New experiences are assimilated into already existing schemas or they may be accommodated by creating new schemas.
6. **Humanism:** It is a reasonable balance in life and regards humans as the centre and measure of all activities. Humanism believes in the interests and welfare of all human beings. Thus, the life of a human being should be transformed so that the welfare of all becomes the goal. The form of learning is on self-actualization.
It advocates cooperation, mutual tolerance and social understanding.
7. **Rationalism:** Rationalists claim that there are significant ways in which our concepts and knowledge are gained independently of sense experience.
8. **Empiricists** claim that sense experience is the ultimate source of all our concepts and knowledge.
9. **Existentialism:** It is a philosophy that emphasizes individual existence, freedom and choice. This emphasizes the uniqueness and isolation of the individual experience in a hostile or in different universe, regards human existence as unexplainable, and stresses freedom of choice and responsibility for the consequences of one’s acts.
10. **Behaviourism:** It assumes that learner is a passive organism who may be conditioned to learn new behaviour.
Therefore, learning could be explained by change in observable behaviour. E. L. Thorndike postulated the law of exercise and the law of effect.
(a) **Law of exercise:** Repeating a conditioned response would strengthen the bond between the stimulus and the response. In other words, practice makes a man perfect.
(b) **Law of effect:** Law of effect is the principle of reinforcement and punishment. Pleasures and pains resulting from previous behavior decides our future behaviour.
11. **Gestalt psychology:** It believes that the whole is greater than the sum of its parts.
For example, in the human body, there are cells, tissues, organs, systems, etc., the sum of all these components (human body) is greater than the sum of its parts. This is because the parts are interrelated to each other.

Further, Gestalt psychology demonstrated the significance of perception. It also showed that complex learning need not occur gradually through lengthy practice but may develop through insight.

12. Eclectic philosophy: Eclecticism is nothing but fusion of knowledge from all sources. It is a peculiar type of educational philosophy which combines all good ideas and principles from various philosophies.

There are many more philosophies of education, each of the philosophies have its contributions and limitations. Not a single philosophy is complete in itself. Also, a single philosophy cannot be applied successfully in all situations because the world and its values are continuously changing. The educational system also changes from time to time.

Table 1.1 Important Concepts in Education and its Proponents

Concepts	Main proponents
Basic education (Wardha Education System)	Mahatma Gandhi
Learning to take place in nature and from nature	Rabindranath Tagore
Integral education	Sri Aurobindo
Focus on spiritual aspects of Indian philosophy	Dr. Sarvepalli Radhakrishnan
Education to transform human mind	J. Krishnamurti
Experiential learning	John Dewey
Self-education through development of individuality	Maria Montessori
Kindergarten focus on self-activity, creativeness, and social cooperation	Froebel
No formal learning nature is the only teacher	Rousseau

Forms of Education

Though there are no clear-cut forms of education, we can discuss about the three types that are as follows.

1. Formal
2. Informal
3. Non-formal

1. Formal education: It is pre-planned direct, organized and given in specific educational institutions, such as schools and colleges. It is limited to a specific period and it has well-defined curriculum.

It is given by qualified and trained teachers. Formal Education observes strict discipline. It occurs at different levels, such as in primary, middle, secondary, higher secondary, graduate, post graduate, doctorate, post doctorate. It can be in humanities, science, technical and professional areas.

2. Informal education: The quote by George Santayana, 'A child educated only at school is an uneducated child', amply reflects upon the importance of informal education.

Informal education is not pre-planned or deliberate, it is indirect and spontaneous. It takes place from day to day activities, experiences and living in the family or community. There are no formal goals. Pestalozzi believed parents are the first informal teachers of every man or woman, family environment is the first learning environment.

3. Non-formal education: Education is a lifelong process, it is integrated with life and work.

It falls within the formal and informal types of education. It is a flexible system. It is intentional, incidental and given outside the formal system of education. It is consciously and deliberately planned, organized and systematically implemented. It is an open system of education without rigid rules, regulations and fixed ages, stages or time schedule.

Social or adult education, distance education are the examples of non-formal education.

All these three types of education, such as formal, informal and non-formal, have their due place in the modern system of education. Each has its own merits and demerits. There is need to integrate the three forms and make education holistic and comprehensive.

Thus we can see that above three components are mixed up in actual life situations. Active agencies like family, schools and colleges work through human interaction. Cinemas, radios, newspapers and magazines are counted as passive agencies where education is mostly seen as one way interaction but some feedback mechanism and panel discussions may also exist.

AIMS AND OBJECTIVES OF EDUCATION

In today's situation, no nation can think of social or economic development without an abundant supply of highly educated and skilled people. The issue of function and objectives of education is of utmost importance because all other aspects of education, like the content (subject matter), method (of teaching and instruction), discipline and evaluation are integrated with it.

Most of the functions of education become clear to us through various definitions given above.

Havighurst and Neugarten have given two important functions of education system:

1. A mirror that reflects society as it is or to be stabilizer of the society.
2. An agent of social change or a force directed towards implementing the ideas of society.

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George Payne, a sociologist, has given three main functions:

1. Assimilation of traditions
2. Development of new social patterns
3. Creative and constructive role

Emile Durkheim established ideas on transmission of society's norms and values as the major function of society. He also acknowledged education as a training for specialized roles including adopting some occupation for livelihood. Education is required to perform the function of cultural transmission and enrichment, acceptance and reformulation, change and reconstruction. The process why the young generation learns the traditional ways of society is called enculturation and it differs from society to society. Through education, enculturation is formalized.

Acculturation is a process through which a person or group from one culture comes to adopt the practices and values of another culture, while still retaining their own distinct culture. This concept has become important in an increasingly globalized society.

Factors Determining Educational Aims

Education is mostly a planned and purposeful activity. Educational aims are necessary in giving direction to unique activities which are determined by the following factors.

1. **Philosophy:** Philosophy and education are the two sides of a coin. Philosophy is the main factor that determines the aim of education. Education is termed to be the best means for propagation of philosophy.
2. **Human nature:** It is closely linked with philosophy. For example, idealists regard unfolding of the divine in man as the aim of education.
3. **Socio-cultural factors and problems:** Education has to preserve and transmit the cultural heritage and traditions from one generation to another.
4. **Religious factors:** In ancient India, Buddhism emphasized the inculcation of the ideals of religion, such as ahimsa and truth into the prevailing educational system.
5. **Political ideologies:** The educational aims of a democratic political system can be quite different from that of an autocratic political set up.
6. **Exploration of knowledge:** Knowledge is must for good interpersonal relationships, healthy adjustment in life, modification of behaviour, self-awareness and for social growth, it is also a source of happiness.
7. **Vocational:** Education should prepare the child to earn his livelihood and make him self-sufficient and efficient in both economic and social factors.

8. **Self-actualization and total development:** Education should help a person to become what he has to become according to his or her individual potentials.

The education aims at total development of an individual and it includes physical, mental, emotional, social and spiritual developments.

9. **Harmonious development:** Mahatma Gandhi emphasized this aim of education very much when he said 'By education, we mean an all round drawing out of the best in child and man-body, mind and spirit'.
10. **Moral and character development:** Some educationalists consider these as the supreme aim of education.

Herbert Spencer emphasized that education must enable the child to cultivate moral values and virtues, such as truthfulness, goodness, purity, courage, reverence and honesty.

11. **Citizenship:** As a member of the society, a student should be conscious about his or her duties, functions and obligations towards society.
12. **Education for leisure:** Leisure is the time which is utilized for enjoyment and recreation. It is needed to keep up rest and regain energy. Leisure, if wisely used, gives birth to physical and mental balance. Artistic, moral and aesthetic developments can be inspired through the beneficial use of leisure time.

Some specified aims of education in Indian context: When India became free there was a need for re-orientation and restructuring of all our existing social, political and educational systems, in order to meet the socio-economic, political and educational needs of the country.

Since independence, various committees and commissions were appointed to lay down the aims and objectives of education in India.

1. University Education Commission of 1948 was chaired by Dr. S. Radhakrishnan.
2. Secondary Education Commissions of 1952-53. was headed by Dr. Murlidhar as its chairman.
3. National Education Committee was set up under Dr. S. Radhakrishnan as its chairman.
4. Kothari Education Commission of 1964-66.

National Educational Policy (1986) specified the following aims and objectives of our education:

1. All round material and spiritual development of all people.
2. Cultural orientations and development of interest in Indian culture.
3. Scientific temper
4. National cohesion

5. Independence of mind and spirit. Furthering the goals of socialism, secularism and democracy.
6. Man-power development for different levels of economy.
7. Fostering research in all areas of development.
8. Education for equality.

TEACHING CONCEPT

'Educationists should build the capacities of the spirit of inquiry, creativity, entrepreneurial and moral leadership among students and become their role model'

—Dr. APJ Abdul Kalam

The main objective of effective teaching is learning. As per NTA-UGC-NET syllabus, our current focus is to imbibe the concept of teaching. The experiences we resort to for learning can take different forms that have been explained under the concept of learning.

These words reflect the whole idea of what it means to be a teacher. The progress and prosperity of a nation depends upon the development of its human resources. For this purpose, we need highly competent teachers.

Teaching aptitude is all about evaluating candidates who want to enter teaching profession on the basis of their knowledge and skills. It refers to basic qualities required to become a successful teacher. This includes qualification, intelligence, attitude and many other qualities expected from a person who wants to become a successful teacher.

Teaching can be defined in the following ways:

1. Teaching is the purposeful direction and management of the learning process.
2. Teaching is a process of providing opportunities for students to produce relatively permanent change through engagement in experiences provided by the teachers.
3. Teaching is a skilful application of knowledge, experience and scientific principles with an objective to set up an environment to facilitate learning.
4. Teaching is a planned activity and effective teaching depends on the following factors.
 - (a) How clearly the students understand what they are expected to learn.
 - (b) How accurately their learning can be measured.
5. Teaching is a process in which the learner, teacher and other variables are organized in a systematic way to attain some predetermined goals.
6. Teaching is an activity that influences a child to learn and acquire desired knowledge and skills and also their desired ways of living in the society.

BASIC TEACHING MODELS

There is no basic model of teaching that augurs well for all the situations. Two contrasting models are discussed here; these models separately or in combination could be used for different courses.

Pedagogy Model

Pedagogy is a conventional approach. In this method, the instructor, more or less, controls the material to be learned and the pace of learning while presenting the course content to the students. The purpose of this method of learning is to acquire and memorize new knowledge or learn new skills.

Instructor-centred teaching can also be described as 'pedagogical approach'. Pedagogy is the art and science of teaching. It determines 'how the teaching occurs, the approach to teaching and learning, the way the content is delivered, and what the students learn as a result of the process'.

In pedagogical approach, the learner is dependent upon the instructor for all learning, and the teacher assumes full responsibility for what is taught and how it is learned. The teacher or instructor evaluates the learning processes of the students.

Table 1.2 Major Shifts in Teaching

From Pedagogy	To Andragogy
Teacher centered, fixed designs	Learner centered, flexible process
Teacher's direction and decisions	Learner's autonomy
Teacher's guidance and monitoring of learning	Teacher's facilitation, support and encouragement for learning
Passive reception in learning	Active participation in learning
Learning within the four walls of the classrooms	Learning in the wider social context
Knowledge as 'given' and 'fixed'	Knowledge as it evolves and is created
Disciplinary focus	Multidisciplinary, educational focus
Linear exposure	Multiple and divergent exposure
Assessment short, Few	Assessment multifarious, continuous

Source: NCERT Pedagogy

Andragogical Model

In this model, the learner is mostly self-directed and is responsible for his or her own learning. The students learn best not only by receiving knowledge but also by interpreting it, i.e., learning through discovery and, at the same time, setting the pace of their own learning. In this method, the instructors facilitate the learning of participants and help them by offering opportunities to learn themselves and acquire new knowledge and develop new skills. This type of teaching is also referred to as andragogical approach.

Self-evaluation is also the characteristic of this approach. Andragogical approach is also identified with 'adult learning.'

NATURE OR CHARACTERISTIC FEATURES OF TEACHING

The characteristic features of teaching includes the following:

1. It has different levels of teaching.
2. It takes place in a dynamic environment.
3. It is closely related to education, learning, instruction and training.

4. It is essentially an intellectual activity.
5. It is an art as well as science.
6. It tends towards self-organization.
7. It is a social service.
8. It includes lengthy period of study and training.
9. It has high degree of autonomy.
10. It is a continuous process.
11. Teaching is a profession.

These characteristic features have been discussed in the coming pages.

Levels of Teaching

We all know that teaching is a purposeful activity. Development of all-round personality of the learner is the final goal of teaching and learning. During teaching an interaction takes place between an experienced person (teacher) and an inexperienced person (student). Here the main aim is to bring change in the behavior of the student.

Let's first look at the different levels of psychology during the lifespan of a learner. The levels of teaching move from left hand side to right according to the diagram.

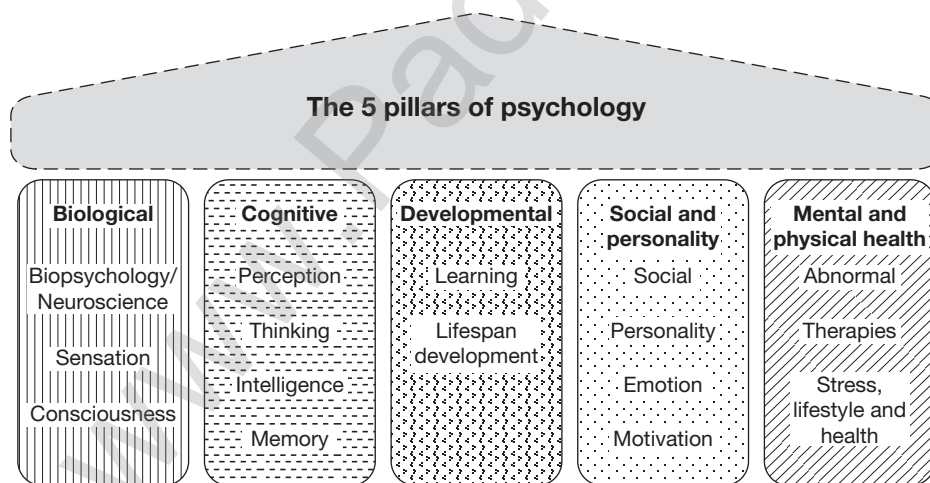


Figure 1.1

Teachers teach students at three levels. They have to keep in mind about the developmental stage of the learners so that desired educational objectives can be

achieved. These three levels have been shown below in a pyramid and explained as well.

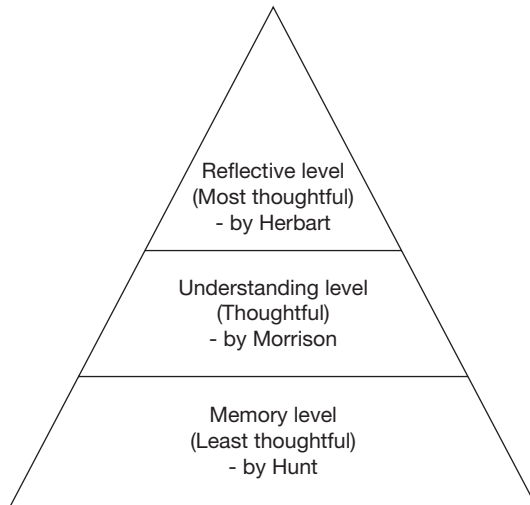


Figure 1.2

1. It is the initial stage of teaching.
2. It induces the habit of rote memorization of facts and bites of information.
3. It enables the learner to retain and also to reproduce the learnt material whenever required.
4. The evaluation system mainly includes oral, written and essay-type examination.

MEMORY LEVEL OF TEACHING (MLT)

Herbart is the main proponent of memory level of teaching. Good memory includes rapidity in learning, stability of retention, rapidity in recalling and the ability to bring only desirable contents to the conscious level. Here, the teaching-learning process is basically a 'Stimulus-Response' (S-R).

It is initial stage of teaching. Teaching and learning at memory level are basically about committing factual material to our memory.

The three major aspects are:

1. Learning of the material
2. Retention of the material and
3. Reproduction of the material as and when required.

Objectives of Memory Level Teaching

1. The main objective is imparting knowledge and information to the learner.
2. Knowledge gained by the learner is basically factual that is acquired through memorization or rote learning.
3. It covers only the knowledge-based objectives of Bloom's Taxonomy.
4. The teaching is subject centered.

5. Simple memorable things are taught to students.
6. The subject material is well organized and simple in nature. The subject matter is simple.
7. The knowledge delivered is definite, structured and observable.

Teaching Method

The teaching is subject-centered so are the teaching methods - drill, review, and revision, and asking questions. Drill (and practice) means repetition or practice to attain proficiency in memorizing.

Review or revising the elements relates learners to new experiences and to form new associations.

Question technique is used to examine whether or not knowledge level objectives of teaching have been achieved.

Teacher's Role

The teacher usually plays a dominating and authoritarian role. Teacher is the stage setter and resource manager of class room. He evaluates also.

So, in this level of teaching right from the selection of the subject matter to its evaluation, the key process of teaching and learning remains with the teacher.

Role of Learner

The role of the learner is a passive one as the subject contents, teaching techniques and teaching methods are decided by the teacher.

The characteristics of the learner should be taken care of while framing objectives and curriculum, and selecting teaching-learning activities and methods of teaching and evaluation.

Teaching Equipment

Different kinds of teaching aids like visual, audio and audio-visual aids - models, charts, maps, pictures, T.V., radio etc. develop a curiosity of the learners towards the learning process.

Nature of Motivation

Motivation drives students to learn better, it should be an intrinsic feeling, not a forced one.

In memory level of teaching the teacher forces the students to learn the syllabus content through the process of memorization.

Hence the nature of motivation at this level of teaching is purely extrinsic.

Evaluation System for Learners

The evaluation system mainly includes oral, written and essay-type examination.

The evaluation is being done on predetermined objectives.

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Here both oral and written tests are conducted to check the memory power of students.

In the written test, short type, recall type, recognition type, multiple choice, and matching type test items are used.

Here the learners are required to attempt the maximum number of questions.

Psychological Bases of Memory Level of Teaching

According to Jean Piaget, the Memory level is meant for starters. The learners are at the pre-operational level of cognitive development in the school. They cannot operate upon abstract concepts. As per their mental development, they can learn simple concepts without analyzing their true meaning and nature. Normally, they are not expected to reflect upon the learnt facts.

Herbartian theory of apperception suggests that the young pupil mind gets ready at this stage for perceiving themselves and world around them. Brain gets ready for a big mass of factual information. It includes concepts, elements, structures, models and theories. They can acquire and retain information about a large number of things, objects, and material through memorization.

Pavlov and Skinner advocated the Conditioning Theory that underlies the concept that correct response made by the individual is strengthened by reinforcement to retain the learned subject-matter longer and to facilitate ease in further learning.

The concept of Pavlov's Classical conditioning considers the mechanical process as is applied at memory level teaching; and thorough review or retrieval, correct learning by the student is rewarded and retained for future use.

Overall Thoughts on Memory Level Teaching

It is not worthwhile to say that memory level teaching is totally meaningless and useless. It is very useful for young children, under the conditions that their mental ability and cognitive levels are at low levels. Such children still need to reason out and reflect upon teaching material, concepts, contents, elements etc. They still have to broaden their view point that depends upon the age also.

Suggestions for Memory Level Teaching

1. The teaching material should be objective and useful.
2. The teaching material should be finite and also it should be simple to complex.
3. Teaching aids should be adequate, and parts of the content should be integrated and well sequenced.

4. Systematic and organised way of presentation of subject matter.
5. Scope for continuous evaluation to measure improvement in the memory power of students.
6. The retention of the material in memory of students can be increased by more practice and exercise.
7. There should be scope for continuous reinforcement during the course of instruction.

UNDERSTANDING LEVEL OF TEACHING (ULT)

Morrison is the main proponent of understanding level of teaching.

It is 'memory plus insight' as it goes beyond just memorizing of facts. It focuses on mastery of the subject.

It makes pupil understand the generalizations, principles, facts and some application part also.

It provides more and more opportunities for the students to develop 'intellectual behaviour'.

The teaching at this level stands at higher level in comparison to that at understanding level. It is more thoughtful.

Cognitive abilities or mental development of the learners is more developed. They become more capable to think, present the facts in a more logical manner, analyze them properly, drawing inferences. They are able to evaluate the relationships between the principles and facts and also provide space for the assimilation of facts.

Objectives: According to revised Bloom's Taxonomy, Understanding level teaching aims at the following objectives.

Primarily, it is the understanding of instructional messages by means of interpretation, exemplification, classification, comparison, inference of instructional messages.

Then application objectives include the use of a proper procedure for executing and implementing the use of principle/ rules in practical life situations.

The subject matter is wide and more detailed in comparison to the memory level teaching. The content also includes the application of the principle/generalizations in due real life situations.

Teaching Methods and equipments: They include the following:

1. Lecture (cum demonstration)
2. Discussion method
3. Inductive-deductive
4. Exemplification and explanation

Classroom climate is more motivational. Learners are actively engaged in the learning process. Motivation at understanding level of teaching is extrinsic as well as intrinsic in nature.

Teaching equipment includes the following:

1. Models
2. Charts
3. Flash cards
4. Pictures

The learners can comprehend the concepts more easily with help from teaching aids. The teacher must use the right aid and equipment as per the need and level of students.

Evaluation

The evaluation system mainly includes both essay and objective-type questions.

Understanding level needs more comprehensive evaluation.

The tests and tools need proper planning. Planned tests could evaluate the student's ability to comprehend, grasp, analyze, synthesize and discriminate.

These abilities can be examined using oral and written tests. There should be some scope for testing practical knowledge.

Role of the Teacher

The teacher plays a significant role. He presents learning material and generate interest in them. The sequence of presentation of contents, mode of instruction, methods used in evaluation all remains with is the powers of the teacher.

The role of learner is more active and s/he has to work hard at this level. The participants at this level are secondary learners. They may make more initiatives to know the contents further. Both the teacher and learner interact within the framework set by the teacher.

REFLECTIVE LEVEL OF TEACHING (RLT)

This level is the highest and the most practical level of teaching. Society expects that a person should be able to understand the whole scenario and apply his knowledge. This is also termed as the 'introspective level'. It also means thinking deeply about something.

1. It is the highly thoughtful and useful. The pupils occupy the primary place and teachers assume the secondary place.
2. A learner can achieve this level only after memory level and understanding level.
3. The reflective level makes the learners to solve the real problems situations of the life.
4. At this level, the student is made to face a real problematic situation.
5. Classroom environment is to be sufficiently 'open and independent'.
6. Here, the problem is identified, defined, and then a solution is found.

7. The student's original thinking and capabilities develop at this level.
8. The teacher needs to be democratic. The knowledge is not enforced.
9. The students becomes active, they need to become innovative and imaginative.
10. Essay-type test is used for evaluation. Attitude, belief and involvement are also evaluated

Merits of Reflective Level Teaching

1. The teaching at this level is learner-centered.
2. There is more interaction between the teacher and the learner.
3. This level of teaching is appropriate for the higher class.

Demerits of Reflective Level Teaching

1. It's mostly suitable for mentally matured children
2. The study material is neither organised nor pre-planned or systematic.

Dynamic Environment

Teaching is dominated by communication, which is very dynamic in nature. Teaching changes according to time and place. Its environment consists of interaction among three variables, namely, independent, dependent and intervening variables.

As students depend upon teachers for learning, students are assumed to be dependent variables. Teachers are in a position to manipulate the behaviours of students and hence, teachers are considered as independent variables. Teaching methods, teaching instructional facilities and motivational techniques which also facilitate the teaching-learning process are termed as intervening variables.

In case we want to look at teacher, learner, curriculum, physical conditions (climate), the following scenarios emerge, starting from bipolar to quadrilateral.

1. It is a bipolar process

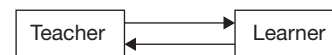


Figure 1.3 Bipolar Process

2. It is a tripolar process

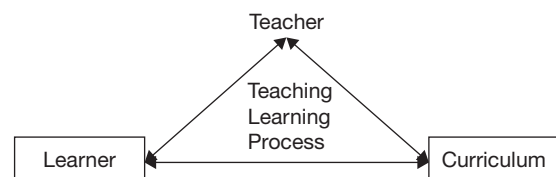


Figure 1.4 Tripolar Process

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3. It is a quadri polar process

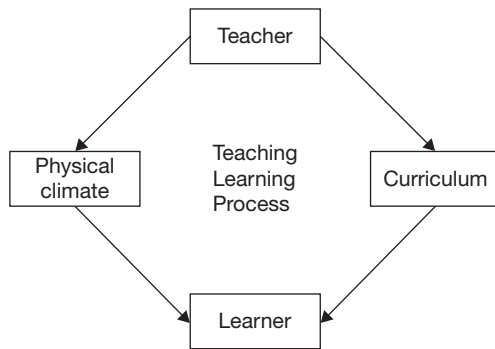


Figure 1.5 Quadripolar Process

According to the modern concept, education is more of a tripolar process that involves pupil, teacher and social environment.

There are other variables that make teaching dynamic.

Teaching is Complex

Teaching makes use of all sorts of techniques, methods, and media and also entails skills such as questioning, probing, exemplifying, etc. Then teaching also makes use of such media as audio-visual media, human interaction media, print media, realia, electronic media, etc. Success in teaching, to a great extent, depends upon selection and use of appropriate techniques, methods, and media.

Teaching Visualizes Change in Behavior

These changes are tentatively permanent – cognitive (knowledge), psycho-motor (skills), and affective (attitudes) values of the learners. The changes that occur in learners need not be performative but be potential ability of the learners.

Teaching can be Direct or Indirect

Under direct methods, Teachers use methods such as lecture, demonstration, etc and engages students in face – to – face interaction. Conversely, in indirect teaching, active methods such as role-play, project, assignment, inquiry or other such activities are used. Indirect methods are basically Learner centred methods where the students are actively involved in the teaching-learning process.

Teaching can be Vertical or Horizontal

In vertical teaching, teachers may lead students deep into the topic. They teach learners higher order thinking skills like analysis, synthesis, evaluation and creating.

Conversely, in horizontal teaching more areas spreading over several topics instead of going deeper into one topic are covered.

Teaching may be Planned or Unplanned

Traditionally, teachers plan for instruction before they go to the classroom for teaching - content analysis, task analysis, decide the techniques and methods to be used for teaching, and then evaluation.

However, with the coming of active leaning methods, no strict planning is possible as one is not clear in advance what could be the possible way of organizing teaching learning activities.

Closely Related to Education, Learning, Instruction and Training

Teaching is basically a method to influence the learning process. Nothing is assumed to be taught unless it is learnt by the students. Thus, learning and teaching go hand in hand. Teaching is the main tool to educate a person.

Important Concepts Related to Teaching

Teaching and Training: The main purpose of imparting training is to equip candidates with specific or job-related or technical skills.

Teaching is assumed to be a wider concept than training. While teaching deals mainly with theoretical aspects and training is the practical application of theoretical knowledge.

Also, teaching seeks to impart new knowledge while training equips and enhances the already knowledgeable concepts with tools and techniques to develop a specific skill set. One of teaching's goals is to enrich the mind while training's end is to mould habits or performance.

Teaching is usually within the context of the academic world while training is generally associated with the commercial realm. Another difference is found between thought and action.

Indoctrination: Indoctrination can be termed as the highest order of teaching. In indoctrination, the beliefs and ideas are impressed upon others and can be included in teaching. Teaching can be done without indoctrination but no indoctrination is possible without teaching.

Intellectual Activity

Teaching is essentially an intellectual activity. It is not merely talking or expressing one's ideas, whereas it requires conscious and continuous organization of learning activities. It entails the creation of a conducive and supportive learning environment. A teacher has to evolve a suitable plan of action to achieve

desired changes in the behaviour of a group of learners. In teaching–learning process, learners constitute the raw material. Learners are prepared to teach in continuous involvements in the society with varied expectations.

Teaching Is a Science as well as an Art

The teaching profession is based upon a systematic body of knowledge, which has been derived from social, psychological, historical, political and economical spheres of life. It is also influenced by the religious, spiritual and ethical beliefs of the society. Teaching techniques are systematic, it has definite steps to be followed, and are easily communicable. On the basis of assumptions of science, a teacher can be trained. There are definite steps that are followed in training a teacher.

Teaching is an art as well. It takes place in a dynamic environment. The teacher has to deal with individual differences in a class in a tactful manner, it needs a lot of individualized approach and discretion.

Self Organization

The people in teaching profession are sensitive towards growth and development because it is self-organized. They evolve a definite mechanism to sustain and promote the standards of teaching profession. The growth in teaching profession is organic in nature, i.e., the growth happens in a spontaneous manner.

Social Service

It has been accepted that education is a potent tool to bring about changes in any nation. It is useful to develop the society.

High Degree of Autonomy

There is a high degree of autonomy in the teaching profession right from curriculum development, planning activities of a year, identifying instructional objectives, deciding upon the method of teaching, media, evaluation criteria and techniques to divide the admission and promotion rules, and autonomy in planning and execution of co-curricular activities.

Teaching as a Profession

Teaching is the profession that makes other professions possible. There are many courses, such as B.Ed, M.Ed, etc., which impart knowledge and skills that establish the foundation for a successful pathway to a teaching career. It entails a number of years of study and intermittent training periods. A teacher has to improve his or her qualification for advancements in the teaching career.

OBJECTIVES OF TEACHING

An objective describes an intended result of instruction rather than the process of instruction itself. A good objective should be specific, outcome based (i.e., it should emphasize on the output rather than the process of instruction) and measurable.

The objectives of teaching and learning must integrate at the end of the instruction.

There are two main ways of classifying instructional objectives. One classification is given by Bloom, whereas another classification is given by Gagne and Briggs.

Bloom's Classification of Teaching and Instructional Objectives

According to this classification, instructional objectives fall under one of the following three categories:

1. **Cognitive domain:** It is related to the development of intellectual capability (i.e., thinking or knowledge) and it is the core learning domain. The other domains (i.e., affective and psychomotor) require at least some cognitive components. It functions at six levels, which are as follows.
 - (a) **Knowledge:** It is basically about recalling information or contents.
 - (b) **Comprehension:** It is the ability to grasp the meaning of a material.
 - (c) **Application:** It converts abstract knowledge into practice.
 - (d) **Analysis:** It involves breaking down a communication into its constituent parts in such a manner that relationship of ideas is understood better.
 - (e) **Synthesis:** It is basically about combining the constituent parts to make it a whole. It is the antonym of analysis.
 - (f) **Evaluation:** It involves judgement made about the value of methods and materials for particular purposes.

Anderson, a former student of Bloom, and David Krathwohl rearranged the levels as following:

- (i) **Remembering:** Recall or retrieve previous learned information.
- (ii) **Understanding:** Comprehending the meaning, translation, interpolation and interpretation of instructions and problems. State a problem in one's own words.
- (iii) **Applying:** Use a concept in a new situation or unprompted use of an abstraction. Applies what was learned in the classroom into novel situations in the work place.

- (iv) **Analysing:** It separates a material or concepts into component parts so that its organizational structure may be understood. It distinguishes between facts and inferences.
- (v) **Evaluating:** Make judgments about the value of ideas or materials.
- (vi) **Creating:** Builds a structure or pattern from diverse elements. Put parts together to form a whole, with emphasis on creating a new meaning or structure.

2. **Affective domain:** Man is a rational animal being endowed with human qualities of love, sympathy, tolerance, co-operation, fellow-feeling and similar things. The term 'affects' has a literary meaning of feeling, emotion and having preference for some object, issue, notion and etc. Affect is also treated as a response to different social, political and economic issues in the form of attitudes.

An individual has to develop and nurture desirable positive attitudes and interests for his or her better adjustment in the society.

Thus, affective domain deals with attitude, motivation, willingness to participate, valuing what is being learned and ultimately incorporating the values of discipline into a way of life. It asks for better student participation. It includes the following levels:

- (a) **Receiving:** Willingness to listen.
- (b) **Responding:** Willingness to participate.
- (c) **Valuing:** Willingness to be involved.
- (d) **Organizing:** Willingness to be an advocate of an idea.
- (e) **Characterization:** Willingness to change one's behaviour or way of life.

Affective education takes a long time to achieve the objectives. For example, any desirable change in the learner's affective behaviour cannot be accomplished through a singular learning situation.

As per one finding, an individual's emotional and rational components of the brain are somewhat independent of each other and operate separately. But there are times when both the components work in harmony with each other.

When the individual is faced with a problem or dilemma and is required to make a decision, the emotional center of the brain functions first while the rational brain is yet to start functioning.

This implies that the educational process should provide the individual with adequate knowledge about the situation to enable him or her to use reasoning to mould the emotional behaviour in a desirable form. Daniel Golemann (1995) calls this type of mental functioning 'Emotional Intelligence', which

enables the individual to deal intelligently with various social problems that one faces in life situations.

An individual's affective behaviour or learning is influenced by both emotional intelligence and cognitive learning.

Therefore, the implication for the educational process is that cognitive learning and affective learning should be planned to go hand in hand.

- 3. **Psychomotor domain:** It is mainly concerned with the acquisition of technical skills. Following are the five different levels of instructional objectives in psychomotor domain.
 - (a) **Imitation:** It includes demonstration of a skill by a skilled person and the learner tries to follow the same.
 - (b) **Manipulation:** A learner tries to experiment various aspects, like manipulating machinery, equipment, etc.
 - (c) **Precision:** Accuracy in performing various acts increases with practice.
 - (d) **Articulation:** Achieving a desired level of efficiency and effectiveness through practice.
 - (e) **Naturalization:** Skill is internalized and an individual is able to adapt, modify or design new techniques, methods or procedures according to the requirements of a situation.

Thus, we can see that learning takes place through three different channels cognitive, psychomotor and affective, it takes place as one process.

The three types of learning are not mutually exclusive, the differentiation among them is warranted because of the nature of the behavioural outcomes.

It is clear that cognitive as well as affective learning takes place simultaneously and with the same content of learning.

Gagne and Briggs Classification of Teaching and Instructional Objectives

According to this classification, the learning outcomes fall under one of the following categories.

- 1. **Intellectual skills:** These skills are crucial for dealing with the environment. They include concept learning, rule learning and problem solving.
- 2. **Cognitive strategies:** These include methods and techniques for one's own learning, remembering and thinking skills.
- 3. **Verbal information:** It refers to organized bodies of knowledge that an individual acquires.
- 4. **Motor skills:** They are basically about motions carried out when the brain, nervous system and muscles work together.
- 5. **Attitudes:** They refer to an internal state of an individual.

Objectives can be put in the following forms also:

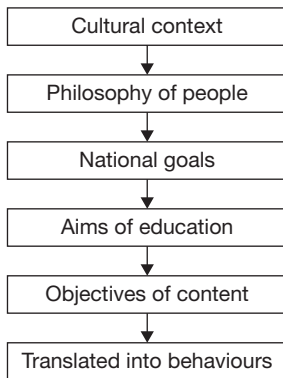


Figure 1.6 Hierarchy of Formulation of Objectives

EFFECTIVE TEACHING PRACTICES

Maxims of Teaching

A maxim is a ground rule or fundamental principle that has evolved over a period of time. It is a guide for future action or behaviour. Teaching has also its own set of maxims, which have been discussed below.

- 1. From simple to complex:** The teacher should start with simple things and ideas, and these can be done with day-to-day examples, if possible. Then gradually, a teacher can move towards concepts and technical terms. This creates interest among learners to acquire new knowledge. This is helpful in better retention.
- 2. From known to unknown:** This is related to first maxim. Retention is always better if new knowledge can be linked with the known one.
- 3. From seen to unseen:** The students should be imparted knowledge about the present and then they can understand the past and the future better.
- 4. From concrete to abstract:** The mental development of students happen better with the concrete objects, they become familiar with and define micro-words for them at a later stage.
- 5. From particular to general:** The students should be presented with examples first and then general laws and their derivations can be explained to them. The experiments and demonstrations serve this purpose.
- 6. From whole to part:** Gestalt psychologists have proved that we first see the whole object and then its parts. For example, we first perceive the tree and then its trunk, branches, leaves, etc. Thus, the introduction or overview of the topics is important.

- 7. From indefinite to definite:** The teacher should help to transform indefinite knowledge into definite one and aim to clarify the doubts of students.
- 8. From psychological to logical:** During initial stages, psychological order is more important, whereas for grown-up learners, logical order is emphasized more.
- 9. From analysis to synthesis:** Initially, the students have little or vague knowledge about the topics. Analysis means dividing problems into its constituent parts, and then, these are studied.
Synthesis means to understand by connecting the knowledge acquired through analysing the parts. A teacher should use analytic-synthetic method.
- 10. Follow nature:** It means to regulate the education of a pupil according to his nature.
- 11. Training of senses:** The types of sense, like sight, hearing, taste, smell and touch are gateways to knowledge. It is better if all or maximum of these senses can be applied in teaching. Montessori and Froebel are the main proponents of this maxim.
- 12. Encouragement to self-study:** Dalton's system is based on self-study.

Principles of Teaching

They are closely related to maxims. Teaching methods are based on two types of principles, such as general principles and psychological principles.

General Principles

- 1. Principle of motivation:** It creates curiosity among students to learn new things.
- 2. Principle of activity (learning by doing):** Froebel's Kindergarten (KG) system is based on this principle. It includes both physical and mental activities. For example, students are asked to make charts and models.
- 3. Principle of interest:** By generating genuine interest among the learner's community, the effectiveness of the teaching-learning process can be increased.
- 4. Principle of linking with life:** Life is a continuous experience and learning linked with life can be more enduring.
- 5. Principle of definite aim:** This is important for optimum utilization of teaching resources and making learning more focused.
- 6. Principle of recognizing individual differences:** Every student is unique in terms of intelligence, attitude, abilities and potentialities, and socio-economic background. The teaching method should be devised in such a manner to make all the students to avail equal opportunities in life.

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7. **Principle of selection:** The horizon of knowledge is expanding every single day. The teacher should be able to pick contents that can be more relevant and updated to the learners' objectives.
8. **Principle of planning:** Every teacher has certain time-bound objectives, and hence, teaching should be systematic to make optimum use of resources within the time limit.
9. **Principle of division:** To make learning easier, the subject matter should be divided into units and there should be links between the units.
10. **Principle of revision:** To make learning enduring, the acquired knowledge should be revised immediately and repeatedly.
11. **Principle of creation and recreation:** This principle is a must to make the classroom environment humorous and creative.
12. **Principle of democratic dealing:** It entails students in planning and executing different activities; it helps in developing self-confidence and self-respect among the learners.

Psychological Principles

1. **Principle of motivation and interest:** A teacher needs to understand that every student is a unique psychological entity and a student can be motivated after identifying his or her motives and needs.
2. **Principle of recreation:** Recreation is necessary to tackle fatigue after attending lengthy classes. This breaks monotony and prepares students for learning again.
3. **Principle of repetition and exercise:** This is specifically true in case of small children.
4. **Principle of encouraging creativity and self-expression:** This is specifically applicable in

subjects, such as mathematics and in learning languages.

5. **Principle of sympathy and cooperation:** This principle is required for the motivation of students.
6. **Principle of reinforcement:** Students should be suitably rewarded for their desired behaviour.
7. **Principle of imparting training to senses:** The use of multimedia makes many senses get involved simultaneously, which is crucial for enduring learning.
8. **Principle of remedial teaching:** This principle is necessary for the teacher to identify mistakes and suggest better answers to the problems.

**Microteaching**

Microteaching is a teacher training technique for learning teaching skills. It employs real teaching situation for developing teaching skills and helps to get deeper knowledge regarding the art of teaching. This Stanford technique involves the steps of 'plan, teach, observe, re-plan, re-teach, and re-observe'. Most of the pre-service teacher education programs widely use microteaching, and it is a proven method to attain gross improvement in the instructional experiences. Effective student teaching should be the prime quality of a teacher. As an innovative method of equipping teachers to be effective, skills and practices of microteaching have been implemented.

EFFECTIVE TEACHING BEHAVIOUR

The following four dimensions have been identified for effective teaching behaviour:

Clarity (For Effective Teaching)	Variety (Newness, Motivation, Sustaining attention)	Task orientation, mostly in class (approach towards practical and better life)	Engagement in learning task (self directed goals and draw new experiences)
Objectives	Intensity of stimulus – speech pattern/bright light	Goal directed	Make learning a developmental activity
Knowledge	Contrast - sudden change	Action directed	Develop concentration
Individual Differences	Teacher's bodily gestures	Achievement/completion	Complete specified assigned homework or task
Integration of Facts	Teacher's Movement in class	In-built motivation	Reinforce the process of development of conceptual understanding and application
Pinpointedness	Self activity of participants	Need fulfillment	
Levels of Teaching	Audio visual aids	Relaxation	
Techniques of Evaluation	Teacher's personal behavior/interaction	Example: Karma Yoga	
Reflection	Pausing		
Balance			
Sharpness			

Broadly teaching has been divided into the following:

1. Pre-instructional skills
2. Instructional skills
3. Post-instructional skills

From the training point of view, we classify teaching skills into three broad categories. These are:

1. Core teaching Skills - common for all subjects.
2. Specific teaching skills - for specific subject areas like language, Social Science, Science, Maths, etc.
3. Target group specific skills - for exceptional children

METHODS OF TEACHING

'If a child can't learn the way we teach, we should teach the way they learn'

—Ignacio Estrada

Once the instructional objectives are specified, the next step is to select an appropriate instructional method to achieve them. The teacher has a number of methods at his disposal to select from. These methods are as follows.

As per NTA-NET syllabus, we have the following two extreme set of methods for institutes of higher learning:

1. Teacher centred methods
2. Learner centred methods

These can be assumed to be two extreme approaches. In between we can have a third method approach, that is called as mixed approach.

Teacher-centred Teaching Methods

Lecture Method

Lecture method is the most conventional and dominating teaching method and is preferred by many teachers.

In this method, a teacher attempts to explain facts, principles or relationships to help learners understand. Here, the teacher is an active participant, the students are assumed to be passive listeners. Usually, the students do not converse with the teacher during lecture by the teacher. That way, it is one way communication. The teacher talks more or less continuously to the class. The class listens, writes and notes facts and the ideas for remembering and to think them over later. It can be made a two way communication, if the teacher allows students to ask few questions to clarify a point but no discussion is usually held.

Basic Features

1. It is formal and narrative in nature.
2. It presents a series of events or facts.
3. It explores problem.

Advantages

1. It is economical and a single teacher can teach a large number of students at a time which is not possible by using other methods. It saves much time and the syllabus can be very easily covered within a limited time.
2. It simplifies the task of the teacher.
3. It is useful for imparting factual information and drawing attention to its important points.
4. During lecture, interruptions and distractions are usually avoided.

Limitations

1. It provides very little opportunity for student activity, the teacher takes special care to make the class interesting.
2. It usually does not provide opportunities to learners to solve problems.

Table 1.3 Important Methods of Instruction

Teacher-centred strategy	Mixed strategy	Learner-centred strategy
Large group methods	Small group methods	Individualized methods
1. Lectures	1. Group discussion	1. Tutorials
2. Team teaching	2. Seminar	2. Assignments
3. TV or video presentation	3. Panel discussion	3. Project work
	4. Brainstorming	4. Case study
	5. Project method or work	5. Programmed instruction
	6. Tutorials	6. Computer-assisted learning
	7. Case study	7. Interactive video
	8. Role play	8. Open learning
	9. Simulation	9. Personalized system of instruction (PSI)
	10. Demonstration	10. Heuristic method

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3. It offers limited opportunities for checking learning progress, whether the students are attending and understanding all that the teacher is explaining.
4. The interests, abilities and intelligence of students are not taken care of.
5. It does not allow individual pace of learning.

Suggestions to make lecture method more effective:

1. The teacher should avoid the tendency to read from the lecture notes word by word.
2. The teacher should maintain eye to eye contact with the students so as to seek their continuous attention.
3. Good lesson planning with introductory remarks, main headings, sub-headings, figures and important data and concluding remarks. The students should get opportunity to make notes.
4. Use of simple language so that students are able to understand. The main points should be repeated in alternative language.
5. Make effective use of audio-visual instructional facilities to improve communication of ideas.
6. Make appropriate use of illustration and examples. There is a need to ensure fair presentation of different views and theories.
7. Provide short breaks during the lecture period for asking thought provoking, stimulating and problem solving questions. Leave time at the end for clarifications and questions.

Team Teaching Method

Team teaching is an innovative approach in teaching large groups in which two or more teachers are involved in planning, executing and evaluating the learning experiences for a group of students.

Advantages

1. Sharing the best faculty by more students.
2. Optimum use of multiple teaching techniques and devices.
3. Improvement of teaching quality.

Limitations

1. Finding teachers with special competencies is a difficult task.
2. More teachers are required for this method.
3. Not useful for teaching all subjects.
4. Requires much time for planning and scheduling.

TV or Video Presentation

Television or video presentation is an improved presentation of radio or audio presentation and it can virtually bring the whole world inside the classroom. Screening of video presentation is followed by a discussion or task.

Advantages

1. Many important personalities and experts are brought to the classroom through video presentation.
2. Specifically useful for adult learners.
3. Illustrated lectures and demonstrations can be supplemented by other teaching instructional facilities, such as slides, models, specimens, etc.
4. Easily accessible for learners in remote areas.
5. Specifically useful for subjects, such as geography, astronomy, etc.

Limitations

1. Less possibility for two-way communication.
2. There can be difficulty in adjusting to complicated schedules to telecast period.

Mixed Group Teaching Methods

Most of the methods of instructional delivery for the learning of smaller groups numbering between 3 and 12 trainees lean towards trainee-centred approach. Some of these methods are group discussion, seminar, project work, tutorials, role playing, etc. These are briefly discussed below.

Group Discussion (GD)

This may be counted under small as large group teaching methods. It is one of the oldest methods used by Greek scholars and scholars from Nalanda University.

A discussion method of teaching is a democratic method used to develop better understanding among students, for supplementing a lecture, in connection with an observation visit or case presentation and for sharing information.

In this method of considering various facts about the topic under consideration, understanding of these facts by studying their relationships and drawing out conclusions of the facts and their relationships are studied. It stimulates students' thinking process to analyse and integrate facts and help in developing their abilities in presentation of their ideas and facts clearly and fluently.

Forms of Discussion

The types of discussion can be classroom discussion, formal group discussion, discussion in terms of symposium, panel, seminar and conference.

1. **Classroom discussion:** This is an informal method of discussion with the class. If the class is not too large, sometimes the teacher may select a particular topic with the whole class participating as one group. In this situation, the teacher acts as a leader, they present the topic guides and directs the discussion. At times, a student may take the

role of a leader. The leader usually notes down the main points on the blackboard or may ask one of the students to do this. He or she also assists the group in summing up.

- 2. Formal group discussion:** Formal group discussion is comprised of small group discussion followed by large group discussion. It is desirable when the number of students is more or when it is desirable to discuss several aspects of a topic. To start with the discussion, the teacher may act as the chairman. He or she introduces the topic for discussion and explains the objectives of discussion. He or she helps the students get organized into 3 to 5 small groups. Each group selects a leader and a recorder. Each sub-group (small group) discusses the topic. The leader initiates, coordinates and controls the group discussion. The recorder notes down the discussion points. The teacher acts as a facilitator and a resource person. She is available to assist groups as required. At the end of allotted time (not more than 30 minutes), all the groups reassemble as large group. The leader or the recorder of each small group presents the report; and the teacher then leads the general discussion, clarifies points and finally sums up.

Symposium, seminars are also forms of group discussions but they have been discussed in the second unit as many questions have been asked from them in the NTA-NET Exam.

Group discussion can be of the following types as well:

- 1. Planned:** There is certainty about the conclusions and objectives. The discussion is guided by the trainer in an appropriate sequence.
- 2. Partly planned:** Here, the concluding and opening statements are known, but the discussions in-between is not directed or very loosely guided.
- 3. Unplanned:** The topic presented for discussion is without any opening statement and the discussion that follows is entirely spontaneous without any guidance from the trainer.

Advantages

1. A stimulating thinking process, it helps in the development of critical thinking.
2. It is pooling of knowledge, ideas and feelings of several persons analysis and integration of facts, ideas and concepts.
3. Rationalization of facts and it thus promotes intelligent learning.
4. Learning together, sharing responsibilities and interests.

5. Developing team spirit in teaching-learning process.
6. Discovering talented students. Good for developing oral and non-verbal communication

Limitations

1. It requires more time, efforts and resources of both teachers and students.
2. It may involve unnecessary arguments. Discussion may go off the track.
3. It may create emotional stress and unpleasant feelings.
4. Possibility of domination of session by a few students.
5. It is not suitable for all the topics.

General Principles for Organizing Discussion

1. The objectives should be clearly defined and understood by all participants.
2. The members of the group should come prepared, have a basic knowledge about the topic to be discussed.
3. The leader needs to guide and coordinate the proceedings so that the discussion should be kept to the point.
4. A recorder may be elected by the group to record the main points of discussion as it is going on. The points can be noted on the black board.
5. Each one in the group should feel free to participate and a shy person should be encouraged to contribute.
6. All points of view should be fairly considered.
7. Discussions should be properly ended with a report, decision, recommendation or summing up of the matters are discussed.

Seminar

It is a type of group discussion where one trainee or several, prepare a paper on a given topic, issue or problem, which is then presented to the whole group for discussion and analysis. A series of seminars can be presented by the trainees around a major topic, so that they form a linked series of discussions. The main stages in seminar are preparation of paper, presentation of paper and discussion on it. Seminars can be bigger ones also.

Advantages

1. This method gives more independence, which leads to the development of presentation skills of the participants.
2. It provides opportunity for the trainees to prepare and contribute to a particular topic thoroughly.

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3. It provides opportunity to the trainees towards practical group leadership and allows them to use analytical skills, research on conclusions, solve a problem, etc.

Limitations

1. It is time consuming and may cause stress to participants.
2. It needs a group of trainees with fairly high-level of attainment.

Panel Discussion

A panel consists of a small group of six to eight people. They carry on a guided and informal discussion before an audience. For example, a panel discussion takes place on the issue of climate change. The leader must, in addition, take special care to select the panel members who can think and speak effectively. He must also be sure that they prepare themselves to discuss the subject.

Advantages

1. Panel discussions, if well conducted, are usually more interesting to the audience than the single-speaker forum.
2. Usually on socially relevant issues.

Limitations

1. Bringing experts to a single forum can be difficult.
2. The audience is not actively involved.

Brainstorming

Brainstorming is a creative group work in which the group members produce a large number of ideas quickly on a given topic or problem for subsequent evaluation. In this method, anyone can exchange remarks with anyone except that the participants are not allowed to criticize the ideas at the time when views are being invited. Sometimes quantity of ideas is more important than quality. Spontaneity is the hallmark of brainstorming sessions.

Several rounds of brainstorming are conducted till all the ideas are exhausted. Participants are then asked to evaluate all ideas and list the best one.

Advantages

1. It encourages creativity that helps trainers to produce, think and explore ideas.
2. Scope for larger participation.
3. It is economical as it does not require much preparation.

Limitations

1. It is not a very systematic way of studying a subject.
2. There is a possibility of some trainees being reluctant to participate.

Project Method

This can be described as both a small group and an individualized instruction. In this method, the students are allowed to explore and experience their environment through their senses and direct their own learning by their individual interests. Very little is taught from the textbooks and the emphasis is on experiential learning rather than rote learning and memorization. A project method classroom focuses on democracy and collaboration to solve purposeful problems.

Advantages

1. Students are likely to develop the habit of critical thinking.
2. They develop the habit of working in teams.

Limitations

1. Continuous monitoring may be required.
2. Additional resources may be required.

Role Playing

Role playing has been used effectively by many teachers to help solve classroom interpersonal problems and to teach human-relations skills in the classroom. Role playing has also been used to facilitate subject-matter learning through the dramatization of literary and historical works and historical or current events. In all these uses, role playing provides the student with a dramatic confrontation and clarification.

Advantages

1. It is the semblance to real-life situations.
2. Interactive and interesting, it entails participation of every member of the group.
3. It gives immediate feedback.
4. It develops social, decision-making, problem-solving, negotiating and manipulating skills.
5. It is effective to change the attitude of the participants.

Limitations

1. It has unpredictable outcomes.
2. Real-life situations are usually more complex.
3. It requires a considerable amount of resources.

Simulation

Simulation means creating conditions that are quite similar to actual conditions and then training is provided under those conditions. For example, the training of pilots and astronauts takes place in conditions that are quite similar to actual flight conditions. Simulation is specifically used for training purpose.

Advantages

1. They are economical in the long run.
2. Safety aspects are taken care of.

Limitation

1. It entails high initial investment in machinery equipment, etc.

Tutorials

Tutorial method is a method employed for teaching small groups for developing skills for solving numerical problems, providing individual guidance and sorting personal problems. It is appropriate for taking care of individual differences and guiding the students as per their needs, mastery, learning, comprehending concepts, principles and their applications and for remedial exercises.

Advantages

1. Focused attention
2. Generates more ideas
3. Better control over pace of teaching and learning process.

Limitations

1. It is difficult to find a suitable pace if the trainees vary greatly in ability.
2. It can be time consuming.

Demonstration Method

This method is based on the principle of learning by doing and learning from concrete to abstract. The term demonstration means to show. It is adopted in the classroom for the achievement of cognitive, affective and psychomotor objectives.

Demonstration can be defined as a combination of verbal explanation coupled with a live display of using apparatus for presenting important facts, ideas or processes. It may entail audio-visual explanation.

Advantages

1. It is effective in explaining materials, objects and ideas.
2. It is effective in explaining abstract concepts.
3. It is useful for achieving objectives in cognitive, psychomotor and affective domains as there is mental and physical participation of students.

Limitation

1. Only few get opportunities to participate in the experimental process.

Learner Centred Teaching Methods

The learner centred teaching methods try to accommodate the differences displayed between the learners. The main teaching methods include assignments, case-study approach, computer-based learning, open learning, personalized system of instruction and programmed instructions, which are discussed below.

Assignments

Assignments are given to students for a number of purposes, such as for acquiring additional information, surveying, application of knowledge and solving numerical problems. Although the main role is of the learner, the teacher too has a crucial role. The teacher has to plan the assignments and guide the student regarding references for collecting relevant information.

Assignments can be prepared on any type of topic, but the nature of assignment should be such that the students may not merely copy from the books. The assignments should be open-ended and should promote creativity among the students.

Advantages

1. It helps students work independently.
2. It helps in sharpening the student's comprehension, analytical and problem-solving abilities.
3. It helps in the inculcation of creativity among the students.

Limitation

1. Students may copy each others material unless the assignments are carefully planned.

Case Study

For students who have been exposed only to the traditional teaching methods. The case studies calls for a major change in their approach to learning.

A case is usually a 'description of an actual situation, commonly involving a decision, a challenge, an opportunity, a problem, or an issue faced by a person or persons in a social set up such as an organization'. In learning with case studies, the students must deal with situations described in the case, i.e., in the role of a decision maker facing the situation. This method has applications across disciplines, such as psychology, management, biology, law, sociology, history, etc., to name a few.

By allowing the students to gain hands-on experience of the real world and shifting the work focus from professor to the student, the case-study method becomes an efficient tool for the creation of a learner-centred

education rather than a teacher-centred education. The student becomes actively involved in the course and is no longer an observer in class developments.

The cases can be short from brief classroom discussions to long and elaborate semester-long projects. It is important for bringing real-world problems into a classroom or a workshop. They ensure active participation and may lead to innovative solutions to the problems.

Advantages

1. It provides opportunity to the participants to analyse, critically examine, evaluate and express reasoned opinions.
2. It enhances decision-making and problem-solving skills.
3. It ensures active participation, which may lead to innovative solutions.

Limitations

1. It requires training for the teachers to use this method.
2. It is not useful for all subjects and situations.

Programmed Instruction

Programmed Instruction (PI) is a general term for a highly structured system of learning, which is based on logical sequence of self-paced, learning steps with feedback between each step. The learner gets immediate feedback after each step.

Advantages

1. There is regular feedback.
2. This ensures active participation of the learner and it can be used for any subject.

Limitation

1. Learner motivation may get diminished after sometime.

Personalized System of Instruction

Personalized System of Instruction (PSI) can be used for all subject matters except where the students are to select the contents. Learners must achieve mastery of a series of written mastery units, assisted by teachers, proctors and enriching lectures before proceeding to the final test. PSI consists of five basic elements as shown below.

1. Mastery learning
2. Self-pacing
3. Stress on written material
4. Proctors
5. Lectures

It is best suited for contents that are usually conveyed through written material.

Advantages

1. It is based on mastery learning.
2. It facilitates self-paced learning.

Limitations

1. It is not suitable for rapidly changing course contents.
2. It is not suitable for psychomotor and affective domains.

Computer-assisted Learning

Computer-assisted Learning (CAL) is concerned with the use of a computer to mediate the flow of information in a learning process. A computer has the ability to process information very quickly, accurately and to adapt and respond to the learner's need, difficulties, and progress, which is much greater than that of a book or video tape.

Advantages

1. It has more flexibility and better control in comparison to other methods.
2. It can be effectively used for drilling and practicing, simulation and modelling.

Limitation

1. It is impersonal and costly.

Open Learning

It is a flexible method of delivering the instruction, where the learner has open access to learning resources of people, material, equipment and accommodation, although regular class attendances are not necessary. There are no or minimal restrictions on admissions.

The face-to-face interaction between teachers and students through tutorials should form a part of open learning. For open learning, the learning packages are to be developed, making use of multimedia. Open learning instruction is, however, not suitable for the rapidly changing nature of content as this involves time, expertise and resources.

Advantage

1. It offers flexibility to the learner.

Limitations

1. It is not suitable for achieving psychomotor and affective learning objectives.
2. It requires time, expertise, resources and hence, not suitable for subjects of rapidly changing nature.

Interactive Video

The interactive video approach to teaching can be employed to achieve cognitive, psychomotor and affective objectives. It allows the learner to randomly access any piece of information and provide immediate feedback regarding the consequences of their action. The essence of the interactive video experience is video simulation with more number of video presentations of real images as possible.

Advantage

1. Interactive video approach enhances the decision-making power of the individual.

Limitation

1. This method is time consuming and requires resources and expertise.

Heuristic Method

This method was advocated by Professor Armstrong. In this method, the student has to find out the answer to his/her own problem by unaided efforts. Thus, the child becomes a discoverer of knowledge by developing a spirit of inquiry. The main aim of teaching by this method is not to provide much facts about Science, Mathematics, Grammar, etc., but to teach how knowledge of these can be obtained.

Advantage

1. Self-learning approach

Limitation

1. Not much focus on factual knowledge

Differentiated Instruction (DI)

Differentiated instruction is a dynamic, proactive method of teaching. It means that the teacher plans and uses a variety of ways to teach learning. It is a combination of whole group, small group and individual instruction methods.

In this method, the qualitative aspects are given more weightage than quantitative aspects. It uses multiple approaches to accommodate multiple intelligences. It is student-centred, meaning that the lessons are engaging, relevant, interesting and active. It is an organized and planned method of teaching.

GAGNE'S TEACHING – LEARNING PROCESS

Robert Gagne (1916–2002) was an educational psychologist who pioneered the science of instruction in the 1940s. His book “The Conditions of Learning,”

Reflective Teaching and Blended Learning

Reflective Teaching

Classroom teaching depends on many factors, such as individual differences, class environment, teacher's and learner's abilities and the lesson subject matter. There is no standard and perfect teaching method to follow and the teachers should seek a suitable approach to present their lessons.

We assume that reflective teachers are knowledgeable about pedagogy, but still there is scope of improvement.

Reflective teaching is a means of ‘looking at what you do in the classroom, thinking about why you do it, and thinking about if it works, a process of self-observation and self-evaluation’. The purpose of doing it is to improve the quality of teaching. In general, reflection involves ‘working towards a better understanding of the problems and ways of solving it’. The steps involved in reflective teaching cover ‘suggestions, problems, hypothesis, reasoning and testing’. Reflective teaching is also seen as the attitude of questioning the practice of teacher's profession. The peer observation, written account of experiences, self-reports, auto biographies, journal writing, collaborative diary keeping and recording lessons, student's feedback, teacher's stories.

It may be specifically helpful for pre-service teachers in their professional development, where in a teacher act as adult learner and the facilitator in education system. It also includes training, practice and feedback.

Blended learning: This term originated in USA. There is no clear single definition available for it. Blended learning combines online learning with face-to-face learning. It is also defined as the combination of multiple approaches to pedagogy or teaching, for example, self-paced, collaborative or inquiry-based study. The goal of blended learning is to provide the most efficient and effective instruction experience by combining delivery modalities.

first published in 1965, identified the mental conditions that are necessary for effective learning. Gagne created a nine-step process that detailed each element required for effective learning.

1.22 CHAPTER 1

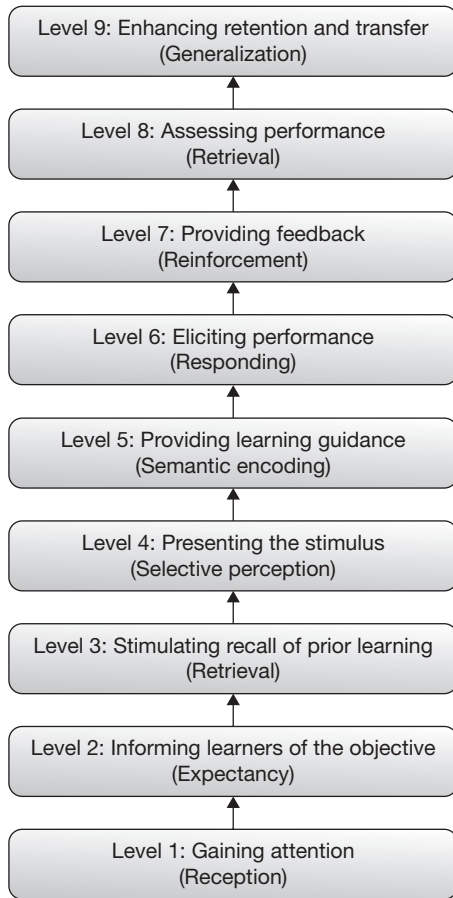


Figure 1.7

Source: www.mindtools.com

OFFLINE VS ONLINE METHODS

Their differences have been shown below:

Table 1.4 Differences Between Offline Classroom and Online Classroom

Offline Teaching Methods	Online Teaching Methods
It is teacher focused. Teacher is the central component of teaching l-learning process.	It is learner focused. Learner is the central focus of teaching –learning process.
Learning is more passive; there are fewer roles for learners in the instructional process.	Learning is more active and role of learners is more in the instructional process
Teacher concentrates on delivering knowledge and subject content	Teacher helps in construction of knowledge

(Continued)

Offline Teaching Methods	Online Teaching Methods
Instructional strategy is verbal oriented and is based on traditional methods of teaching	Less focus on verbal instruction. Instructional strategies make use of different styles and methods of teaching
Multimedia may be used, but delivery of instruction is mainly verbal	Multimedia are used in a variety of ways
Student interaction with technology is less	Students’ interaction with technology is more
Focus on face-to-face interaction between teacher and learners	Opportunity of face-to-face interaction between teacher and learners is less
Less chance for motivation and self leaning	It gives learners chances for selflearning and motivation
More use of traditional styles of teaching	Makes use of innovative techniques of instruction
Use of technological instruments is less.	Use of technological instruments is more
Opportunity of interaction between students and teacher is limited	Opportunity of interaction between teacher and student is more
Duration and period of study is fixed	Duration and period of study is not fixed
Rigid in character	Flexible in nature

Massive Open Online Courses (MOOCs)

MOOCs have become a popular avenue for diverse learners to upgrade their knowledge and skills. Instructors who are new to creating MOOCs tend to focus on the use of technology features to mimic their classroom actions. While it is necessary to be aware of the technology affordances, it is more important to focus on the pedagogy of how to use the MOOC features effectively to foster student engagement and learning. Hence MOOC instructors need a set of design principles and guidelines to create a learner-centric MOOC.

In this course, we will discuss the Learner-Centric MOOC (LCM) model, and how to apply it to create effective MOOCs.

Intended Audience: Teachers, MOOC creators

Core/Elective: Elective

UG/PG: PG

Prerequisites: None

Industry Support: Companies creating online courses, L&D (Training) divisions in companies across various sectors.

SWAYAM

It is an indigenous (Made in India) IT Massive Open Online Courses (MOOCs) Platform for providing best quality education that can be accessed by anyone, anytime and anywhere using the IT system. It was launched by Government of India to achieve the three cardinal principles of Education - access, equity and quality. Access means to take the best teaching learning even to the most disadvantaged. It seeks to bridge the digital divide for the economically disadvantaged students, at all levels. It is taught in classrooms from 9th class till post-graduation to be accessed by anyone, anywhere at any time. The sessions are developed by best faculty and available free of cost. There are more than 1,000 specially chosen faculty members.

The courses hosted on SWAYAM are in 4 quadrants:

- Video tutorials covering a whole course** – normally of 20 hours, each lecture not exceeding 30 minutes.
- E-Content:** added to the learning imparted through the video tutorials.
- Self Assessment:** Quizzes/assignments that intersperse the course
- Discussion forum for posting queries**

Features of SWAYAM

- High quality learning experience using multimedia on anytime, anywhere basis.
- One-stop web location for interactive e-content for all courses from School to University level.
- State of the art system that allows easy access, monitoring and certification.
- Peer group interaction and discussion forum to clarify doubts
- Hybrid model that adds to the quality of classroom teaching.

Thus all this happens through by using audio-video, multi-media and state of the art pedagogy / technology.

Nine National Coordinators are:

- AICTE** - self paced and international courses
- NPTEL** - engineering
- UGC** - Non-technical PG education
- CEC** - UG education
- 5 & 6. NCERT & NIOS** - school education
- IGNOU** - out of school students
- IIMB** - Management studies
- NITTTR** - Teacher Training programme

Students looking for certifications shall be registered and be offered a certificate on successful completion of the course, with a little fee. The assessment takes place through proctored examination and the marks/grades secured in this exam could be transferred to

the academic record of the students. UGC has already issued the UGC (Credit Framework for online learning courses through SWAYAM) Regulation 2016 advising the Universities to identify courses where credits can be transferred on to the academic record of the students.

SWAYAM platform is indigenously developed by MHRD and AICTE with the help of Microsoft and would be ultimately capable of hosting 2000 courses and 80000 hours of learning: covering school, under-graduate, post-graduate, engineering, law and other professional courses.

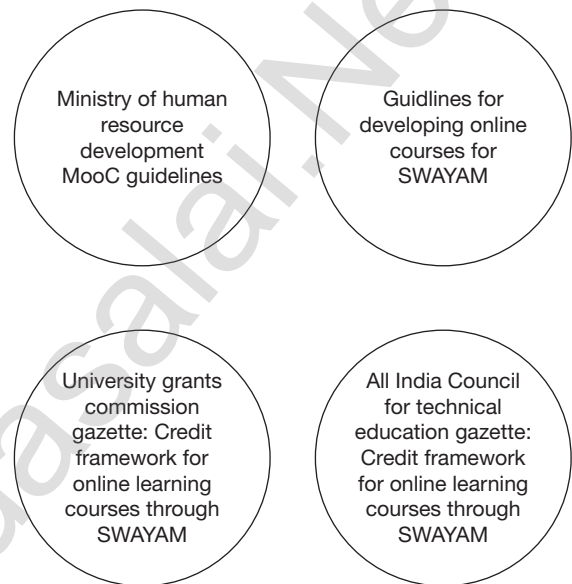


Figure 1.8

Source: All information by Ministry of Human Resource Development

SWAYAM PRABHA

The SWAYAM PRABHA is a group of 32 DTH channels devoted to telecasting of high-quality educational programmes on 24 × 7 basis using the **GSAT-15 satellite**. Every day, there will be new content for at least (4) hours which would be repeated 5 more times in a day, allowing the students to choose the time of their convenience. The channels are uplinked from BISAG, Gandhinagar. The contents are provided by NPTEL, IITs, UGC, CEC, IGNOU, NCERT and NIOS. The INFLIBNET Centre maintains the web portal.

The DTH Channels shall cover the following:

- Higher Education:** Curriculum-based course contents at post-graduate and under-graduate level covering diverse disciplines such as arts, science, commerce, performing arts, social sciences and humanities, engineering, technology,

law, medicine, agriculture, etc. All courses would be certification-ready in their detailed offering through SWAYAM, the platform being developed for offering MOOCs courses.

2. **School education (9-12 levels):** These are basic modules for teacher's training, teaching and learning instructional facilities for our children to help them understand the subjects in better manner. It also helps learners to prepare themselves for various competitive exams to get admissions into professional degree courses.
3. Curriculum-based courses that can meet the needs of life-long learners of Indian citizens in India and abroad.
4. Assist students (class 11th and 12th) prepare for competitive exams.

Teaching Support System

Teacher Support System is basically a set of tools that helps to improve student achievement by building newer capacities in the teachers. It can be taken as kind of process as well, it influences the way decisions are made and what information is passed on. This helps us to know that how teachers acquire new skills and increase student achievement in areas they are under-performing. Though they are happening simultaneously, the movement has taken place from traditional to modern to ICT (Information and Communication Technology) based education. It happens with help from technology also. Traditional can be somewhat compared with orthodox education also.

Traditional and Modern Methods

Let's first differentiate between traditional and modern approaches:

1. Traditional is basically teacher centred instruction that reflects educational essentialism and education perennialism.
Modern is students' centric approach that reflects educational progressivism.
2. In traditional approach, memorization of facts, objective information; correct knowledge is paramount.
In modern approach, understanding the facts, Application of facts, Analysis, Evaluation, Innovation; Critical thinking is paramount
3. Traditional approach aims at high test scores, grades and ultimately degrees. Subjects are individual and independent.
Modern approach aims at Learning, retention, accumulation of valuable knowledge & skills. Subjects are integrated and multidisciplinary.

4. In traditional methods, students matched by age, ability etc, while modern and possibly also by ability.

In modern approach, students match by interest or ability for each project or subject. It can be multi-age also.

5. Traditional method has direct instruction and lectures, seatwork. Here, students learn through listening and observation. The teacher relies on textbooks, lectures, and individual written assignments etc.

In modern teaching, practicality, discoveries, group activities are the main pillars. Focus is on Internet, library and outside experts.

6. In traditional approach, presentation and testing methods favor students who have prior exposure to the material or exposure in multiple contexts.

In Modern approach, context learning integrates personal knowledge within the school environment.

ICT Based Teaching

ICT based teaching support is an approach to facilitate and enhance learning through, and based on, both computer and communication technology. It refers to the use of computer-based electronic technologies of internet, e-mail, websites and CD-ROMS to deliver, facilitate and enhance both formal and informal learning and knowledge sharing from any place at any time. The communication devices can also include digital television, personal digital assistants (PDAs) and mobile phones.

ICT based learning is also called Computer-Based Training (CBT). Generally, CBT and e-learning are treated as synonyms, but CBT is the older term dating from the 1980s. The term ICT evolved from CBT along with the maturation of the internet, CDs and DVDs. It includes Internet-based Learning, Web-based Learning and Online Learning.

ICT is significant in many ways. It enables flexible learning where just-in-time, effective and efficient learning. The pace is determined by the learner.

ICT facilitates collaborative internet and web-based learning opportunities to the learners.

ICT supports distance learning with wide area networks (WAN) and by creating multimedia CD-ROMs or websites.

In ICT teaching methods, there is advantage of having hyperlinking. There are interactive parts that illustrate difficult things. Here doing some exercises is also possible; It allows a wider range of learning experiences, such as there is educational animation to online learners. It also imparts e-training through

the asynchronous and synchronous communication modes. Thus it permits learners the convenience of flexibility. Learners may look at many other options to learn.

Specialised training is rendered through customised software, which addresses the particular needs of the clientele mostly through the synchronous mode on a dedicated broadband internet connectivity. Equally, it also renders training to the learners through the generic software displaying universal contents in asynchronous mode to the learners through a shared network with limited internet access or on World Wide Web; and enhances teaching by professional development of teachers through training on usage of ICT in education. World Links enables the teachers to integrate technology into teaching and thus create dynamic student-centred learning environment in classrooms. The faculties can also interact with their peer groups in the world and exchange ideas and notes on the subject.

ICT is a planned effort towards providing interactive and experiential learning; flexibility in terms of time, place and pace; participation and accessibility; expertise and qualitative subject matter; best resource at the learners' doorsteps and personalised training; and centres round the trainees.

LEARNING AND LEARNER'S CHARACTERISTICS

Learning Defined

It appears quite simple to define the term 'learning', where we all have spent our entire lives learning new things. Learning is basically psychological in nature and a few definitions offered by psychologists are given below.

1. **Gates:** Learning is modification of behaviour through experience.
2. **Skinner:** Learning is a process of progressive behaviour adaptation.
3. **Crow and Crow:** Learning involves the acquisition of habits, knowledge, and attitude.

Learning has also been defined as permanent change in the capacity for performance.

Learning Basics

Learning Theories

There have been some questions in NTA Exam from all learning concepts. So we need to learn some basics here. As per direct NTA syllabus, Individual Differences topic has been explained later.

The concept of learning has not been the same throughout for the last 100 years. Three schools of thought have been found prevailing during these years.

1. Behaviourist School of Thought: This school remained dominant in the first half of the twentieth century. This school focused mainly upon observable and measureable aspects. To them, learning is nothing but a stimulus response reinforcement process. When learners respond to the reinforced stimulus, their responses would get strengthened. Thus learning is a response strengthening process.

For example, when a teacher asks student a question in the Accountancy and student responds correctly, then s/he rewards the student by saying 'excellent' or 'very good'. This acts as reinforcement to the student's response, which gets strengthened.

In teaching-learning process, the focus is on drill and practice and tutorials.

The behaviourists have put forward three main laws of learning:

- (a) **Law of Effect:** The Law of Effect stresses the importance of the effect of a response. Satisfying results reinforce the response while annoying results weaken it. Reward and punishment are, therefore, important ingredients of learning.
- (b) **Law of Readiness:** The law of readiness indicates the student's willingness to make S-R connection.
- (c) **Law of Exercise:** The law of exercise relates to strengthening the connection through practice.

2. Cognitivist School of Thought: The behaviourists paid attention only on observable behavior. There was no heed to the inner processes involving learning. Thus a new school of thought, Cognitivist School of thought emerged. Cognitivists believed that every subject has a structure. When information is presented in an organized manner through lecture or demonstration, learners would acquire knowledge and skills. To them learning is the acquisition, assimilation and accommodation of knowledge and skills in the cognitive structure.

3. Constructivist School of Thought: The constructivists believe that learning is not passive. They began to consider learning as personal. Everyone constructs his or her own knowledge and skills as a result of undergoing experiences. The learning or knowledge continuously gets constructed as new knowledge is acquired. It means new experience is integrated with previous experience. Under Constructivist school, we focus on Independent learning, experiential learning and programming etc. The focus is on generalisable skills that are based upon individual discovery.

Discovery Learning is constructivist approach based. It was introduced by Jerome Bruner, and is a method of Inquiry-Based Instruction. This popular theory encourages learners to build on past experiences and knowledge, use their intuition, imagination and creativity, and search for new information to discover facts, correlations and new truths.

Principles of Learning

Earlier we discussed about the maxims of teaching. Now we can discuss the Principles of Learning that can help in NTA Exam as many questions are asked from these topics.

1. **Principle of Association:** A teacher must know the state of learners' mind and capacity. As learning is continuous, a teacher must start teaching at their level for better learning. This helps in better development of new ideas. The learning is better if it can be linked with those already known to the community.
2. **Principle of Clarity:** Practice must be continuously evaluated and redirected. Objectives must be clear to a teacher, and to the learner. Ultimately 'seeing is believing'.
3. **Principle of Self Activity:** Learning is more effective if it engages the maximum number of senses.
4. **Principle of Rewards:** Learning must be a challenging and satisfying as well.
5. **Principle of Practice:** Learning should always result in functional understanding of facts.
6. **Principle of Nurturing Environment:** It can congenial environment that may be physical and social environment.
7. **Principle of Variable Learning Ability:** This is linked with the concept of individual differences also. Some may be slow learners, and some could be fast learners, so learning depends upon communication and learning ability.
8. **Principle of Multiple Exposure:** To make someone learning may need a set of practices. By using a combination of teaching methods, our teaching will have a cumulative effect on the learners. The percentages of learning and adoption will be higher with multiple exposures.
9. **Principle of Learning Capacity:** The rate of learning declines at the rate of about one percent a year after the age of 35. The main reasons attributed for this decline is physical problems, low external motivation, habits, and the impact of a particular ideology.
10. **Principle of Active Process:** Learning is an individual or personal choice, so some practices are required. Audio visual aids may also help.

11. **Principle of Theory and Practice:** the 'why' and 'how' of an idea are explained by theory. So a teacher should balance theory and practice for better learning by the learners.

12. **Principle of Effective Communication:** Better learning can be achieved by integrating suitable audio visual aids in teaching-learning process.

Learning Methods

For sake of learning, we resort to for learning can take different forms. We learn something or other all the time when we are awake and alert. Our sensory organs keep on capturing and passing on information pertaining to everything which we pay our attention to. Apart from teaching, some of the ways how do children learn have been explained below:

1. **Imitation:** We see that small girls usually imitate their mothers and small boys their fathers. Even adults do imitation of others. Specifically less confident or less assertive people look for confident and assertive people. With practice and passage of time, they also become confident or assertive.
2. **Observation:** Observation is an interesting way to learn. In case we want to learn about the social behaviour of our leaders or boss or teacher, we need to go to their office or habitat etc. There we observe them closely and take details of the things observed.
3. **Experience:** Learning is based on and follows from experience. We follow many things from our experiences. After we undergo some experience and reflect over it, with the help of a few questions, we will learn a lot out of it by seeking answers to them. For learning about our social diversity, learners may be taken to a village fair.
4. **Teaching:** In teaching, teachers are invited - teachers select a topic, subject it to content and task analysis, and expose students to the topic through lectures. The students listen to the lecture and as a result, they learn.
5. **Instruction:** Instruction is usually concerned with physical settings rather than cognitive skills. Usually the system involves demonstration with supporting explanation. As a result, the learners acquire knowledge and skills.
6. **Trial and Error:** When an individual is facing a problem, and is not sure of which option is the most appropriate, he may opt for the one that he thinks is the right one. If it is found that it does not work, he may go for another. This process continues until he arrives at the right solution. In this process of trial and error, he learns a lot. This may happen in subjects such as mathematics.

7. **Reflection:** The reflective has a tendency to consider and deliberate the alternative solutions to problems. Conversely, an impulsive person tends to respond spontaneously without deliberation, especially in case of uncertain situations. The reflective person uses cognitive powers such as reasoning and analyzing to make sense of things that he or she is required to do.
8. **Experimentation:** When a person is in doubt, relying on intuition and guessing may not be wise. To get to know the reality, we have to resort to experimentation. Our thinking can be one thing and the reality may be another. In case, we choose to conduct an experiment, we can certainly arrive at the reality. In the course of the experimentation, we learn several things. As we have seen, there are quite a number of ways through which we can learn.
Our success in learning, to a great extent, depends on our ability to select the most appropriate method, not the best one, looking into the nature of matter to be learned and the objectives for which it is learned.
9. **Questioning:** Even questioning is a good technique to learn. In theory the perfect convergent (closed-ended) question would have only one answer and the perfect divergent (open-ended) question would have infinite answers. Questions can be Factual, Explanatory, Analysing, Hypothetical, Decisional and so on.

'Self Learning is also called as the conative learning'.

Learning Characteristics

Some of the important characteristics of learning are as given below:

1. **Learning is Unitary:** It implies that the learner reacts as a whole person to the whole situation in a unified way. It means that the learner responds intellectually, emotionally, physically and spiritually at the same time. This attitude helps in the achievement of educational goals.
2. **Learning is a complex whole:** The different dimensions are knowledge, skills, insights, values, attitudes, and habits.

Development of Knowledge: According to Cognitive psychologists such as Bruner and Ausubel, each discipline has a structure consisting of key concepts. Knowledge is organized systematically. Expository methods such as lecture or demonstration help in better understanding in finite (definite) form. Logical organized contents

easily fall into patterns - critical thinking ability (analysis), creative thinking ability (synthesis). Patterns give meaning. We need to take learners to the higher levels of cognitive abilities such as analysis, synthesis, evaluation and creating.

Development of Skills: A skill is a learned activity that one develops through practice and reflection. It is the ability to perform a learned activity well and at will. Skill, as an ability to perform something, includes proficiency, competence, and expertise in the activity. Skill refers to learning of psycho-motor behaviours required in activities such as driving a car, swinging a tennis racket. The development of skills entails the following stages:

1. **Cognitive Stage:** achieved through declarative knowledge
2. **Associative Stage:** combining individual steps into larger units
3. **Automated Stage:** where the whole procedure can be accomplished without much attention. In the last stage, the brain process shifts from reflective to reflexive.

Development of Attitudes: Attitude is a mental state held by an individual which affects the way that person responds to events and organizes responses. Attitudes are commonly held to have three essential components or dimensions:

1. **A cognitive dimension:** beliefs and rationalizations which explains the holding of the attitudes
2. **An affective dimension:** emotional aspects of attitude such as likes, dislikes, feeling of distaste, and
3. **A conative or behavioural dimension** which involves the extent to which the individual are prepared to act on the attitude that they hold.
3. Learning may be planned or may be unplanned.
4. Learning can be active as well as passive.
5. Learning is usually individual, but it can also be collectively generated in groups.
6. Learning is treated both as a process and as an outcome. Learning is life-long process.
7. Learning may be incremental -it may add cumulatively to the prior learning or transformation.
8. Learning can be stimulated or triggered by any experience, failure, success, and anything else.
9. Learning outcomes may be undesirable as well as desirable.
10. Learning has always a moral dimension.
11. Learning is self active, creative and transferable.

Thus we can say that learning is always multifaceted.

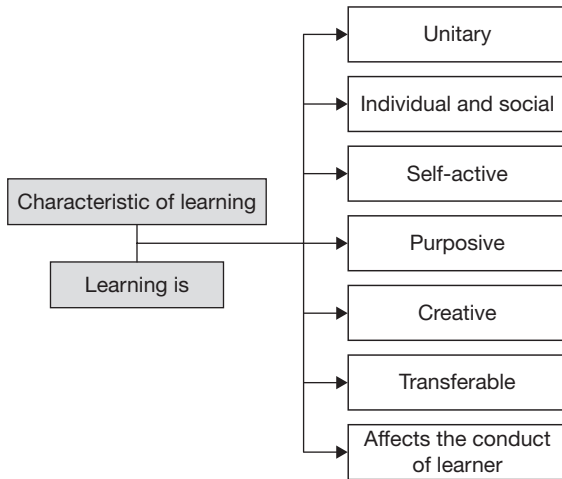


Figure 1.9

Basic Conditions of Learning

External conditions responsible for learning are very important in various types of learning. A brief description of the basic conditions of learning is given below :

- 1. Contiguity:** One of the basic conditions of learning, contiguity is almost simultaneous occurrence of the stimuli and of the responses to them. It applies in teaching also.
- 2. Practice:** Practice is the repetition of a response. Practice of S-R Stimulus-Response (S-R) is required such as in classical conditioning, operant conditioning, skills learning.
- 3. Reinforcement:** We can use reinforcement in different ways to produce different effects.
- 4. Feedback** is providing the knowledge that the responses are correct or that they require amendment, also functions as reinforcement in strengthening the responses to be learned. It increases the learning efficiency.
- 5. Generalisation and discrimination:** Both generalisation and discrimination (say among colours) are perhaps better defined as phenomena rather than as conditions of learning.

Learner's Response to Learning

Singh and Sharma (1987) have suggested five component behaviours of the skill for managing students' responses in the classroom to enhance participation.

- 1. Prompting (when no answer/response):** in the form of clues, hints, a partial answer, etc. to the students. Clues given for a correct answer are known as prompts.

- 2. Redirection:** When a student is not able to give right answer to the question, then question is directed to a number of students. Through redirection, teacher can ensure greater participation, more time to think and brainstorming situation for the students.
- 3. Seeking further information:** When a student gives incomplete or partially correct answer, then teacher tries to help the student to clarify higher response. Additional information related to a question or answer can be asked to ensure whether a student has properly understood the ideal concept or not.
- 4. Refocusing:** In case, the students' answer is correct, he can be asked to relate knowledge gained in similar or new situations. It will provide an opportunity to think about the application of the acquired knowledge.
- 5. Increasing critical awareness:** In case a student gives the correct answer, the teacher puts higher order questions in order to increase critical thinking or awareness among students.

LEARNING ENVIRONMENT

Learning is an ongoing dynamic process. It is the result of the interaction between individuals and environment in which those operate. Learning environment may be defined as a composite of natural conditions, circumstances and influences, and sociocultural contexts in which an individual is situated. Learning environment is the sum total of the surroundings in which individuals interact to enrich experiences and thus leading to learning. There are many theories at play while describing learning environment.

Bandura, a social psychologist, in his Social Learning Theory proposed that new behaviour can be learned through the process of observation and imitation. It is the result of interactions among personal characteristics, behaviour and environmental factors. Besides social environment, physical environment also influences learning.

Vygotsky, a constructivist thinker, believed that the mastery over the culturally important tasks (such as language) can take place only through social interactions. Variations in learning environment lead to different learning outcomes.

Based on the different types of settings, UNESCO (1984) classified following types of learning:

- 1. Formal Learning:** institutionalized to transmit knowledge – highly structured and there is continuous interaction that are linked to some objectives and they lead to recognised qualification. Teachers and learners are the prime stakeholders.

2. **Non-formal Learning:** not structured and it is organised with flexibility. There is no certification. The family, the neighborhood community, the peer groups, the market places are the prime stakeholders.
3. **Informal Learning:** incidental and individualized, it is not organized. In a country, one can find a number of initiatives and programmes, which are non-formal by nature. In India, adult education programmes, basic education programmes, literacy programmes, health awareness programme etc. Curricular experiences are generally formulated keeping in mind the specific needs of the target group. These are more individualized rather than broad-based and general in nature. Transaction of learning experiences is centred around community resources.

Importance of Creating a Positive Learning Environment

Some constituents of an institution's environment are discussed as follows:

1. **Physical Environment:** 'The classroom is the basic structural unit of our educational system'. Learners are constantly interacting with the physical environment of their institutions during scheduled or unscheduled time, consciously or unconsciously. There is strong, consistent evidence for the effect of basic physical variables (air quality, temperature, noise) on learning. The absence of the minimum essential standard for a school drastically affects the teacher's productive output and classroom management.

Different room arrangements, chairs, tables etc. serve different purposes, it is necessary for classrooms to have some degree of flexibility.

'Ownership' and 'engagement of space and equipment by both teachers and students is important.

2. **Psychological Environment:** If building, space and facilities provide physical environment to a school, its philosophy and practices provide a psychological environment to it. The psychological environment mostly refers to the stimuli that influence upon the learner's psyche in the school. For example, imagine a situation in a school where a learner is kept in a *threatening situation*. This situation will result in the development of *anxiety in the learner*. Anxiety may lead to undesirable behaviors such as escaping from tests, blaming the teachers for faulty questions, engaging in malpractice, and so on.
3. **Social Environment:** Through constant interactions with the peer group, a learner learns and

practices the social virtues of cooperation, self-sacrifice and loyalty. The outdoor activities offer learners opportunities for developing qualities like courage, resourcefulness, self-reliance and initiative among students. Good personal relationships develop stability, trust, sense of belongingness, self-respect and self-acceptance among learners and creates a positive environment for learning.

As a teacher, you are expected to fulfill at least two cognitive demands of the learners: academic task demands (understanding and working with content) and social task demands (interacting with others concerning that content).

4. **Motivational Climate:** There are two factors that are critical in creating such a motivational climate: value and effort. To be motivated, students must see the worth of the work that they are doing and the work others do. A teacher must demonstrate *value* of the task to be performed in the class. This can be done by telling them the value of the task in daily life. *Effort* involves time, energy, and creativity a student uses to develop the "work". One way that teachers encourage effort is through specific praise. In the beginning of the year, teacher must set expectations and create a motivational climate for learning.
5. **Understanding Individual Differences:** For creating positive environment in the classroom, it is essential for a teacher to become responsive to the individual needs of learners. An effective teacher has to be sensitive to the individual differences in terms of their preferred learning styles by varying the rate, amount, nature or content of the instruction.

Individual Differences in Learning – Types of Learners

Learners have many common characteristics at various ages and stages, but they also differ significantly in many ways. Teachers need to understand both the commonalities and the differences in order to meet the students' needs as no two individuals are alike. There are variations among learners with respect to their age, cultural environment, past experiences, physical, mental and emotional make up, goals, needs, etc.

Furthermore, different learners have different learning styles and as heterogeneity is increasing day by day, they may perceive, interpret and evaluate the same learning event in different ways.

Learners' characteristics, therefore, merit consideration in selection of media. Learners benefit from those media that match their individual learning styles. Therefore, it is understandable why a variety of methods, resources and paths should be provided for

different students to achieve a particular objective. Thus, while designing an instructional plan, the important task for the designer is to identify the most critical characteristics for the attainment of instructional objectives.

Elements of Learning Event

The main components of learning event are as follows:

1. **Learner:** The learner must interpret the stimulus, differentiate and combine them and give them some meaning.
2. **Stimulus:** Any stimulus or set of stimuli to which the learner is sensitive can become a part of his learning situation.
3. **The internal conditions of the learner:** These are perception, cognitive structure, self-concept, attitudes, needs, motives, intelligence, previous learning, etc.
4. **Response:** Any action or reaction to a learning situation.

Main Steps in Learning Process

In NET Exam, there may be direct or indirect questions on learning process.

Reception: Gaining attention by making some abrupt changes in stimulus or stimuli.

Expectancy: Informing learners of the objective and what they will be able to do after learning.

Retrieval to working memory: Stimulating recall of prior knowledge.

Selective perception: Displaying contents with distinct features.

Semantic encoding: Learning guidance.

Responding: Asking learner to perform.

Reinforcement: Providing feedback to the learner.

Retrieval and reinforcement: Additional performance by learner and it entails feedback also.

Generalization: More practice of varied problems so as to increase retention.

Types of Learners

In the past, many direct and indirect questions have been asked in the NET exam. There are three main categories of learner characteristics, such as general characteristics, specific entry competencies and learning styles.

Learner Characteristics

1. **On the basis of personal and social attributes:** They help in planning instructional objectives as it may reveal physical characteristics that are relevant to training or instructional decisions. The social factors mainly include the following.
 - (a) Age and maturity level
 - (b) Motivation and attitude towards the subject
 - (c) Expectations and vocational aspirations
 - (d) Special talents
 - (e) Mechanical dexterity
 - (f) Ability to work under various environmental conditions.

Some of the differences in learner characteristics between the adolescence and the adults has been described further.

2. **Field independent vs. Field dependent:** 'Field' here means context or surroundings. Some people are more and some less, influenced by the context when performing a skill or learning.

Field-independent learners tend to rely less on the teacher or other learners for support. Field independent learners perceive analytically. They see objects separately from the surrounding field, they prefer to work in self-structured situation and have self-defined goals. In the classroom activities, such as extensive reading and writing, which learners can carry out alone are useful for field-independent learners.

On the other hand, field-dependent learners often work well in teams as they tend to be better at interpersonal relationships. They perceive globally. They prefer to work in existing structure or context, they require externally defined goals and reinforcements and are more aware of their surroundings.

In the classroom, activities that connect different parts of a lesson are useful for field-dependent learners. For example, learners can discuss what they know about a topic, predict content or look at and listen to related material.

3. **Reflectivity and impulsivity:** When a question is posed, some students take long time to respond while others are quick in response. The speed with which the respondents make a response to the task and the number of errors they make is termed as conceptual tempo. Those students who respond quickly and make a fair number of mistakes are said to have a fast conceptual tempo. They are said to possess impulsive style of learning.

Learners who are slow in response and tend to make fewer mistakes are called reflective. In problem-solving situations, the impulsive learner collects less data, they are less systematic and does not look for alternative solutions. Reflective learner spends more time collecting information and analyzing the data before offering a response.

4. **Class-room based learning styles:** Learning styles are traits that refer to how learners receive and process information.

(a) **Visual learners** learn easily and better through sight. Brightness, size, colour, distance, clarity, frame and symmetry are important to visual learners. Visual learners must see so that they may learn easily. Visual learners may be categorized as **verbalists** (they see words and letters) or **imagists** (they see images, i.e., pictures).

(b) **Auditory learners** acquire information through sound, i.e., the ear gate. Various aspects of sound, for example, pitch, volume, tempo, rhythm, resonance are important for auditory learners. Auditory learners may be aural (they learn by listening to others) or **oral** (they learn by talking and hearing themselves).

(c) **Motor learners** learn through motor activity. Various aspects of action, for example, frequency, duration, intensity, pressure, etc., are important for them. Motor learners may be **kinesthetic** (they learn through the use of gross motor muscles) or **mechanical** (they use fine motor muscles to support their learning). Apart from above, the classroom style learners can be of the following types.

(i) **Intuitive:** Insights and hunches

(ii) **Inductive:** From facts to generalization

(iii) **Deductive:** From theory to individual facts

(iv) **Reflectively:** Introspection

5. **Learner characteristics on the basis of listening skills:** Listening is an important skill and there are four types of listening styles, which are as follows:

(a) **Active listening:** It is listening with a purpose.

(b) **Empathic listening:** It is a form of active listening in which you attempt to understand the other person.

(c) **Evaluative listening or critical listening:** In this type, the listener evaluates the accuracy, meaningfulness and utility of speaker's message.

(d) **Appreciative listening:** Listening for enjoyment involves seeking situations involving relaxing, fun or emotionally stimulating information.

6. **Learner characteristics on the basis of thinking styles:** There are different thinking styles of learners, which are mentioned below.

(a) **Reflective thinkers**

(i) View new information with respect to the subject.

(ii) Relate new information to past experiences.

(iii) Always ask 'why?'

(iv) Examine their feelings about what they are learning.

(b) **Creative thinkers**

(i) Like to play with new information.

(ii) Always ask 'why?'

(iii) Create their own solutions and shortcuts.

(c) **Practical thinkers**

(i) Always look for factual information.

(ii) Seek the simplest and the most efficient way to do their work.

(iii) Not satisfied until they know how to apply their new skills to their job or other interest.

(d) **Conceptual thinkers**

(i) Accept new information only after seeing the big picture.

(ii) Want to know how things work, not just the final outcome.

(iii) Learn the concepts that are presented but also want to know the related concepts that may not have been included.

Characteristics of Adolescence and Adult Learners: Academic, Social, Emotional and Cognitive

'Live as if you were to die tomorrow'

'Learn as if you were to live forever'

— Mahatama Gandhi

Learning is a fundamental, continuous, ongoing and a lifelong process. It's for our successful adaptation of human beings to internal and external environment. It should be according to the physical and intellectual ability of the learner. Both teachers and learners must be aware of this fact. Here, we are first going to discuss concepts of adolescence and adult learning and thereafter comparison of both.

Adolescence Learners

Adolescence means 'to emerge' to achieve 'identity'. It is a time for the maturing of mind and behaviors. It is not an age, but a stage. It is divided into three major stages:

1. **Early adolescence:** (10 to 12 years) growth hands, feet and later in the limbs. There is demand for independence and privacy, so chances of conflict.

2. **Middle adolescence:** (12 to 16 years) there are further bodily and genetic developments, specifically in girls.

Girls develop into personal skills quicker, loyalty and commitment matter more. The decisions of vocations and education are made. The physical effect of pubertal development becomes incorporated into the self-image.

3. **Late adolescence:** (16 to 19 years) and transformation towards adulthood. In late adolescence, career decisions are finally traced. The child gradually returns to the family, on a new footing.

WHO defines adolescence both in terms of age spanning the ages between 10 and 19 years. Hall describes adolescence as “*storm and stress*” period that reflects the unsettling growth period in modern societies. This concept was recognized by Margaret Mead also.

Academically, adolescence is the time spent in high schools and early colleges.

Psychologically it is a period of transition, during which cognitive, physical, personality and social changes occur.

Sociologically, it is a period that fills the gap between dependent childhoods to self-sufficient adulthood. From medical point of view, adolescence begins with the growth and hormonal changes with the growth of body.

In India, the adolescent is dependent on his parents for many more years in comparison to the West. The emotional dependence is also termed as ‘Delayed Adolescence’ that can go upto 21 years and even up to 25 years.

Academic Achievements

Adolescents spend more waking time in school. Academic achievement during adolescence is predicted by interpersonal (parental engagement), intrapersonal (intrinsic motivation), and institutional factors. It can set the stage for future career opportunities. Sports, games, arts and crafts also play some role. Parents put greater efforts during this stage.

Malcom Knowles has identified following characteristics of adult learners.

1. More autonomous and self-directed
2. Goal-oriented and practical
3. Relevancy-oriented and see a reason for learning something.
4. Adults must be shown respect. The adult trainers must acknowledge the wealth of experiences that adult participants bring to the classroom.

Now-a-days children know more, learn more, and want more. This may lead to arguments, friction and tears, all leading to a ‘cultural gap’ from their parents.

Adults learn voluntarily, they require more time to practice new skills. They have many responsibilities and have less time to learn. They prefer to learn by participation.

As they have own self-esteem and ego, they evaluate learning in terms of results, and its utility to their life situations.

Social Changes

Margaret Mead highlighted the role of cultural factors in the development of personality of the Adolescent. Mead observed “*storm and stress*” as a serene and gradual, transition from childhood to adulthood and an easy acceptance of adult roles. It is relatively stress-free in a society.

Harold W Bernard also subscribes it as a cultural phenomenon. The cultural aspect of adolescence states that two main aspects:

1. a rapidly widening life
2. an increasing overlapping between the roles of the child and adult.

Adolescents may feel bad while facing conflicts, values, emotional tension and extreme attitudes.

With industrialization, urbanization and individualization, the incidents of Juvenile delinquency also increase.

With fast growth and structural bodily changes, new attitude towards oneself and others, rising awareness of one’s rights and duties, adolescence is a transitional period.

The adolescence is affected by the following:

1. There is search for self concept or self identity.
2. There is demand for more independence to make decisions.
3. They think more about right values and wrong values.
4. Peer pressure also increase.
5. They communicating in different ways - through internet, cell phones and social media

Socialisation is affected during this stage.

During ‘Homophily’, an adolescence spends more time with friends. The peer groups evolve from primarily single-sex to mixed-sex.

The ‘*deviant peer contagion*’ under which peers reinforce problem behavior by laughing or showing other signs of approval that then increase the likelihood of future problem behavior. Negative peer pressure leads to vices and crime. Friends may provide support mechanism.

Crowds refer to different groups of people such as ‘theater kids’ or ‘environmentalists’. Friendships are reciprocal dyadic relationships. Cliques refer to frequently

interacting groups of individuals. They enjoy 'shared reputations' than actual interactions, such as when the whole group is famous or notorious for an activity.

Romantic relationships are usually short-lived rather than long term commitment.

Emotional Changes

Research indicates that emotions cannot be separated from the intellect (learning). If the learner is stressed, over anxious he/she will not be able to learn. Role confusion is an indicator of not successfully meeting the task of adolescence.

Adolescents face problems of morality and being much ambitious. They favour freedom and democratic life. They like permissive atmosphere so that parents and teachers to be lenient towards them. They tend to be rebellious by nature.

'Conscience formation' takes place during this stage. Adolescents possess a self-owned yearning for religion, God, worship, prayer and spiritual values.

Hall says that the major physical changes during this phase cause major psychological changes.

Adolescent years are more important for the formation of personality. Anne believed that the libido, which quieted during the latency years, reawakens in Adolescence and threatens to upset the delicate balance of ego and id.

According to Erik Erickson adolescence resolves the conflict of identity vis-à-vis identity confusion.

Early puberty and cognitive changes come with worse outcomes for girls than boys. It impacts decision making controls also.

The emotional changes with the unique combination of genes, brain, environment, experiences, and culture shape development. There is more self-consciousness about physical appearance and changes. It is basically an "invincible" stage of thinking and acting.

The egoistic needs are in the form of dominance, achievement, retention, attention, autonomy, acquisition, cognizance and destruction. Moffitt regards adolescent-limited antisocial behavior as resulting from a "maturity gap".

The genetic changes to environmental factors are called as a *differential susceptibility* model. These variations are considered riskier than others. Individual differences play an important role in adolescent development. The 'unholy triad' sums up these as substances abuse, violence and early sexual experimentation.

Cognitive Development

Cognitive development refers to the mental activities that enable an individual to adjust to the environment while mental development refers to intelligence, thinking or imagination about the environment.

Cognitive development takes place at different paces at different stages of life. At elementary level, there is an increase in children's capacity to learn, qualitative aspects and maturity. The capacity develops in the learners through interaction of innate power (heredity), environment and maturation. It is the mental process that can systematize, organise and utilise knowledge.

Piaget mentioned the following stages for cognitive development:

1. Sensory period (0–2 years)
2. Pre-operational period (2–7 years)
3. Concrete operation period (7–11 years)
4. Formal operation period (11–15 years)

The main characteristics displayed here are:

1. Systematic analysis of a problem
2. Logical approach towards a solution of problem – to move away from rote learning.
3. Ability to use higher order structure to solve a problem
4. Systematic analysis of a problem
5. Moral maturity

It has been observed that the type of language used in uneducated homes is mostly of commands whereas in educated homes it is mostly of explanations. Individuals struggle through environmental changes. Through this process of adaptation, cognitive development takes place. The purpose of this process of adjustment is to bring about a 'State of Equilibrium' in the life of individuals.

At adolescence stage, social interaction plays a very significant role in learning. Readymade solutions of problems should be discouraged. The teachers should provide such type of education that helps to form minds which can be critical, can verify and not accept everything that is offered.

At the stage of formal operation, the child displays three new qualities: 1 i. systematic analysis (with all possible solutions) of the problem ii. logical approach, and i iii. ability to use higher order structure.

There is no knowledge development without relating objects within the environment. An individual acquires knowledge not by passively copying objects in the environment but by acting upon it.

Adult Learners

Life is busy, adults are busy.

They are actively engaged in the process of life. To take time out of this busy process, adults may ask: How will this benefit me?

What makes learning this worth the effort?

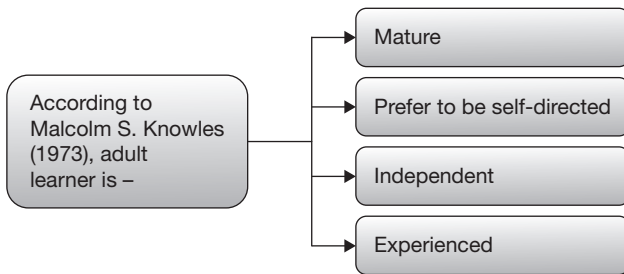


Figure 1.10

Adult education is based on a philosophy called ‘andragogy’ that is art and science of helping adults learn. The guiding principles of adult learning aim at bringing:

1. changes in what people know
2. changes in what can do
3. changes in what people think
4. changes in what people actually do.

In other words, it must emphasize change knowledge, attitude and skills of the learner.

Adulthood is mostly defined on the basis of age or cognitive maturity. While in India, adulthood is defined between 15 to 35 years, UNESCO and Organisation for Economic Cooperation and Development defines it between 24 to 65 years.

Adult learning process may be systematic learning process, be it formal or non formal or informal, it may be self-mentored or corporate-sponsored, may be undertaken as fulltime or a part time learner.

Important Characteristics of Adulthood

Adults are not just grown children. Adults learn differently from children.

With the maturity, the self concept of a person moves from being a dependent personality towards one of being a self directed person. Adulthood is the stage where this transition occurs.

Adults are experiential learners. The person accumulates a growing wealth of experience that is used to make sense of the environment. Adults may know more than the teacher.

With maturity, the readiness to learn becomes oriented to the development tasks of social roles, but contents must be relevant and legitimate. The life application is critical.

With maturity, the time perspective moves from one of the postponed application to one of the immediate application. The shift is from subject-centeredness to problem centeredness. Adults enjoy solving problems.

Here, the motivation to learn is increasingly internal. Personality responsibility is significant. Adult learners want to meet the requirements of their lives. They want to be successful. In India, an adult learner is a person who has had no opportunity of formal education in their early years of life.

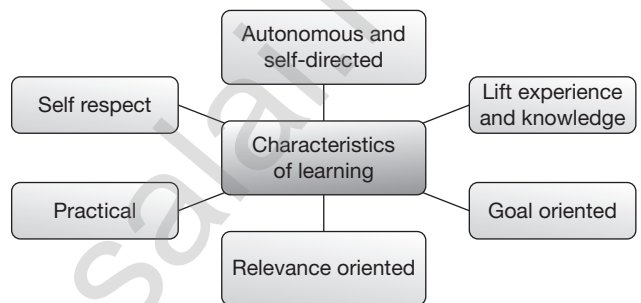


Figure 1.11 Characteristics of Learning by an Adult Learner

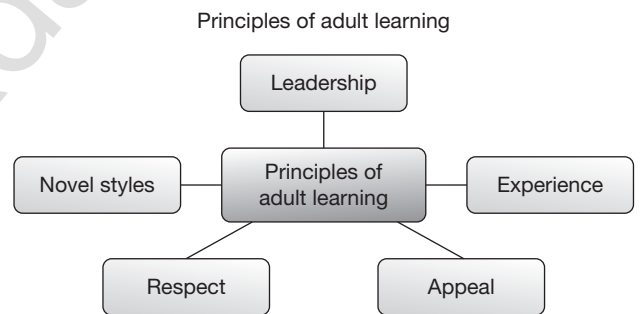


Figure 1.12 Principles of Adult Learning

Once gone through both adolescence and adult learners, we need to get focused on difference between the two:

Table 1.5 Differences Between the Adolescence and the Adults

Elements	Adolescence Learners	Adult Learners
Learner	<ul style="list-style-type: none"> • The learner is dependent on the teacher for learning 	<ul style="list-style-type: none"> • The learner is selfmotivated and self directed
Role of learners experience	<ul style="list-style-type: none"> • The learner has little experience. It has to be built on, more than used as resource • The experience of the instructor is most influential 	<ul style="list-style-type: none"> • The learners have a tremendous amount of life experience • Adults are a rich resource for one another • Experience becomes the source of self identify

(Continued)

Elements	Adolescence Learners	Adult Learners
Orientation to learning	<ul style="list-style-type: none"> Learning is a process of acquiring prescribed subject matter Content units are sequenced according to the logic of the subject matter 	<ul style="list-style-type: none"> Learning must have relevance to real-life tasks Learning is organized around life/work situations rather than subject matter units
Motivation for learning	<ul style="list-style-type: none"> Primarily motivated by external rewards and punishment, competition for grades, and the consequences of failure 	<ul style="list-style-type: none"> Motivation by internal incentives: recognition, better quality of life, self confidence self actualization The need to know, in order to perform more effectively in some aspect of one's life is important
Demand for learning	<ul style="list-style-type: none"> Learner must balance life responsibilities with the demands of learning 	<ul style="list-style-type: none"> Learner can devote more time to the demands of learning because responsibilities are minimal
Permanence of learning	<ul style="list-style-type: none"> Learning is self-initiated and tends to last a long time 	<ul style="list-style-type: none"> Learning is compulsory and tends to disappear shortly after instruction.
Climate	<ul style="list-style-type: none"> Tense, low trust Formal, cold, aloof Authority-oriented Competitive, judgmental 	<ul style="list-style-type: none"> Relaxed, trusting Mutually respectful Informal, warm Collaborative, supportive
Diagnosis of needs	<ul style="list-style-type: none"> Primarily by teaching system and teacher 	<ul style="list-style-type: none"> Mutual assessment by learner and facilitator
Planning of curriculum	<ul style="list-style-type: none"> Primarily by teaching system and teacher 	<ul style="list-style-type: none"> Mutually by learners and facilitator
Objectives of learning	<ul style="list-style-type: none"> Objectives are set by teaching system Objectives are predetermined and inflexible 	<ul style="list-style-type: none"> Objectives are set by mutual negotiation Objectives are flexible
Designing learning plans	<ul style="list-style-type: none"> Teachers' content plans Fixed course syllabus Logical sequence 	<ul style="list-style-type: none"> Learning contracts Learning projects Sequenced by readiness
Learning activities	<ul style="list-style-type: none"> Passive teaching methods like transmitted techniques, assigned readings, etc., are used 	<ul style="list-style-type: none"> Active training methods are used
Pace of learning	<ul style="list-style-type: none"> Teachers' control timing and pace of learning 	<ul style="list-style-type: none"> Learners influence timing and pace of learning
Evaluation	<ul style="list-style-type: none"> By teacher Norm-referenced (on a curve) with grades 	<ul style="list-style-type: none"> By learner-collected evidence validated by peers, facilitators, experts Criterion-referenced

TEACHING AND LEARNING FACTORS

According to new NTA-NET Exam pattern, teaching and learning are important for effective teaching.

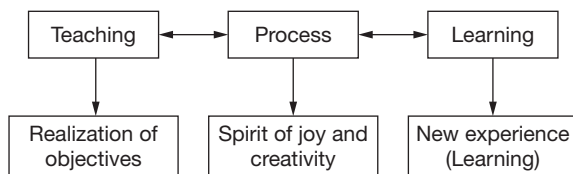


Figure 1.13 Effective Teaching

Teaching Factors

A teacher should have the following qualities.

1. Personal qualities like warmth, affectionate, sympathetic, democratic, optimistic, dynamic, etc.
2. Professional competencies like command on the subject matter, effective communication, proper use of teaching instructional facilities, classroom management, evaluating students learning also.

1.36 CHAPTER 1

From the training point of view, we classify teaching skills into three broad categories. These are:

1. Core teaching skills (common for all subjects)
2. Specific teaching skills (for specific subject areas like language, Social Science, Science, Maths, etc.)
3. Target group specific skills (for exceptional children).

Some factors as practised by teachers in classroom are as follows:

1. A teacher having limited exposure and experience in teaching is prone to:
 - (a) follow textbook reading by the students
 - (b) transmit information through lecture
 - (c) dictate notes
 - (d) impart required information
2. A teacher having professional training and reflective thinking is tempted to:
 - (a) adopt new ways to teach
 - (b) involve students in teaching
 - (c) generate new ideas through problem solving
 - (d) teach through group activities
 - (e) follow cooperative learning
 - (f) adopt interactive approach.

At different stages of teaching, with added experience, a teacher goes on enriching higher style of teaching. This is indicative of teacher's growth in higher professional pursuits.

Teacher on its role needs to focus on clarity, variety, task orientation, engagement in learning task in classroom environment. A teacher like a doctor, pilot, engineer or a counselor is supposed to possess the repertoire of teaching skills so that s/he could perform his/her teaching well. These are called as 'Metacore Skills'. These help during professional coaching. The more variety of sub-skills is called as 'Polycrest skills'.

The National Council of Educational Research and Training (NCERT) in its publication *Core Teaching Skills* (1982) has laid stress on the following teaching skills:

1. Writing instructional objectives
2. Organizing the content
3. Creating set for introducing the lesson
4. Introducing a lesson
5. Structuring classroom questions
6. Question delivery and its distribution
7. Response management
8. Explaining
9. Illustrating with examples
10. Using teaching instructional facilities
11. Stimulus variation
12. Pacing of the lesson
13. Promoting pupil participation

14. Use of blackboard
15. Achieving closure of the lesson
16. Giving assignments
17. Evaluating the pupil's progress
18. Diagnosing pupil learning difficulties and taking remedial measures
19. Management of the class

Learning Factors

In effective learning, mostly we notice of these factors

1. more intensity of learning
2. more retention
3. Joyful learning
4. more scope of cognitive development
5. self-directed learning
6. self-motivation for further learning.

Keeping the above in consideration, the following factors become automatically important:

1. Background of the learner (repertoire)
2. Nature of learning material (easy or difficult)
3. Environmental factors (space, physical condition and psychological support)
4. Motivation (intrinsic and extrinsic)
5. Learning support (human-teachers and parents; electronic - audio, video and computer)

Certain qualities and traits of learners such as their level of intelligence, their attitudes, their motivation, their learning styles, aptitudes, their readiness to take risks, etc. can impact the way they learn. Many factors have been defined under the learning topic itself.

Teacher Support Material

The support materials aim to support teachers and students in achieving the learning outcomes of any subject. The ideas and resources are neither prescriptive nor exhaustive. Teachers and students can discover many other ways of reaching the learning outcomes. They can relate to any book, practical sessions, some specific activities etc. We can take example from a book here:

1. **Teacher solutions manual:** They are designed to assist teachers in effective teaching such as the solutions manual provide suggestions on how to teach a topic. They are kind of comprehensive supplementary resources such as an end-to-end solution.
2. **Lecture slides:** While teachers develop their own instructional facilities to deliver a lecture in the class, the lecture slides provide a firm base for instructors to build on.

- 3. Extra practice questions:** Students always demand extra practice that authors of a book can provide. The texts are bundled with extra exercise questions, case studies, and other such materials used by teachers to frame homework, quizzes and tests.

Learning Environment and Institutions: We have discussed many things that contribute towards learning. The leadership approach of management also comes into play. That can be autocratic, democratic, laissez faire and so on. Political, social, legal environments can also be used here.

The present trends in the management of institutions of higher education indicate changes in many directions. These changes may be implementation of democratic principles for better participatory culture, delegation of power to the lower level executive bodies; faculty members participation etc. There is increased focus on identifying objectives and planning for both short-term and long-term perspective; and greater concern for the economics of institutional operations.

The term institutional building is the process of internal development of an institution as well its impact on the society. The functions of any university-teaching, research and extension activities - are more important. The delegating and organising function, organization Development, the directive function, the operative function, and the evaluative function are all important for the management of an institution. The sharing of experiences, innovations, approaches and problems among institutions, feed-back on various dimensions of teaching and, non-teaching activities and generating ideas and suggestions to solve the main problems faced by the institution.

Instructional Facilities

'I hear and I forget, I see and I believe, I do and I understand'

—Confucius

As mentioned in new NTA-NET Exam, teaching instructional facilities or Teaching Learning Material can be assumed to be part of major instructional facilities.

These are also termed as instructional facilities that assist an instructor in the teaching-learning process. They supplement teaching methods and are themselves not as self-supporting as teaching methods.

The teaching instructional facilities include audio-visual instructional facilities. They follow the assumption that learning originates from senses' experience. They help in better learning, retention and recall, thinking and reasoning, activity, interest, imagination, better assimilation and personal growth and development.

The Main Benefits of Instructional Facilities

Instructional facilities are also known as Teaching Learning Materials (TLMs).

They are used to make the teaching-learning process effective. They also help learners achieve the learning outcomes after classroom teaching and learning. Some of the reasons to use teaching instructional facilities in classroom are of various types as described below.

- 1. Motivation of learners:** Capturing attention is the first step to any learning and teaching instructional facilities help in capturing the attention of learner in classroom. Teaching instructional facilities provide a variety of stimuli, which helps in making classroom teaching most effective.
- 2. Based on maxims of teaching:** The use of teaching instructional facilities is not a haphazard exercise, but based on maxims of teaching.
- 3. Better retention of information:** The more the number of sensory channels involved in interacting with teaching instructional facilities, the longer will be the retention of information. Therefore, the learning will be effective and will last long.
- 4. Teaching instructional facilities facilitate change in attitude:** Pictures, models, etc., helps in the inculcation of positive attitude of learners.
- 5. Better organization of classroom teaching:** The teachers need to organize learning experiences, making them as realistic as possible. They need to use visual or verbal teaching instructional facilities to present accurate data in sequentially organized manner. Teaching instructional facilities helps in overcoming shortcomings in verbal or visual communication.
- 6. To facilitate holistic learning:** Keeping in view that there are varied learning objectives in cognitive, affective and psychomotor domains. Therefore, varied learning experiences need to be provided, which can be done through teaching instructional facilities. They supplement classroom teaching. They cater to individual differences as well.
- 7. Promotion of scientific temper:** Teaching instructional facilities promotes scientific temper, which is one of the main goals of education.
- 8. Practical applications:** Teaching instructional facilities show application of theoretical knowledge into practical applications.
- 9. Making learning fun:** Learners enjoy novelty of handling new objects and learn new concepts through them.
- 10. Concept formation:** Teaching instructional facilities facilitate the formation and attainment of concepts among children. They concretize the abstract concepts. Thus, children are able to understand them and not resort to rote learning.

Educational Technology

Educational technology can be divided into two categories, they are hardware approach and software approach.

- 1. Hardware approach:** It mechanizes the process of teaching so that teachers are able to deal with more students with less expenditure in educating them. Hardware includes computer, epidiascope, overhead projector, radio, slide and film projector, teaching machines, television, etc.
- 2. Software approach:** This makes use of the principle of psychology for building in the learner a complex repertoire of knowledge, modifying a learner's behaviour. It evolved through the pioneering work of Skinner and other behaviourists. Software approach is characterized by task analysis, writing precise objectives, selection of appropriate learning strategies, immediate reinforcement of responses and constant evaluation. Newspapers, books, magazines, educational games, flash cards, etc., also form a part of software approach.

According to the senses involved, the educational technology can be divided into audio audio, video and audio-video instructional facilities.

- 1. Audio instructional facilities:** They are instructional devices through which message can only be heard. We spend more than 50% of our time in hearing. This reflects the importance of audio media in our life. Examples of audio instructional facilities include language labs, radio sets, sound distribution sets, etc.
- 2. Visual instructional facilities:** Instructional devices through which the message can only be seen are known as visual instructional facilities. Examples include posters, flashcards, charts, bulletin boards, maps, models, photographs, etc.
- 3. Audio-visual instructional facilities:** Audio-visual instructional facilities are those instructional facilities that help in completing the triangular process of learning, i.e., motivation, classification and stimulation. They are instructional devices in which the message can be heard and seen simultaneously. Out of five senses, seeing at 87% and hearing at 7% are the major ones to attract attention and increase learning. Examples of audio-visual instructional facilities include television, video films, documentary films, etc.

Functions of Audio-visual Instructional Facilities

When properly used, audio-visual instructional facilities contribute to one or more of the following functions.

1. More clarity and understanding.
2. Better attention, interest and retention.
3. It helps in faster and comprehensive learning.
4. Better access
5. Save the instructor's time.
6. Supplement the spoken words by combining audio and visual stimuli.

Limitations of Audio-visual Instructional Facilities

1. Learners may form distorted impressions unless audio-visual instructional facilities are supplemented with required explanations.
2. Teaching may be narrowed down to only a few big ideas, not giving the complete picture of a subject.
3. There is the possible risk of spectatorism instead of the attitude of thoughtful enquiry. Some extension workers acquire the mistaken idea that they have little to do when audio-visuals are used.
4. **Multimedia:** It is a combination of more than one media, but it could include several forms of media and audios, texts, still images, animations, graphics, videos and films.

Types of Instructional Facilities According to Projection or Show

Teaching instructional facilities according to projection or show are divided into projected and non-projected instructional facilities.

- 1. Projected instructional facilities:** Visual instructional devices that are shown with a projector are called projected instructional facilities. Examples include slides, filmstrip, silent films, cartoons, etc. These are projected through an opaque projector (epidiascope) or an overhead projector.
- 2. Non-projected instructional facilities:** Visual instructional devices that are simply presented without any projection equipment are non-projected instructional facilities. Examples include blackboard, chart, etc.

Apart from these instructional facilities, there are two additional categories of the teaching instructional facilities, they are display instructional facilities and presentation instructional facilities.

Table 1.6 Projected and Non-projected Instructional Facilities

Projected instructional facilities	Non-projected instructional facilities				
	Graphic	Display boards	3-D	Audio	Activity
Films	Charts	Blackboard	Models	Radio	Field trips
Slides	Flash cards	Whiteboard	Mock-ups	Recordings	Experimentation
Overhead projector	Posters	Bulletin board	Objects and specimens	Digital Audio Player	Dramatics
Epidiascope	Pictures and photographs	Flannel board	Puppets	Television	Teaching machines
Video projectors	Graphs	Magnetic board		Telephone and mobile	Programmed instructions
Film strips	Map diagrams	Peg board			

- 1. Display instructional facilities:** Visual instructional facilities that are spread before the audience for viewing information and instruction. Examples are posters, bulletin boards, models, exhibits, etc.
- 2. Presentation instructional facilities:** Visuals instructional facilities are presented or projected before the audience for viewing, explaining or presenting the message of the visuals, so that the audience gets meaningful understanding of the subject. Examples are flashcards, slides, filmstrips, etc.

Table 1.6 shows the different types of teaching instructional facilities according to projection or show.

PROJECTED VISUAL INSTRUCTIONAL FACILITIES

Any visual instructional facilities that is used for magnification of image on a screen in dark or semi-dark conditions can be called a projected visual instructional facilities. There are three important methods of projection and they are listed below.

- 1. Direct projection:** Slide and film projectors
- 2. Indirect projection:** Overhead projector
- 3. Reflected projection:** Opaque projector and epidiascope

Slides

A slide is a transparent-mounted picture that is projected by focusing light through it. The projection may be made on a screen or on a white wall. Slides of 35 mm films mounted on individual cardboard or plastic frames are common and are extensively used in extension work during training programmes, seminars, workshops, group meetings, campaigns, exhibitions, etc.

Overhead Projector (OHP)

The overhead projector projects the picture over the head of the speaker on the screen. Drawings, diagrams, letterings, etc., are made on transparent sheets and are put on the glass platform of the overhead projector, through which a strong light is passed. The rays of light are made to converge with a lens and are reflected by a mirror held at an angle on the screen at the back.

Transparencies can also be made through photographic, xerox or electronic processes as well. Overhead projection is used in training programmes, group meetings, seminars, symposiums, workshops, etc.

Advantages include synchronization of projections with audio, facing audience and observing their reaction, sustaining audience interest, clear presentation of complex ideas, time saving and easy availability of materials for making transparencies.

Handheld Projector

It is also known as a pocket projector, a mobile projector or a pico-projector. It is an emerging technology that applies the use of a projector in a handheld device. It is a response to the emergence of compact portable devices, such as mobile phones, personal digital assistants and digital cameras, which have sufficient storage capacity to handle presentation materials with an attached display screen.

Video Projector

A video projector is also known as a digital projector, which is now popular for many applications for extension and development. All video projectors use a very bright light to project the image.

Mind Mapping

Mind Mapping as a method of teaching was developed by Tony Buzan in 1960. A 'mind map' is a diagram for representing tasks, words, concepts or items linked to and arranged around a central concept or subject. It uses a non-linear graphical layout that allows the user to build an intuitive framework around a central concept and it can turn a long list of monotonous information into a colourful, memorable and highly organized diagram that works in-line with a learner's brain's natural way of doing things.

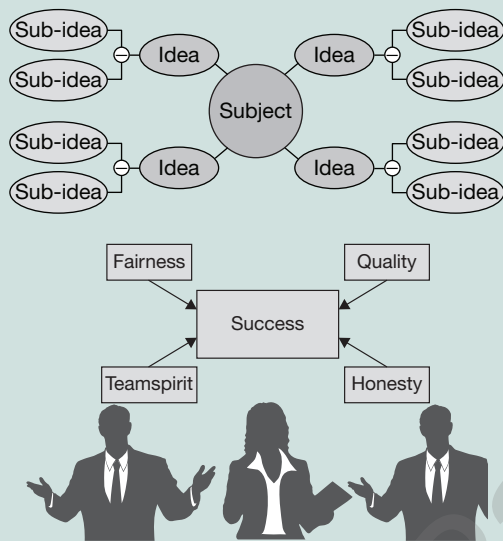


Figure 1.14 Mind Map

Using mind maps as an innovative thinking tool in education helps students to visualize and externalize concepts and understand the connections between different ideas. It is commonly used in presentations, critical thinking, brainstorming, decision making and project management.

Opaque Projector (Epidiascope or Episcopes)

It is a device that displays opaque materials by shining a bright lamp onto the object from above. The material can be book pages, drawings, mineral specimens, leaves, etc.

Film Strips

The filmstrip was a common form of still image instructional multimedia. It was once commonly used by educators in primary and secondary schools,

Microsoft PowerPoint Presentations

PowerPoint is an application program of presentation that is found in Microsoft Office. Nowadays, many of the audio-visual teaching instructional facilities have been replaced with PowerPoint presentations. Here, the slides give us the flexibility in terms of fonts, visuals, sizes, ability to change, etc. It allows the teachers to reflect on a lesson and correct any changes, and they can create perfect lessons and can print them out. Using PowerPoint improves the students' learning motivation, increases authentic materials for study and encourages interaction between the teacher and the students.

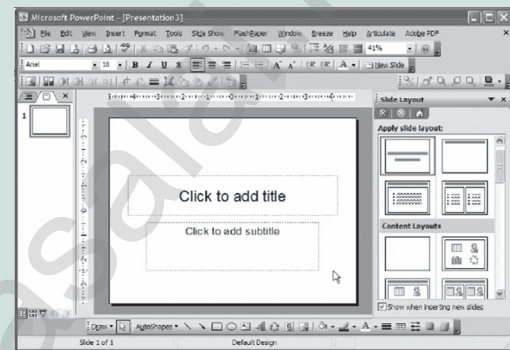


Figure 1.15

Microsoft PowerPoint, copyright © 2003
Microsoft Corporation.

now overtaken by newer and increasingly low-cost, full-motion videocassettes and DVDs, since 1940s till 1980s.

NON-PROJECTED VISUAL INSTRUCTIONAL FACILITIES

Non-projected visual instructional facilities are those instructional facilities that are used without projection or help of any projector. Advantages include easy availability, no specific power supply requirement, economical and ease in handling. They can be useful in small group situations. Many of them can be converted into projected instructional facilities. For example, charts, flannel graphs and flash cards can be photographed or scanned and converted into slides. Some of them can be projected through an opaque projector.

Charts

A chart is a symbolized visual instructional facilities with pictures of relationships and changes, which are used to tabulate a large mass of information or show a progression. Charts can help communicate difficult

and dull subject matter in an interesting and effective way. They make facts and figures clear and interesting, show or compare changes and show the size and placement of parts. They are also helpful in summarizing information and presenting abstract ideas in visual form.

Types of Charts

There are many varieties of charts. Some common types of charts are briefly discussed below for your understanding.

1. **Process charts** are used to show steps in a process. For example, charts can show life cycles of insects, energy cycles, etc.
2. **Organizational charts** are used to represent hierarchal relationships, flow of communication among different departments in an organization.
3. **Time charts** are used to represent events, occurrences in chronological sequences, such as evolution of man, political empires, etc.
4. **Tabular chart** represents data in tabular form for easy comparison and understanding. For example, types of plantations, etc., are represented in tabular form, which makes comprehension easier.
5. **Tree chart** shows the growth and development from single source to many branches like in a tree. For example, family tree is a familiar example.
6. **Stream chart** is opposite to a tree chart wherein many branches come together to converge into a single stream. For example: Many rivers like Yamuna fall in Ganga, which then flows down to fall in the sea.
7. **Sequence charts or flip charts** are collection of charts like flip charts used to show many events or series of events in succession.

The flip chart is like a calendar with a sheet each for twelve months. As the month changes, the sheet is flipped over. Actually, flip chart consists of several charts arranged in a sequential order and fastened together at one end with this spiral, metal or wooden strip.

Flash Cards

Flash cards are brief visual messages on poster board. The cards are flashed (turned over at short intervals) before the audience to emphasize the important points in a presentation. Flash cards are held like a pack of cards and are flashed to the audience one at a time in a sequence along with the talk.

Poster

A poster is displayed in a public place with the purpose of creating awareness among the people. A poster is generally seen from a distance and the person glancing

at it seldom has the time or inclination to stop and read. The job of the poster is to stop the persons hurrying past and thrust the message upon them.

1. Posters give only an initial idea and cannot furnish detailed information. They need to be reported for further information by another instructional facilities or method (Examples: Leaflets and demonstration).
2. The production of good posters is a technical job and requires skill and time.
3. It cannot be repeated, so for each occasion, a new poster has to be made.

An attractive poster with appealing text to indulge the audience is known as 'caption'. Usually, a caption conveys the important message and the visual is to attract attention and therefore, to support the message to be conveyed. Posters can be of themes, such as 'Save Earth', 'Swachh Bharat Abhiyan', 'Rural Health', etc.

Pictures and Photographs

A picture is a representation made by drawing, painting or photography, which gives an accurate idea of an object. A good picture may tell a story without using a single word. Pictures may be in black and white or in colour. Nowadays, digital cameras are popularly used to take many photos and eye-catching images.

Graphs

A graph is an image that represents data symbolically. A graph is used to present complex information and numerical data in a simple, compact format. Bar graphs, line graphs, scatter graphs, and pictographs are some types of graphs. In a two-dimensional graph, the information is represented along two co-ordinates: X coordinate and Y coordinate. An independent variable is shown along X axis and dependent along Y axis. More about graphs is discussed in Chapter 7 on Data Interpretation.

Maps

A map is a visual representation of an area. It is a symbolic depiction highlighting the relationship between elements of that space, such as objects, regions and themes. Cartography or map-making is the study and practice of crafting representations of the earth upon a flat surface.

Maps are useful tool in every discipline. In social studies, it is very important for learning geographical, historical and economical concepts.

Diagrams

A plan, sketch, drawing or outline designed to demonstrate or explain how something works or to clarify the relationship between the parts of a whole is called a diagram.

Display Boards

Blackboard or Chalkboard

It is one of the oldest teaching instructional facilities and the chalkboard is probably the simplest, inexpensive, most convenient, and widely used non-projected visual instructional facilities in extension teaching. It is a vehicle for a variety of visual materials.

The chalkboard is suitable for use in lectures, training programmes, group meetings, etc.

It facilitates step-by-step presentation of the topic, creates a dramatic impact and sustains audience interest. Presentations may be adjusted according to the receptivity of the audience. It helps the audience to take notes. It helps in comprehension and retention of knowledge.

White Board

Modern classrooms are equipped with boards also called marker boards or multipurpose boards. They require special erasable markers. A felt eraser is required to erase the surface soon after use. Markers are available in different colours. It may be used as surface for projecting films, slides and overhead transparencies. A white board with a steel backing can be used as magnetic board for display.

An interactive white board is a large interactive display that connects to a computer and projector. A projector projects the computer's desktop onto the board's surface, where users control the computer using a pen, finger or other device. The board is typically mounted to a wall or to a floor stand.

Bulletin Board

A bulletin board displays messages. It is a surface in which bulletins, news, information and announcements of specific or general interest can be displayed. Bulletin boards are of different sizes with provisions to hold pins, book exhibits and other materials.

Flannel Board and Flannel Graph

A flannel board is a visual instructional facilities in which messages are written or drawn on thick paper and presented step-by-step to the audience to synchronize with the talk. The board is a flannel-covered flat surface. Flannel is stretched and then glued to a piece of plywood or heavy cardboard.

Magnetic Board

It can be a sheet of tinplate and it is simply a type of chalkboard and the surface of which is treated or coated with a porcelain-like substance. The base of the board is steel and pictures and objects can be pasted or mounted with small magnets and can easily be moved about.

Peg Board

Perforated hardboard is tempered hardboard, which is pre-drilled with evenly spaced holes. The holes are used to accept pegs or hooks to support various items, such as tools in a workshop.

Three-dimensional Models

Real things may not be available all the times, and in the desired form. Hence, models help to tide over this problem. A model is a recognizable representation of real things in three-dimensional view, such as its height, width and depth. This makes the understanding better and easy.

Models can be of three types, such as (i) solids, (ii) cut away or cross sections and (iii) working models. They have advantages of reality depiction, illustration and are complex and intricate. They are long-lasting and inexpensive.

Objects, Specimens, and Globe

Objects are collections of real things for instructional use. Specimen is any typical object representing a class or group of things. A globe is the spherical model of earth.

Audio Instructional Facilities

Radio

Radio has been a popular mass medium for close to a century. These days many of us are tuned to Radio through FM channels. Radio is due to its easy access, speed and immediacy. In its start in 1917, radio was visualized as a source for mass education. In India, the first radio station was established in Mumbai (Bombay) in July 1927. Two more radio stations in Calcutta and Delhi were established in 1936. All India Radio (AIR) broadcasted radio programmes for the country. In 1937, Calcutta station broadcasted school programmes for the first time and it continues till date.

School educational programmes are still in demand and are used by teachers to generate interest of students. **Gyan Vani** is a dedicated FM channel for educational broadcasts. It is used to broadcast educational programmes from Educational Media Production Centre (EMPC) of Indira Gandhi National Open University (IGNOU), New Delhi. Audio programmes developed by Central Institute of Educational Technology (CIET) of NCERT for school children are also broadcast by Gyan Vani.

Podcast

Radio is a mass broadcast medium whereas podcasts are personalized broadcast.

Podcasts are prepared for specific target and made available to the target group for specific learning objectives. Podcast is the portmanteau of words 'pod' from iPod and 'cast' from broadcasting.

Recordings

A tape recorder or any other kind of audio recording is suitable for extension work in meetings, training programmes, campaigns, recording radio programmes, etc. It facilitates on-the-spot recording of sound. It is easy to operate and preserve. It has low operational cost as the same tape may be used again.

Digital Audio Player

A digital audio player is sometimes referred to as an MP3 player and has the primary function of storing, organizing and playing audio files. Some digital audio players are also referred to as portable media players as they have image viewing and video-playing support. An ideal example is iPod (fourth generation audio instructional facilities).

Telephone and Mobile

Usually, two persons can communicate at a time through a telephone and the system serves many people in a given area if a speaker is attached to it like Cell Phone-Operated Mobile Audio Communication and Conference System (COMBACCS). This technology is seeing a phenomenal growth in many developing countries. Short message service (SMS) and wireless application protocol (WAP)-enabled cell phones with cameras can be effective in offering always available extension between experts and people. COMBACCS can help community members at different locations build relationships and understanding.

Television

Television is an effective tool in expressing abstract concepts or ideas. Abstract concepts are usually produced and conveyed with words. Besides this, in making an abstract concept concrete, the role of animation and visual experimentation is very important.

Activity Instructional Facilities

- 1. Field trip:** A field trip is a structured activity that occurs outside the classroom. It can be a brief observational activity or a longer, more sustained investigation or project. Field trips offer an opportunity to students to get exposure to real people, events and opportunity to make connections with others.
- 2. Experimentation:** The experiments are specifically useful in science subjects so as to relate theory with practice.
- 3. Dramatics:** They can convey some message to society or public at large. These are usually theme-based and the students are assigned different roles.

- 4. Teaching machines:** There are many types of teaching machines. In general, they all work on the same method, which is to present a question, have the user indicate the answer and then provide the user with the correct answer. They are usually programmed. They are particularly useful in subjects that require drill, such as arithmetic or a foreign language. Users can proceed at their own pace and also have an opportunity to review their work. If the machines are used in a classroom, they relieve teachers of some of the time-consuming aspects of drilling students and allowing them to give more attention to individuals with specific problems or to concentrate on some particularly difficult area of instruction.
- 5. Programmed instructions:** They are also useful instrument.

FACTORS INFLUENCING THE SELECTION OF INSTRUCTIONAL FACILITIES

No single rule-of-thumb can be given for the selection and use of various audio-visual instructional facilities to ensure effectiveness in all situations. In order to get the most effective results, the following aspects are important:

1. Selection of appropriate instructional facilities
2. Suitable combination of the selected instructional facilities
3. Their use in proper sequence.

Audio-visual instructional facilities are used singly or in combination, thereby taking into consideration the following factors.

- 1. Nature of audience:** Printed media are meant for literate people, whereas exhibits, pictures and symbols are for less literate people.
- 2. Size of audience:** A video show or whiteboard cannot be used effectively when the number of participants exceeds 30 and internet can be used for large audiences.
- 3. Teaching objective or expected nature of change:** Select the audio-visual instructional facilities based on the objective of extension teaching, i.e., to bring about a change in
 - (a) Thinking or knowledge
 - (b) Attitude or feeling
 - (c) Actions or skills.

If you merely want to inform or to influence a large number of people slightly, then use mass media, such as radio or television.

- 4. Nature of subject matter:** In case new practice is simple and familiar, a news article, a radio message, or a circular letter will be effective, whereas complex or unfamiliar practices will require audio-visual instructional facilities.

1.44 CHAPTER I

5. **Availability of instructional facilities:** Despite the availability of the Internet two decades back, it was not being used on a large scale. With the availability of speed, due to better technology and cost effectiveness, more people are now using internet-based technologies as teaching instructional facilities.
6. **Relative cost:** Effective instructional facilities need not be necessarily costly. The amount expended on audio-visual instructional facilities, in relation to the extent of effectiveness is also an important consideration in their selection and use.

Dale's Cone of Experience

Dale's Cone of Experience is a model that incorporates several theories related to instructional design and learning processes. During 1960s, Edgar Dale theorized that learners retain more information by what they 'do' as opposed to what is 'heard', 'read', or 'observed'. His research led to the development of the 'Cone of Experience'. Today, this 'learning by doing' has become known as 'experiential learning' or 'action learning'.

How can instructors use the cone of experience? According to Dale's research, the least effective method at the top involves learning from information presented through verbal symbols, i.e., listening to spoken words. The most effective methods at the bottom involve direct, purposeful learning experiences, such as hands-on or field experience. Direct purposeful experiences represent reality or the closest things to real, everyday life. The cone charts the average retention rate for various methods of teaching. The further you progress down the cone, the greater the learning and the more information are likely to be retained. It also suggests that when choosing an instructional method, it is important to remember that involving students in the process strengthens knowledge retention. It reveals that 'action-learning' techniques result in up to 90% retention. People learn best when they use perceptual learning styles and these learning styles are sensory based.

The more sensory channels possible in interacting with a resource, the better chance that many students can learn from it. According to Dale, the instructors

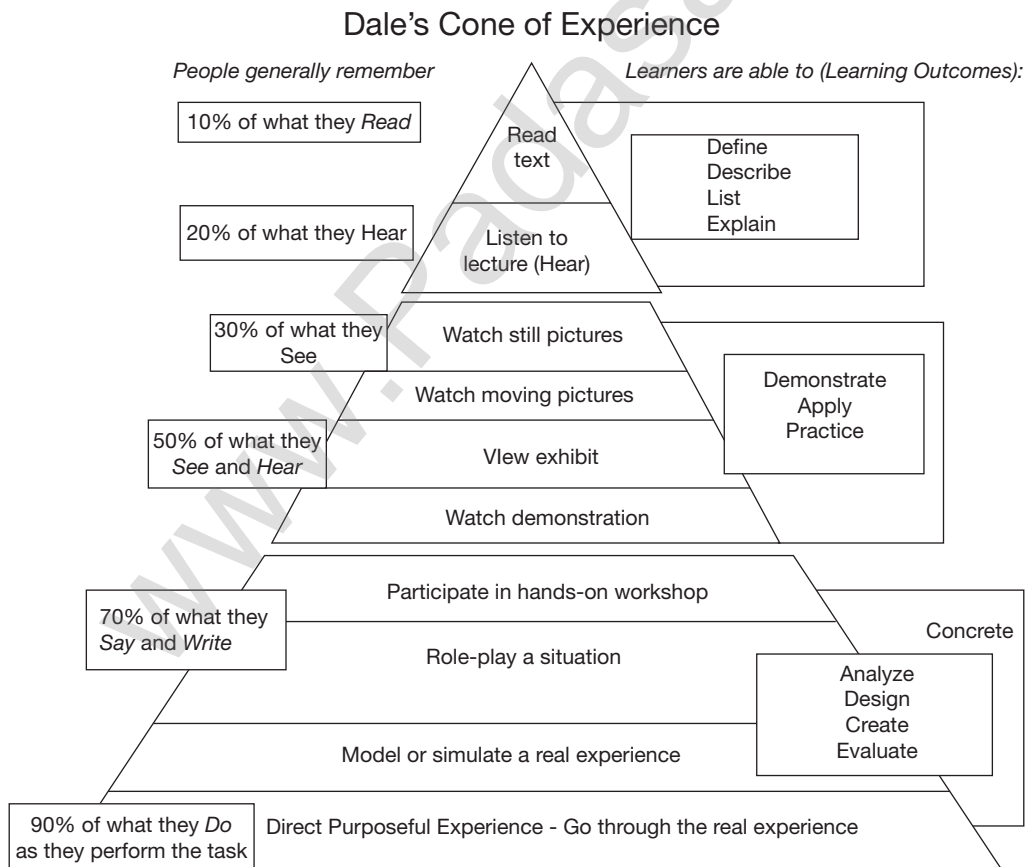


Figure 1.16 Dale's Cone of Experience

should design instructional activities that build upon more real-life experiences. Dales' cone of experience is a tool to help instructors make decisions about resources and activities.

IMPORTANT TIPS FOR BETTER CLASSROOM MANAGEMENT

In NET examination, there are questions about class indiscipline and how to deal with the situation. There are number of things a teacher must keep in mind when dealing with students who do not behave in a disciplined manner in the class. There is a basic rule that the teacher must consider that he or she does not hurt them physically or emotionally. This would prove psychologically harmful to the student and our purpose is surely not to harm them but to modify their behaviour as individuals.

Punishments, if any, should be seen as reasonable and fair, and never vicious. The ability to control a group of students depends on the personality of the teacher and also the rapport that he or she develops with them. There are some tips to be kept in mind.

- 1. Immediate action:** In case of deviant behaviour, a teacher must take immediate action.
- 2. Stop teaching in case of misbehaviour:** The moment the teacher stops teaching, it is clear that the teacher means business and will not tolerate misbehaviour in the class.
- 3. Change seats:** If few students disrupt the class, change their seats. Separating the troublemakers is quite effective in controlling indiscipline.
- 4. Adapt and be sensitive:** In case the entire class is gradually getting out of control, then it's a signal that the activity is boring. The best way of

controlling them is by changing the activity, for example, if they are reading, immediately switch over to a writing task, which would keep them all quiet and involved. The teacher must learn to adapt and be sensitive to the mood of the class.

- 5. Counsel after class:** One of the most effective ways of tackling a student is by giving counselling after class. The teacher should also clearly explain the consequences of not improving.
- 6. Talk to the parents:** In several cases, a talk with the parents will improve the behaviour of the student. It would also give a better insight into the reasons for indiscipline by individual students.

EVALUATION SYSTEMS

Interdependence of Teaching, Learning, and Evaluation

Teaching has been defined as the process of facilitating learning and the term learning is broadly defined as the process of acquiring knowledge, attitude, skills, habits and abilities. To determine whether teaching has facilitated learning and if yes, upto what an extent, evaluation is carried out. In other words, teaching, learning and evaluation are the three inter-dependent aspects of the educative process. This interdependence is clearly seen when the main purpose of instruction is conceived in terms of helping students achieve a set of learning outcomes that include changes in the cognitive, psychomotor and affective domains.

There is a direct relationship among the four important factors of the educational system, such as objective, curriculum, method and evaluation. As Indian Education Commission (1944–1966) has remarked, 'It is now agreed that evaluation is a continuous process, it forms an integral part of the total system of education, and is intimately related to educational objectives. It exercises a great influence on pupil's study habits and the teacher's method of instruction and this helps not only to measure educational achievement but also to improve it'.

Evaluation

Evaluation is a systematic process of collecting, analysing and interpreting information to determine the extent to which instructional objectives are being achieved.

Perhaps the most comprehensive definition of evaluation has been given by Beeby, 'Evaluation is the systematic collection and interpretation of evidence leading as a part of process to a judgement of value with a view to action'.



Teaching with Sense of Humour

- Laughter is a natural, universal phenomenon, with beneficial effects, which is both physical and psychological.
- Everyone loves a teacher with an infectious sense of humour.
- It builds cordial relationship.
- It has the ability to relax people and reduce tension.
- It is an effective advertising strategy.
- Teaching with the help of cartoon is a very effective way.
- When there is a willingness to change, there is hope for progress in any field.
- Students enjoy humour in forms of funny anecdotes.

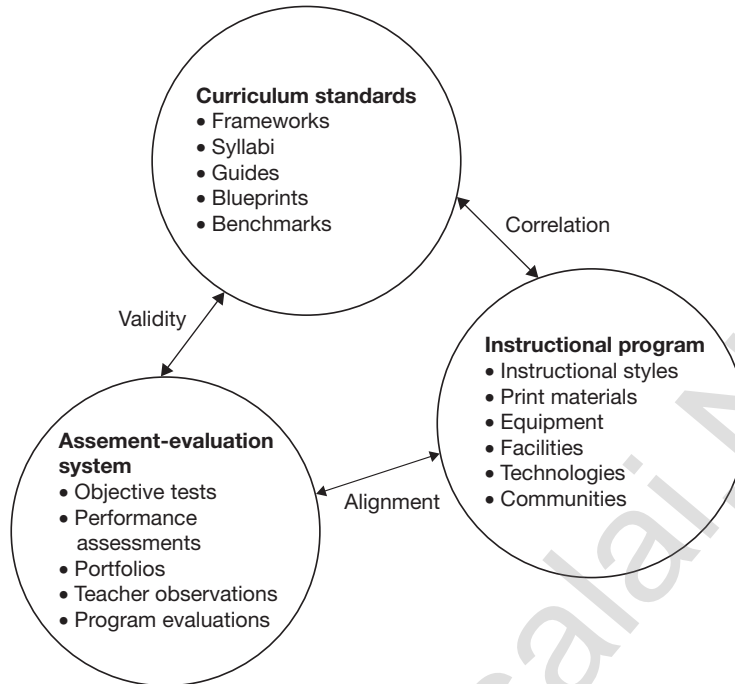


Figure 1.17

Source: Congruence Triangle – Reynolds (1996)

From this definition, it is clear that the following four key elements constitute the process of evaluation.

1. Systematic collection of evidence (**Example:** score)
2. Its interpretation
3. Judgement of value
4. With a view to action

Desirable Characteristics of Evaluation

1. **Comprehensiveness:** It must try to assess all aspects of a child's development. Thus, different techniques might be used by the teachers to evaluate the performance of the child.
2. **Continuous:** Evaluation is a continuous process in education. It is not just an examination but a part of the evaluation process. There is no fixed time limit for the completion of evaluation work, but it is a continuous process. CBSE's Continuous and Comprehensive Evaluation (CCE) is based on the above two parameters. CCE helps in improving the student's performance by identifying his or her learning difficulties at regular time intervals right from the beginning of the academic session and employing suitable remedial measures for enhancing their learning performance.

Difference between Measurement, Assessment and Evaluation

Measurement is the quantitative description of one's performance. For example, a student scored 92 in Mathematics, 75 in Science, 65 in Social Science, 64 in Hindi and 68 in English.



Figure 1.18

Assessment is the second step of evaluating student's performance. The description that a student stood first in the class represents the concept of assessment. It makes student's performance more meaningful. Unless we interpret, analyse, rank-order and compare one's individual score with the average score of the group, we cannot find out one's relative position in a group.



Figure 1.19

If in case of a student, the case of a student, we find that she has 'improved significantly in half-yearly

examination' in comparison to her performance in the earlier examinations. What does it mean?

We can conclude that this type of judgement carry certain value and add to the performance of student to make it more meaningful.

While forming the judgement like 'improved significantly', the earlier performance of student in the previous examinations has been taken into consideration by the teacher. When we add value to the assessment of student performance, we carry out evaluation of their performance.

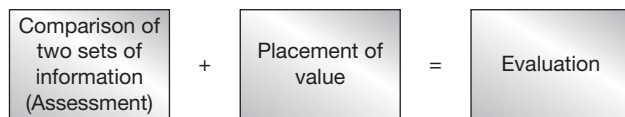


Figure 1.20

The comparison can be depicted with the help of following diagrams as well.

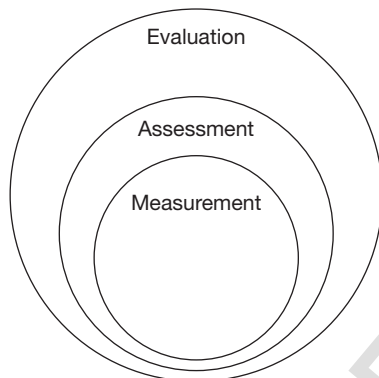


Figure 1.21

Functions of Evaluation

Evaluation does not end with the summarization of results. It has direct bearing on the improvement of the system as a whole. The functions of evaluation are as follows.

1. **Feedback:** To assess strengths and weaknesses.
2. **Motivation:** The mere realization that you would be evaluated propels a student to work hard.
3. **Better guidance:** Crucial for the growth of pupils.
4. **Remediation:** It helps in locating the areas that require remedial measures.
5. **Facilitates planning:** It helps the teacher in planning, organizing and implementing learning activities.
6. Revision of curriculum.
7. Inter-institutional comparison.
8. **Educational decision-making:** It relates to selection, classification, placement, promotion, etc.
9. Submission of progress report to parents.

Types of Evaluation

A good evaluation device is one which secures valid evidence regarding the desired change of behaviour. A teacher needs to know the various devices that are helpful in gathering evidence on the changes taking place in a pupil.

The following table depicts the categorization of evaluations that is very important from NTA-NET Exam point of view. It is important to mention here that there is some overlapping among different concepts.

According to basic nature: They can be categorized into quantitative and qualitative techniques:

Quantitative Techniques

1. **Written examination:** It is also known as paper pencil test. In this technique, the answers are to be written as per the instruction of questions.
2. **Oral examination:** They supplement the written examination. Examples are test of reading ability, and pronunciation and viva voce is also an example.
3. **Practical examination:** These tests are necessary to test experimental and manipulative skills of a learner, particularly in subjects, such as science, technology, agriculture, craft, and music.

Table 1.7

According to approaches	According to phase of instruction/function	According to nature of reference	According to purpose	According to grades
Quantitative techniques	1. Placement	1. Norm referenced	1. Diagnostic tests	Direct
	2. Formative	2. Criterion referenced	2. Aptitude tests	
Qualitative techniques	3. Diagnostic		3. Achievement tests	Indirect
	4. Summative		4. Proficiency tests	

Qualitative Techniques

- 1. Observation and interviews:** Observation is used to evaluate the behaviour of the pupil in controlled and uncontrolled situations. It is purposive and systematic and carefully viewing or observing the behaviour and recording it. Interview is sometimes superior to other devices. It is because of the fact that pupils are usually more willing to talk than write.
- 2. Checklist:** A checklist is an instrument that is used for collecting and recording evidence regarding significant behavioural tendencies of the pupils or specific problems they present in the classroom.
- 3. Rating scale:** Rating is a term applied to the expression of opinion or judgement regarding some situation, object or character. Rating scale is a device by which judgements can be quantified.
- 4. Cumulative records:** Anecdotal records, cumulative record cards and diaries of pupils are some other devices used in evaluation process to know the details about a child's behaviour.

Type of Evaluation on the Basis of Phase of Instruction

In the various phases of instruction, evaluation is integrated. The four types of evaluation are placement, formative, diagnostic and summative.

- 1. Placement evaluation:** The key word which is used for placement assessment is the 'entry behaviour'. It determines the knowledge and skills the students possess, which are necessary at the beginning of instruction in a given subject area. Evaluation of entry behaviour is done just before teaching starts, a teacher should know the previous knowledge of students. This helps teacher to organise teaching-learning activities according to the previous knowledge of learners.

Various entrance exams can also be conducted for the same purpose. This is also done to see the knowledge base of students and a teacher can start discussion keeping that in view.

- 2. Formative evaluation:** It is also known as internal valuation, it is done during the programme before its completion. It focuses on the process. It is conducted more than once depending upon the length of activity. This evaluation provides the student with feedback regarding his or her success or failure in attaining the instructional objectives. It also identifies the specific learning error that needs to be corrected. For instance, a student learns and scores high on the objective part of the test but fails in the essay part. He is reinforced to exert more effort in answering essay questions in the

succeeding tests. For a teacher, formative evaluation provides information for making instructions and remedies more effective. Formative evaluation is quite helpful in the early stage of development of a programme as it helps in improving the programme. The examples of formative evaluation are unit end tests, monthly test, quarterly tests, etc.

- 3. Diagnostic evaluation:** While the formative evaluation determines the extent to which students accomplish the learning targets, the diagnostic evaluation goes a step further and tries to provide an explanation for the possible causes for problems in learning. Thus, diagnostic tests are more comprehensive and detailed. Diagnostic evaluation is done at any time in the programme to pin point anything wrong in the programme. This helps the teacher in correcting the problems immediately, thereby, improving the course.
- 4. Summative evaluation (external evaluation):** As the name indicates, it is done at the end or completion of the course.

It determines the extent to which the objectives of instruction have been achieved and is used for assigning course grades. Summative evaluation generally includes oral reports, projects, term papers and teacher-made achievement tests and it shows how good or how satisfactory the student is in accomplishing the objectives of instruction.

Types of Evaluation and their Functions

- 1. According to nature of reference:** Here, norm-referenced testing and criterion-referenced testing can be termed as the two alternative approaches to educational testing. Though there are some similarities between these two approaches to testing, there are also fundamental differences between the two. These are termed as complementary approaches.

Table 1.8

Areas of function	Types of evaluation and their functions
After instructions	Summative evaluation (To certify the learner)
During instructions	Diagnostic evaluation (To solve learning difficulties)
	Formative evaluation (To provide feedback on the teaching-learning process and to know mastery in content)
Before instructions	Placement evaluation (To know entry behaviour)



Scholastic Assessment

Scholastic assessment refers to the assessment of cognitive abilities of learners in various academic activities, which are associated with various subjects.

Therefore, all those abilities in cognitive domain, namely, knowledge, understanding, application, analysis, synthesis, evaluation and creativity comes under scholastic abilities. Continuous and comprehensive evaluation is one such example.

2. **Criterion-referenced evaluation:** Glaser (1963) first used this term, 'Criterion-reference test' to describe the learner's achievement on a performance continuum.

Consider the following statements:

- Amit scored 95 or 95% marks in Mathematics.
- The typing speed of Davinder is 58 words per minute.

A criterion-referenced test is used to ascertain an individual's status with respect to a defined achievement domain. In the above statements, there is no reference to the performance of other members of the group. Thus, criterion-referenced evaluation determines an individual's status with reference to well-defined criterion behaviour. There are clearly defined learning outcomes which serve as referents (criteria). Success of criterion-reference test lies in the delineation of all defined levels of achievement which are usually specified in terms of behaviourally stated instructional objectives.

The purpose of criterion-referenced evaluation or test is to assess the objectives and that's why it is termed as objective based test. The objectives are assessed, in terms of behavioural changes among the students. Hively and Millman (1974) suggested a new term, domain-referenced that has a wider connotation. A criterion referenced test can measure one or more assessment domain/s.

3. **Norm referenced evaluation:** A norm-referenced test is used to ascertain an individual's status with respect to the performance of other individuals on that test. It is normally used in competitive exams.

Consider the following statements:

- Amit stood third in Mathematics test.
- Rajesh scored 98 percentile that means only 2% candidates scored better than him. This is used in CAT for admission into IIMs and some other top notch institutes in India.

In the above statements, the person's performance is compared to others of their group and the relative standing position of the person in his/her group is mentioned. We compare an individual's performance with similar information about the performance of others.

Norm-referenced tests are mostly easy but can be tough as well

Reflective Prompts

Reflective prompts is a technique in which the teacher provides a set of flexible questions to the students that prompt them to reflect on their own learning. In this technique, each student answers some questions such as given below after completion of a lesson/unit by the teacher. If the test scores are interpreted in terms of an individual, then they are known as self-referenced.

Types of Evaluation Tests of the Basis of Purpose

Though there is some overlapping with the evaluation techniques as discussed earlier, purpose-specific category includes tests designed to achieve a specific purpose of evaluation. Generally four test-types are identified in this category. Let us briefly present the features of each of these.

Diagnostic Test

These tests help us in identifying 'area of learning' in which a learner may need a remedial course and they provide us a profile of what the learner knows and does not know. A diagnostic test may consist of a battery of a number of sub-tests to cover sub areas.

Aptitude Test

Aptitude tests basically serve a predictive function, they help us in identifying potential talents and desirable characteristics which are essential for one to be competent to perform a specific task. These tests are generally used while selecting people for special courses.

Achievement Test

As the name indicates, such tests aim to measure the extent to which the objectives of a course have been achieved. The usual end-of-course exam may be taken as a typical example of an achievement test.

Proficiency Tests

These tests aim to assess the general ability of a person at a given time.

Their scope is governed by a reasonable exception of what abilities learners of a given status (say, matriculates or graduates) should possess.

Grading System of Evaluation

The word 'grade' is derived from the Latin word Gradus which means 'step.' In educational measurement, grading involves the use of a set of symbols to communicate the level of achievement of the students.

Types of Grading

1. **Direct grading:** In direct grading, the performance exhibited by an individual is assessed in qualitative terms and the impression so obtained by the examiner is directly expressed in terms of letter grades. The advantage of direct grading is that it minimizes the inter-examiner variability. Moreover, it is easier to use in comparison to indirect grading. Direct grading lacks transparency.
2. **Indirect grading:** In this method, the performance of an examinee is first assessed in terms of marks and subsequently transformed into letter grades by using different modes. This transformation may be carried out in terms of both 'absolute grading' and 'relative grading' as discussed below.
 - (a) **Absolute grading:** Absolute grading is a conventional technique of evaluation. It is based on a pre-determined standard that becomes a reference point for assessment of students' performance. It involves direct conversion of marks into grades, irrespective of the distribution of marks in a subject. For example, the categorization of students into five groups, namely, distinction (75% and above), first division (60% and less than 75%), second division (45% and less than 60%), third division (33% and less than 45%) and unsatisfactory (Below 33%).
 - (b) **Relative grading:** Relative grading is generally used in public examination. In this system, grade of a student is decided not by her performance alone rather than performance of the group. This type of grading is popularly known as 'grading on the curve.'

CHOICE BASED CREDIT SYSTEM (CBCS)

Ministry of Human Resource Development has started the process for developing New Education Policy (NEP) in our country to bring out reforms in Indian education system. With UGC has more active participation, it has already initiated several steps to bring equity, efficiency and academic excellence in National Higher Education System. The important ones include innovation and improvement in course-curricula, introduction of paradigm shift in learning and teaching

pedagogy, examination and education system. The education plays enormously significant role in building of a nation. There are quite a large number of educational institutions, engaged in imparting education in our country. Majority of them have entered recently into semester system to match with international educational pattern.

There has been complete lack of relationship between education, employment and skill development in conventional education system. The present alarming situation necessitates transformation and/or redesigning of education system, not only by introducing innovations but developing "learner-centric approach in the entire education delivery mechanism and globally followed evaluation system as well. Majority of Indian higher education institutions have been following marks or percentage based evaluation system, which obstructs the flexibility for the students to study the subjects/courses of their choice and their mobility to different institutions. There is need to allow the flexibility in education system, so that students depending upon their interests and aims can choose interdisciplinary, intra-disciplinary and skill-based courses. This can only be possible when choice based credit system (CBCS), an internationally acknowledged system, is adopted. The choice based credit system not only offers opportunities and avenues to learn core subjects but also exploring additional avenues of learning beyond the core subjects for holistic development of an individual.

Advantages of the choice based credit system:

1. Shift in focus from the teacher-centric to student-centric education.
2. Student may undertake as many credits as they can cope with (without repeating all courses in a given semester if they fail in one/more courses).
3. CBCS allows students to choose inter-disciplinary, intra-disciplinary courses, skill oriented papers (even from other disciplines according to their learning needs, interests and aptitude) and more flexibility for students).
4. CBCS makes education broad-based and at par with global standards. One can take credits by combining unique combinations. For example, Physics with Economics, Microbiology with Chemistry or Environment Science etc.
5. CBCS offers flexibility for students to study at different times and at different institutions to complete one course (ease mobility of students).
6. Credits earned at one institution can be transferred.

Though difficult to adopt, the uniform grading system will also enable potential employers in assessing

the performance of the candidates. In order to bring uniformity in evaluation system and computation of the Cumulative Grade Point Average (CGPA) based on student's performance in examinations, the UGC has formulated the guidelines to be followed.

Outline of Choice Based Credit System

- 1. Core course:** A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.
- 2. Elective course:** Generally a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/subject of study or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the candidate's proficiency/skill is called an Elective Course.
- 3. Discipline Specific Elective (DSE) Course:** Elective courses may be offered by the main discipline/subject of study is referred to as Discipline Specific Elective. The University/Institute may also offer discipline related Elective courses of interdisciplinary nature (to be offered by main discipline/subject of study).
- 4. Dissertation/Project:** An elective course designed to acquire special/advanced knowledge, with an advisory support by a teacher/faculty member is called dissertation/project.
- 5. Generic Elective (GE) Course:** An elective course chosen generally from an unrelated discipline/subject, with an intention to seek exposure is called a Generic Elective.
- 6. Ability Enhancement Courses (AEC):** This may be of two kinds: Ability Enhancement Compulsory Courses (AECC) and Skill Enhancement Courses (SEC). "AECC" courses are the courses based upon the content that leads to Knowledge enhancement; Skill Enhancement Courses (SEC): These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge.

Central/State Universities have lot of flexibility in deciding common minimum syllabi of the core papers and at least follow common minimum curriculum as fixed by the UGC. This allows deviation from the syllabi being 20 % at the maximum.

COMPUTER BASED TESTING (CBT)

CBT seems to be catalyst for changes in pedagogical methods. It brings about a transformation in learning, pedagogy and curricula in educational institutions. The setting is the basis of both computer-based and paper-based testing.

Benefits of Computer-Based Testing (CBT)

1. More frequent testing opportunities
2. Data rich results
3. Increasing candidate reach
4. Streamlined logistics

There are two types of CBT which include:

- 1. Linear test:** This involves a full-length examination in which the computer selects different questions for individuals without considering their performance level.
- 2. Adaptive test:** Here the computer selects the range of questions based on individuals performance level. These questions are taken from a very large pool of possible questions categorized by content and difficulty.

Using the waterfall model, the CBTS SDLC was split up into a number of independent steps. Each step was carried out in sequence and accordance to one after the other. The previous stage is always completed before moving to the next stage of the life cycle.

1. Requirements analysis and definition
2. System and software design
3. Implementation and unit testing
4. Integration and system testing
5. Operation and maintenance

In India, CBT has been started for number of exams such as by IBPS for banking exams and currently by National Testing Agency (NTA) to conduct exams for UGC, NEET, GPAT, GMA etc.

CURRICULUM FRAMEWORK, CURRICULUM AND SYLLABUS

Until 1976, Indian constitution allowed the state governments to take decisions on all matters pertaining to education including curriculum. The centre could only provide guidance to the states on policy issues. National Council for Education Research and Training developed National Curriculum Framework (NCF) in 1975 following the recommendations of Education Policy on 1968.

In 1976, the constitution was amended to include education in the concurrent list and for the first time in 1986 the country as a whole had a National Policy on Education (NPE-1986) which envisions NCF as a means of modernizing education, taking into consideration the capability of responding to India's geographical and cultural diversity while ensuring the common core values and a comparable standards of education. NPE-1986 emphasized a relevant, flexible and learner-centred curriculum. NCF was subsequently revised in the years 1988, 2000 and 2005.

The curriculum framework is a plan that interprets educational aims with regard to both individual and society. This plan leads to an understanding of the kinds of learning experiences that an educational institute must provide to children.

Curriculum is perhaps best thought of as the sum total of all deliberately planned set of activities, which facilitate learning and are designed to implement specific educational aims.

It is a plan to explain what concepts are to be transacted, what knowledge, skills and attitudes are to be deliberately developed among learners. It includes statements of criteria for selection of content and choice of methods for transaction of content as well as evaluation. It is concerned with the following factors.

1. The general objectives of education at a particular stage or class.
2. Subject-wise learning objectives and content.
3. Course of studies and time allocation.
4. Teaching-learning experiences.
5. Teaching-learning instructional facilities and materials.
6. Evaluation of learning and feedback to learners.

In reference to the discussion given above, it would mean that curriculum core and syllabus put together form the curriculum.

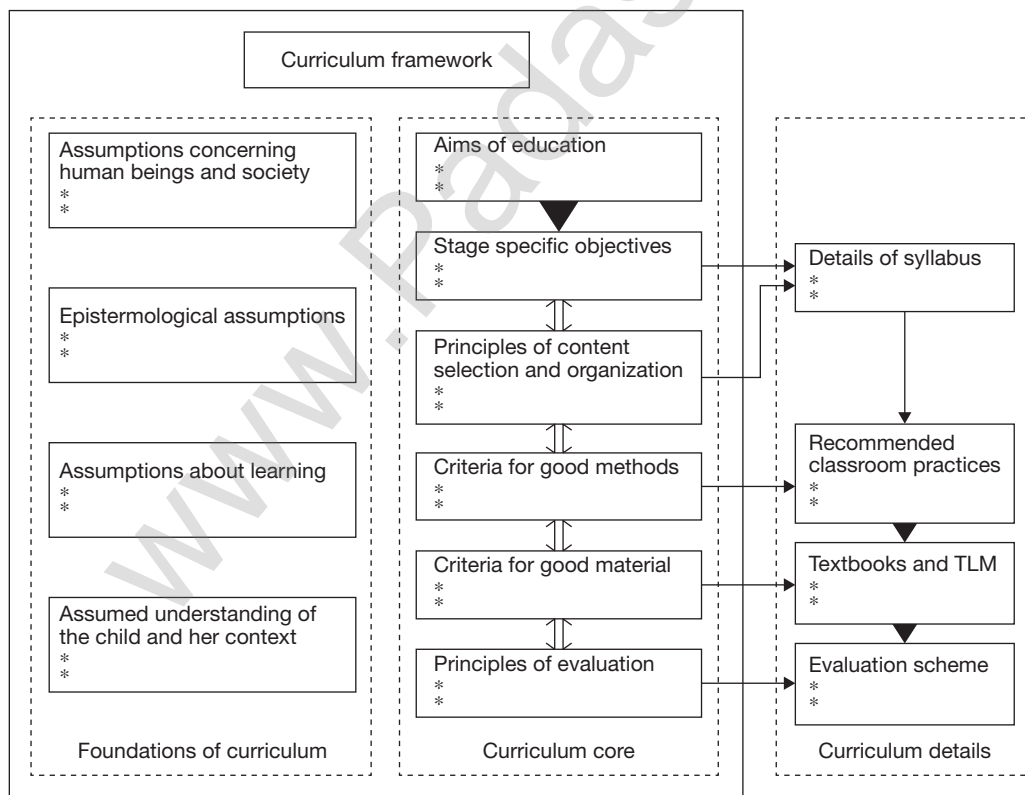
Syllabus

It is a document that gives details of the content of subjects to be transacted and the skills, knowledge and the attitude which are to be deliberately fostered together with the stage (level) specific objectives.

Syllabus is a descriptive list of subjects to be covered and a summary of their contents. It describes and summarizes what should be taught to the students, it may have details, such as schedule, assessments, assignments, projects, etc. Thus, it may highlight the schedule of assignments, projects and exams, etc.

Main Differences Between Syllabus and Curriculum

1. The syllabus is described as the summary of the topics covered to be taught in the particular subject. Curriculum refers to the overall content, taught in an educational system or a course.



Source: NCERT Pedagogy

Figure 1.22 Curriculum Framework

2. The curriculum has a wider scope than the syllabus. Syllabus is descriptive in nature, but the curriculum is prescriptive. Syllabus varies from teacher to teacher while the curriculum is same for all teachers.
3. The syllabus is accessible to the learners, at the beginning of course in secondary or tertiary education. They can use it as a guide for their studies. On the other hand, curriculum is not made available to the learners unless they specifically ask for it.
4. Syllabus is set for a particular subject, unlike curriculum, that covers a particular course of study or a program.
5. Syllabus is mostly prepared by the teachers. Conversely, a curriculum is decided by the government or school or college administration.
6. The duration of a syllabus is for a year only, but curriculum lasts till the completion of the course.

Basic Approaches to Curriculum

1. **Subject-centred curriculum:** Here it is assumed that universal and objective knowledge can be transmitted directly from those who have acquired the knowledge to those who have not.

Lecture is the most commonly used method to communicate subject knowledge to students. Students generally memorize the subject content provided by the teacher or textbook. Examinations test the content knowledge of students.

2. **Behaviourist curriculum:** Behaviourist psychologists view learning as change in behaviour and learning objectives are defined in terms of behavioural change. Knowledge is the capability for action, identified as the 'successful performance of tasks.' The only way to determine whether or not students 'know' or 'do not know,' something is to see how they behave in certain situations.

The following falls within the scope of behaviourist theories of learning:

- (a) Competency-based curriculum
- (b) Criterion referenced curriculum
- (c) Mastery learning
- (d) Programmed learning

These approaches assume that large or complex tasks can be broken down into small or simpler tasks and these can be sequenced in order from simple to complex. In competency-based curriculum, terminal competencies are defined in behavioural terms. These are then sub-delineated into sub-competencies. The competency based curriculum (minimum levels of learning) has been developed in India and some other countries.

In behaviourist curriculum, the teachers are instrumental to implement curriculum developed by curriculum developers. Teachers do not question the 'ends or means of curriculum.' The behaviourist curriculum does not take into consideration the learner's experiences, context and cognitive

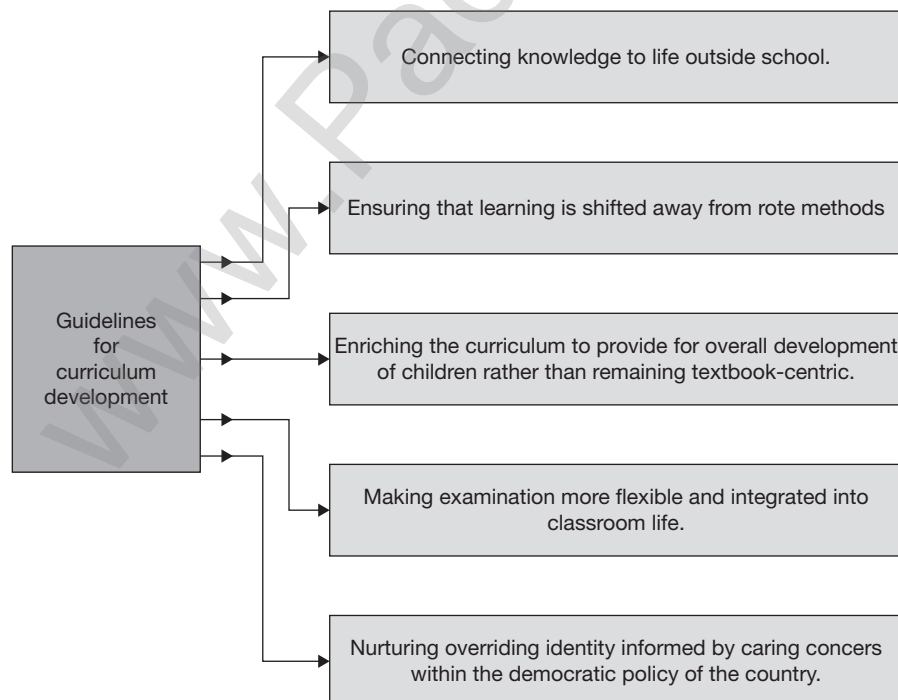


Figure 1.23 Curriculum Development Guidelines

predispositions. The learners are treated as passive receivers of knowledge and teachers are regarded as transmitter of knowledge.

Chalk and talk is the common method of teaching. Learners memorize, recite or study their lessons silently without questioning. Childhood is viewed as the preparation for adulthood within the society. The education aims at developing such knowledge and skills which will be helpful for students to serve society in their adult life.

Critiques of subject-centred and behaviourist approaches say that these curricula do not help in achieving the aim of all-round development of the learner.

- 3. Learner centred curriculum:** Here the purpose is to stimulate and nurture growth of learners and teachers must trust in the innate abilities of learners.

The learning is viewed from a constructivist perspective. Learning is more effective when learners engage with stimulating environment, get involved in inquiry and make meaning for themselves out of interactions with environment. Here, the mantra is 'what is happening within' and the learner stands between stimulus and response. The curriculum must engage learners with stimulating experiences by arranging suitable learning environment.

The educators are interested in parameters, such as the state of learner's cognitive structures, her meaning-making abilities and her creative spirit.

'Constructivist curriculum' is based on the following assumptions.

- Knowledge is actively constructed, invented, created or discovered by learners. It is not passively received and stored by learners.
- Knowledge cannot be separated from the process of learning. It is based on learner's conceptual structures and prior experiences.
- Learners are constantly constructing and reconstructing their cognitive structures, both as a result of newly acquired knowledge and as a result of their reflection on previously acquired knowledge.
- Social interactions with peers and adults in a cultural context are important in the construction of knowledge.
- Concept formation progresses from concrete to abstract slowly.
- Learners have different learning styles and teaching-learning should accommodate this process.
- The teacher in constructivist curriculum is the provider of the learning environment and a facilitator of learning.

EDUCATION AND TEACHING-RELATED IMPORTANT DAYS

Table 1.9 Important Dates Related to Education

Dates	Important days
January 04	World Braille Day—A form of written language for blind people, in which the characters are represented by patterns of raised dots that are felt with the fingertips.
January 24	National Girl Child Day also known as Balika Divas.
February 21	International Mother Language Day
February 28	National Science Day—To commemorate invention of the Raman Effect in India by the Indian physicist Sir Chandrasekhara Venkata Raman on the same day in 1928.
June 21	International Day of Yoga—United Nations proclaimed 21 June as International Yoga Day.
September 5	Teachers' Day is celebrated on 5th September every year, which is also the birthday of Dr Sarvepalli Radhakrishnan, the first Vice-President of independent India and the second President of the country.
September 8	International Literacy Day—To highlight the importance of literacy in life and remind ourselves of the status of literacy and adult learning worldwide.
September 14	Hindi Day
October 5	World Teachers' Day—UN World Teachers' Day commemorates the work of teachers and their contributions to society.
October 11	International Day of Girl Child
October 20	World Statistics Day
November 1	National Education Day—It is also the birthday of Maulana Abul Kalam Azad, eminent educationist and the first Education Minister of independent India.
November 14	Children's Day—It is also the birthday of independent India's first Prime Minister Pt. Jawaharlal Nehru.
November 20	Universal Children's Day

Kindly Send Me Your Key Answers to Our email id - padasalai.net@gmail.com

UNIVERSITY GRANTS COMMISSION

UGC/TNSET/NET

ENGLISH

UNIT-1-2-3-4

TEST STUDY MATERIAL

PAPER-2-

Important Questions With Answers

1. The Miracle plays principle deal with the miracles performed by-

- (a) Magic
- (b) Supernatural powers
- (c) **Saints and Sages**
- (d) Personified Vices and Virtues

2. The Mystery plays deal with-

(a) The life and deeds of the saints

(b) Biblical Themes

(c) Heaven and Hell

(d) Moral values

3. What is the most significant feature of the Morality plays?

(a) They present Biblical figures

(b) They present saints and sages

(c) They present Vices and Virtues as personified figures

(d) They symbolize Christian moral values

4. Why were the Interludes introduced?

(a) They had better theatrical effect

(b) They pleased the common class of the spectators

(c) They provided comic relief

(d) They dealt with the real problems of life

5. Everyman was the most famous play of the 15th century. It was a_

(a) Morality play

(b) Mystery play

(c) Miracle play

(d) An Interlude

6. Virtues and Vices are personified in-

(a) The Moralities

(b) The Mysteries

(c) The Miracles

(d) The Interludes

7. There were four famous theatrical Cycles enacting the Morality plays. One of the following four names given below is wrong. Which one?

(a) York Cycle

(b) Towneley Cycle

(c) Chester Cycle

(d) Charles Cycle

8. John Heywood's Interlude entitled 4pp (or 4p's) caricatures four professionals whose professions begins with P. In the four professionals listed below, one is wrong. Which one?

(a) The palmer

(b) The pardoner

(c) The piper

(d) The pedlar

9. In some of the plays, an 'Epilogue' appears. At what stage of the plot does the Epilogue appear?

- (a) In the beginning of the play
- (b) At the end of the play**
- (c) At the end of the Third Act
- (d) At any stage where its presence is felt necessary
10. Into which stanza form is Pope's Essay on Criticism written?
- (A) Blank Verse
- (B) Heroic Couplets**
- (C) Free Verse
- (D) Eight Parts
11. What is the function of the Chorus in a play?
- (a) The Chorus explains the past and the future events in the play**
- (b) At Chorus represents the views of the dramatist
- (c) The Chorus is a band of singers who sing
- (d) The Chorus comes to declare the ending of an Act
12. Strophe, Antistrophe and Epode are the component parts of?
- (A) Pindaric Ode**
- (B) Horatian Ode
- (C) Sophoclean Chorus
- (D) Aeschylus Chorus
13. The Concept of 'Tension' in poetry was advanced by:

- (A) R.P. Blackmur
(B) Austin Warren
(C) Cleanth Brooks
(D) Allen Tate

14. Name the earliest dramatist who wrote his plays in Blank Verse?

- (A) John Lyly
(B) Marlowe
(C) Shakespeare
(D) Ben Johnson

15. Each stanza in Shelley's Adonais has :

- (A) Seven lines
(B) Nine lines
(C) Fourteen lines
(D) Eight line

16. What is Spenserian stanza?

(A) It is a nine-line stanza consisting of two quatrains in iambic pentameter, rounded off with an Alexandrine in the last line.

(B) It is a nine-line stanza of which the first line is an Alexandrian following by two quatrains in iambic pentameter

(C) It is a nine-line stanza consisting of two iambic pentameter quatrains rounded off by an iambic hexameter

(D) It is a nine-line stanza made up of four Heroic Couplets rounded off with an unrhymed line

17. In Which work does Spenser use the Spenserian stanza for the first time?

(A) The Faerie Queene

(B) Amoretti

(C) The Shepheard's Calendar

(D) Astrophel

18. What is Blank Verse?

(A) Blank Verse has no metre and no rhyme

(B) Blank Verse has a metre but no rhyme

(C) Blank Verse has rhyme but no metre

(D) Blank Verse has both rhyme and metre but no rhyme

19. What is Free Verse?

(A) Free Verse has no metre and no rhyme

(B) Free Verse has rhyme but no meter

(C) Free Verse has rhyme but no rhyme

(D) Free Verse is musical prose

20. What is meant by Rhetoric?

- (A) Art of using language effectively and impressively in poetry.
- (B) Using language musically in poetry
- (C) Using language according to poetic diction**
- (D) Using language metaphorically in Poetry

21. Nissim Ezekiel's Hymns in Darkness is—

- (A) A Drama
- (B) A Novel
- (C) Literary Essays

(D) Collection of Poems

22. Who said, "I regard untouchability as the greatest blot on Hinduism"?

- (A) Bakha
- B) Mahatma Gandhi**
- C) Hutehinson
- (D) Lakha

23. 'Black Death' is the name given to

- (A) The great Famine that occurred in Chaucer's Age
- (B) The Epidemic of Plague that occurred in Chaucer's age**
- (C) The epidemic of cholera that broke out in Chaucer's Age

(D) W.B. Yeats

31. In which year was Bernard Shaw awarded the Nobel Prize?

(A) 1920 **(B) 1925** (C) 1930 (D) 1932

32. E.M. Forster's A Passage to India deals with

(A) Ancient Indian Culture (B) Arrival of the Britishers in India

(C) Relationship between the Britishers and Indians

(D) Discovery of the Sea-route to India

33. Who was he lived to be 'a classicist in literature, royalist in politics, and Anglo-Catholic in religion'?

(A) Ezra Pound (B) Rudyard Kipling (C) George Orwell **(D) T.S. Eliot**

34. The exodus of Greek scholars and artists from their country started after

(A) The fall of Constantinople at the hands of the Turks

(B) The defeat of the Greeks in the War of Troy

(C) The death of Alexander, the Great (D) the death Homer

35. The Renaissance spirit is best expressed in

(A) Spenser's Faerie Queene (B) Shakespeare's Historical Plays

(C) Bacon's Essays

(D) Ben Johnson's Comedies of Humours

36. One of the following poets did not belong to the group called the

Metaphysical Poets Identify him

(A) Andrew Marvell

(B) Richard Crashaw

- (A) Sir Walter Raleigh (B) Sir Philip Sidney
(C) **Queen Elizabeth** (D) King Arthur

64. The central theme of the Lusiad is

- (A) The Voyages of Odysseus
(B) Ancient Glory of Portugal
(C) **Vasco-da-Gama's Voyage to India**
(D) Battles between Portugal and England

65. Spenser's Motto in writing his Faerie Queen was

- (A) To please and honour Queen Elizabeth
(B) To justify Holiness as the greatest virtue
(C) To save the Honour of Womanhood
(D) **To Fashions a Gentleman in virtuous and gentle discipline**

66. How many books are there in Spenser's Faerie Queene?

- (A) Ten (B) Twelve (C) Six (D) Four

67. Which Book of Paradise Lost begins with an invocation to Light ?

- (A) Book IX (B) Book IV (C) **Book III** (D) Book VI

68. Who is next in command after Satan in the Paradise Lost?

- (A) Mammon (B) **Beelzebub** (C) Moloch (D) Baalim

69. "What in me is dark

Illumine, what is low raise and support."

96. A Famous lyric opens with the following line-

“Drink to me only with thine eye”

Who is the poet who wrote it?

(A) Shakespeare (**B) Ben Jonson** (C) Marlowe (D) John Donne

97. “Others abide our question –Thou art free.

We ask and ask: Thou Smilest and art still,

Out-topping Knowledge.” These lines are quoted from a lyrical poem by

Matthew Arnold. Who does the Poet refer To in this poem?

(A) Chaucer (B) Spenser (C) Wordsworth (**D) Shakespeare**

98.”Just for a handful of silver he left us,

Just for a rib and to stick in his coat.” These are the opening lines of a

poem The Lost Leader. Who is this lost Leader?

(A) Robert Southey (**B) William Wordsworth**

(C) Lord Tennyson (D) Coleridge

100. “Smiling they live, and call life pleasure:

To me that cup has been dealt in another measure”.

From which of Shelley’s poems have these lines been quoted?

(A) Love’s Philosophy (B) Ozymandias

(**C) Stanzas Written in Dejection** (D) A Lament

101.”The music in my heard I Bore,

122. " I Change, but I Cannot Die."What it is that changes but cannot die, according to Shelley as stated in one of his odes?

(A) The World **(B) The Cloud** (C) The West Wind (D) The Skylark

123. "Field is that music- do I wake or sleep ?" Which ode of Keats ends with this line ?

(A) Ode on a Grecian Urn (B) On Melancholy
(C) To a Nightingale (D) To Psyche

124."If winter comes, can spring be far behind ?

(A) The Cloud (B) the Skylark
(C) The West Wind (D) The Poet's Dream

125.Spenser wrote an elegy to mourn the death of Sidney. Choose the Correct title of the Elegy

(A) Amoretti (B) Epithalamion **(C) Astrophel** (D) Prothalamion

126. Choose the correct title of an elegy written by Dryden on the death of Cromwell.

(A) The Medal (B) MacFlecknoe (C) Tyrannic Love **(D) Heroic Stanzas**

127. On whose death did Milton write the elegy Lycidas?

(A) Spenser **(B)Edward King** (C) Maelowe (D) Cromwell

128. What kind of elegy is Milton's Lycidas?

(A) A Classical Elegy (B) An elegy of personal grief

(A).William Maggin's The Rime Of the Ancient Waggoner

(B).Scott's The Lay of the Last Minstrelg

(C).Coleridge's The Rime of the Ancient Mariner

(D).Keat's la Belle Dame Sans Merci

148. Langland's piers the plowman is a satire on

(A) Peasants of his time **(B) Corrupt Clergy men of his time**

(C) Some of his contemporary poets (D) Princes of his time

149. Samuel Butler's Hudibras is a satire on

(A) Puritanism (B) Corrupt clergymen of his time

(C) Some of his contemporary poets (D) contemporary social life

150. Dryden's The Medal is a personal satire on

(A) Shafetsbury (B) James II (C) Charles I (D) John Bunyan

151. Whom does Dryden satiries in Absalom and Achitophel ?

(A) Abraham Cowley (B) Thomas Shadwell

(C) Duke of Buckingham **(D) Shafetsbury**

152. Whom does Dryden satirise in Mac Flecknoe ?

(A) Alexander pope **(B) Thomas Shadwell**

(C) Duke of Buckingham (D) Shaftesbury

153. Whom does Dryden satiries under the name of Zimri in Absalom and

Achitophel?

(c) Dr. Faustus

(d) Hamlet

178. A 'Soliloquy' is defined as the 'loud-thinking' of a character. Who can hear this 'loud thinking'?

(a) The character himself

(b) The heroine of the play

(c) The characters present of the stage **(d) The whole audience.**

179. One of the following types of the plays is not meant for acting. Which one of the following?

(a) A Romance

(b) A Chronicle play

(c) A Closet play

(d) A Masque

180. How many Dramatic Unities were recommended by the Greeks?

(a) One central unity

(b) Two dramatic unities

(c) Three dramatic unities

(d) No number fixed

181. How many constituent parts are there in a Tragedy according to Aristotle?

(a) Four

(b) Five

(c) Six

(d) Three

182. Which is supposed to be the first regular in English?

(a) Roister Doister

(b) Gorboduc

(c) Morte de Arthur

(d) Troylus and Cryseyde

183. Who is the author of The Spanish Tragedy?

(a) Thomas Lodge

(b) George peelee

(c) Thomas Kyd

(d) Robert Greene

(a) Horror Plays

(b) Heroic Plays

(c) Revenge Plays

(d) Restoration Plays

208. Dryden has written a play on a Mughal Emperor. What is the name of the Emperor on whom he has written the play?

(a) Shahjahan

(b) Aurangzebe

(c) Bahadur Shah

(d) Akbar

209. Addison's tragedy Cato has been called-

(a) The last of the Elizabethan tragedy

(b) The tomb of the Heroic plays

(c) The grave of English tragedy

(d) The burial of classical tragedy

210. What is a Melodramatic play?

(a) A play which has predominance of pity

(b) A play which has predominance of violence and heinous crimes

(c) A play which has boisterous laughter

(d) A play in which the hero is a villain

211. Which of the following plays of Marlowe has the maximum number of melodramatic scenes?

(a) Tamburlaine the Great

(b) William Congreve

(c) John Webster

(d) William Wycherley

212. Which of the following dramatists is a writer of Melodramas?

(a) George Etherege

(b) William Congreve

(c) John Webster

(d) William Wycherley

235. Mosca is an important character in Ben Johnson's-

- (a) **Volpone or the Fox** (b) The Alchemist
(c) Sejanus (d) The Poetaster

236. Which of the following plays is written by William Congreve?

- (a) She Would If She Could (b) Love in Wood
(c) **The Way of the World** (d) The provoked Wife

237. One of the following Restoration Playwrights gave a happy ending to Shakespeare's King Lear. Identify the playwright-

- (a) Thomas Otway (b) Nathaniel Lee (c) **Nahun Tate** (d) George Farquhar

238. Nahun Tate gave a happy ending to Shakespeare's King Lear. How does the play end in Tate's version?

- (a) Cordelia does not die (b) Lear does not die
(c) **Cordelia marries Edgar**
(d) The three sisters are united and patronize Lear

239. Zimri, Duke of Buckingham, is a character that appears in Dryden's-

- (a) MacFlecknoe (b) **Absolem and Achitophel**
(c) The Medal (d) The Rehearsal

240. Who is the author of the play, The School for Scandal?

- (a) Richardson (b) William Congreve (c) **Sheridan** (d) Goldsmith

241. Dryden's MacFlecknoe is a satire on-

(a) Ulysses

(b) The Bishop Orders His Tomb

(c) Prospice

(d) Rabbi Ben Ezra

264. "Made weak by time and fate, but strong in will To strive, to seek, to find, and not to yield." From which Dramatic Monologue are these lines quoted?

(a) My Last Duchess (b) Evelyne Hope **(c) Ulysses** (d) Rabbi Ben Ezra

265. "Fail I alone, in words and deeds? Why? all men strive and who succeeds?" From which Monologue are these lines quoted?

(a) The Last Ride Together (b) Andrea del Sarto

(c) Rabbi Ben Ezra (d) Ulysses

266. The tragic plays of Galsworthy are-

(a) Lyrical tragedies (b) Political tragedies

(c) Social tragedies (d) Psychological tragedies

267. What is the central theme of George Bernard Shaw's Man and Superman?

(a) Man's evolution into superman

(b) The exposition of the latent faculties of man

(c) A woman's search for a fitting man (d) Godly spark in man

268. The central theme of Galsworthy's Strife is-

(a) An individual in conflict with society

(d) Art and Literature

293. What is the basic theme of Swift's The Battle of the Books?

(a) A comparative study of modern and ancient poets

(b) Competitive spirit amongst Augustan authors

(c) Humour and satire on contemporary authors

(d) Competition amongst literary critics.

293. Who defines the Essay as "a loose sally of the mind"?

(a) Hugh Walker (b) Saintsbury **(c) Dr. Johnson** (d) Dryden

294. Who is believed to be the Father of the Essay?

(a) Plato (b) Aristotle **(c) Montaigne** (d) Horace

295. Who is the most important writer of the Aphoristic Essays in English?

(a) Ben Jonson **(b) Bacon** (c) Sir Thomas Browne (d) Sidney

296. Bacon's Essays are modeled on the Essais of:

(a) Plato (b) Montaigne (c) Aristophanes (d) Rahael Holinshed

297. How many Essays were there in Bacon's third and last edition of Essays

Published in 1625?

(a) 28 (b) 40 **(c) 58** (d) 62

298. Who is the author of a collection of essays published under the title

Discoveries?

(a) Thomas Dekker

(b) Joseph Hall

(a) John Lockhart

(b) William Mason

(c) Thomas Moore

(d) James Froude

326. Whose volumes of Essays are entitled Essays, or Counsels Civil or Moral?

(a) Ben Jonson (b) Thomas Browne **(c) Bacon** (d) Abraham Cowley

327. Whose volumes of Essays is entitled Timber or Discoveries?

(a) Thomas Overbury (b) Thomas Dekker

(c) Abraham Cowley **(d) Ben Jonson**

328. Whose essays and character-sketches are collected in a volume entitled Essays and Characters of a Prison and Prisoners?

(a) Abraham Cowley (b) Thomas Dekker

(c) Geffray Mynshull (d) Joseph Hall

329. Who brought out a weekly journal entitled The Adventurer?

(a) Addison **(b) Dr. Johnson** (c) Leigh Hunt (d) Richard Steele

330. Who is the author of The English Comic Characters?

(a) Coleridge (b) Walter Scott **(c) William Hazlitt** (d) Charles Lamb

331. Who is the author of The Spirit of the Age?

(a) Thomas De Quincey (b) Carlyle

(c) Savage Landor **(d) William Hazlitt**

332. Who is the author of Latter-day Pamphlets?

(c) Free Will

(d) Man as the architect of his own fate

357. What award was given to Hardy as a great novelist?

(a) Nobel Prize

(b) Laureateship

(c) Order of Merit

(d) Knighthood

358. Wilkie Collins as a novelist is best known for:

(a) Psychological characterization

(b) Creating double plots

(c) The creation of sensational plots

(d) The striking endings of his novels

359. The phrase 'Stormy Sisterhood' is applied to:

(a) Charlotte Bronte

(b) Emily Bronte

(c) Ann Bronte

(d) Collectively to all the three

360. Which of the following novels of Charles Dickens is most autobiographical?

(a) A Tale of Two Cities

(b) David Copperfield

(c) Hard Times

(d) Pickwick Papers

361. Who is the author of the novel No Name?

(a) Mrs. Elizabeth Gaskell

(b) Wilkie Collins

(c) Ann Bronte

(d) Charles Kingsley

362. Dickens said about one of his novels: "I like this the best". Who novel was he referring to?

(a) Oliver Twist

(b) Great Expectations

(c) A Tale of Two Cities

(d) David Copperfield

414. "Be Homer's works your study and delight. Read them by day and meditate by night." Who gives this advice to the poets?

- (a) Dryden **(b) Pope** (c) Dr. Johnson (d) Addison

415. Which of the following critics preferred Shakespeare's Comedies to his Tragedies?

- (a) Dryden (b) Pope **(c) Dr. Johnson** (d) Addison

416. Wordsworth's Preface to the Lyrical Ballads is believed to be the Preamble to Romantic Criticism. In which year was it Published?

- (a) 1798 **(b) 1800** (c) 1801 (d) 1802

417. "The end of writing is to instruct, the end of poetry is instruct by Pleasing." Whose view is this?

- (a) Wordsworth's (b) Coleridge's
(c) Dr. Johnson's (d) Matthew Arnold's

417. Regarding the observance of the three Classical Unities in a play, Dr. Johnson's view is that:

- (a) Only the Unity of Time should be observed
(b) Only the Unity of Place should be observed
(c) Only the Unity of Action should be observed
(d) All the three Unities should be observed

445. T.S. Eliot says, "Poetry is not a turning loose of emotion, but an escape from emotion : it is not the expression of personality, but an escape from personality." In which essay does he make this observation?

(a) Tradition and the Individual Talent (b) The Perfect Critic

(c) The Imperfect Critic (d) Hamlet and His Problems

446. "The poet has none, no identity-he is certainly the most unpoetical of all God's creatures".

(a) T.S. Eliot **(b) Keats** (c) Walter Pater (d) F.R. Leavis

447. "Poetry is the first and last of all knowledge-it is as immortal as the heart of man. "Who makes this observation?

(a) Wordsworth (b) Matthew Arnold (c) Shelley (d) Philip Sidney

448. The first twelve line of a Shakespeare sonnet are arranged under one of these patterns. Which pattern?

(A) Three Quatrains

(C) Two Quatrains and two Couplets

(D) One Quatrain and four Couplets

(B) Six Couplet

449. In which poem Ezekiel calla himself 'a poet, rascal, clown'?

(A) Background Casualty

(B) Night of the Scorpions

(C) Philosophy

(D) Poem of the Separation

450. The Statute of Pleadings makes English the official language of the English Parliament in

(A) 1755

(B) 1362

(C) 1611

(D) 1879

*******ALL THE BEST *******

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