



# UGC-NET

Paper - 1

NATIONAL TESTING AGENCY (NTA)

**PAPER – 1 || VOLUME – 1**

**Teaching & Research Aptitude, Comprehension  
& Communication**



# UGC NET PAPER – 1

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# 1 UNIT

## Teaching Aptitude



### Chapter -1 Teaching

#### Teaching Definitions

Teaching is the actions of a person who is trying to help others to reach their fullest potential in all aspects of growth and development. Teaching would result when the teacher indulges in any activity with the aim that students would learn something as a result of it.

Teaching is an activity related to the effective transfer of knowledge and skills in any person/student. It limits or enhances the ways a student learn concepts and ideas.

Teaching is defined as 'facilitation of learning' or in other words, the main objective of teaching is to facilitate learning.

- **Swami Vivekananda** defines education as the manifestation of perfection already in man. According to Swami Vivekananda, the feel of "I am" could be developed through Services. He also stated that "Education must provide 'life-building, man-making, character-making assimilation of ideas'".
- **Vivekananda said:** "The education which does not help the common mass of people to equip themselves for the struggle of life, which does not bring out the strength of character, a spirit of philanthropy, and the courage of a lion – is it worth the name?"
- **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'.
- When a person imparts information or skills to another, it is common to describe the action as teaching.
  - Imparting may mean to share experiences or communicating information, for instance, lecture.
- Teaching is regarded as both an art and science.
  - As an art, it lays stress on the imaginative and artistic abilities of the teacher in creating a worthwhile situation in the classroom to enable students to learn.
  - As a science, it sheds light on the logical, mechanical or procedural steps to be followed to attain an effective achievement of goals.

- Different educationists hold different ideas regarding the concept of Teaching.
- “Teaching is intimate contact between a more mature personality and a less mature one which designed to further the education of the latter”. Morrison (1934) and Dewey (1934) expressed this concept of teaching by an equation. “Teaching is learning as selling is to buying”.

### According to Morrison

“Teaching is a disciplined social process in which teacher influences the behaviour of less experienced

Pupil and helps him to develop according to needs and ideas of society”.

**According to Smith-** “Teaching is an organised system of specific activity aim to help the learner, to learn Something “.

**There are 3 processes involved in teaching: -**

1. Agent or source producing the learning
2. Goal or the target to be achieved
3. Intervening variables

### According to Gage (1963)

“Teaching is a form interpersonal influence aimed at changing the behaviour potential of another person”.

**Types: -**

1. **Autocratic method – (Teacher centric)**
  - Teacher decides everything
  - No feedback between more mature & less/no mature one.
2. **Democratic Teaching – Best Method**
  - Definition- Student centric
  - Feedback is always done
3. **Laissez – Faire Teaching – Put your hands off**
  - Teacher is not concerned with students.

- Teacher is expecting that students do everything by their own.
- This method is subject centric.

## Basic Teaching Models (2019)

### Pedagogy Model (2021, 22, 23, 24)

Pedagogy relates to the learning journey of children & involves best practices to help children learn Effortlessly.

Pedagogy is referred to as the science of teaching and impacts the learning processes of students. It is Focused on building on the previous knowledge of the students. In this, the teacher plays a major role To go ahead in the syllabus and solve the problems. It encourages the students to learn concepts and Apply them in real-life situations apart from their books.

Pedagogy is a way of imparting knowledge and skills in the educational context. It plays a very Important role in the early education of children. The teachers must make sure that the students are in a good learning atmosphere for better learning outcomes.

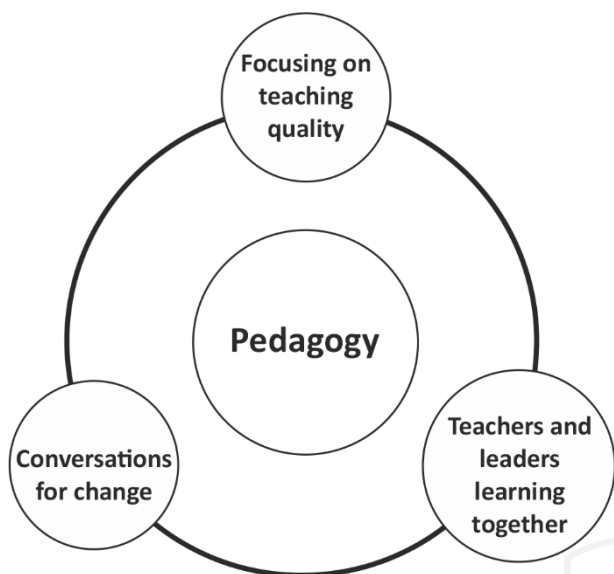
- Art & Science of Teaching School Children
- A teacher-centered approach with fixed design
- Teacher’s guidance and monitoring of learning is done here

### Elements of pedagogical skills :

1. Content knowledge
2. Teaching strategies
3. Student’s understanding of conceptions of subject matter & learning
4. 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.

## Components of Pedagogical analysis :

1. Object formulation
2. Selection of teaching methods & materials
3. Content analysis
4. Selection of evaluation devices



According to Herbart, the sequence of elements of Pedagogy of teaching and learning are :

1. Preparation
2. Presentation
3. Association
4. Generalization
5. Application

### 1. Preparation:

- In this step, we prepare the learner's mind to receive new knowledge.
- It is about creating a productive or rich ground for learning by relating new content to previous knowledge and experiences.

### 2. Presentation:

- In this step, fresh or updated knowledge is presented to the learner.
- This may be in the form of a lecture, a demonstration, a text, a real-world problem, or a thought-provoking question.

### 3. Association:

- In this phase, learners are inspired to connect new knowledge with what they already know, forming associations that help to insert the new knowledge into their mind or mental schema.

### 4. Generalisation:

- This stage involves filtering a general principle or rule from the learning experience. It's about abstracting the key insights from specific examples or experiences.

### 5. Application:

- In the final stage, learners are motivated to apply their new knowledge or skills to different situations. This helps to strengthen the learning and make it more robust.

### Properties :

1. Related to school level children
2. Teacher-centered
3. Evaluation is done by teachers
4. Motivation is extrinsic (external)
5. Completing for grades only

### Critical Pedagogy:

It is a unique teaching approach that tries to help students question and challenge control and the beliefs and practices that control.

In other words, it is a theory and practice of helping learners in achieving critical consciousness.

### Andragogy Model

Andragogy is a learning theory for adults who learn by themselves. It means that the student is self driven and does not require much guidance. They make use of various resources which help them get through major challenges and issues in learning. In this format students' experience of learning plays an important part and helps them to improve in the subject.

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It cannot be said that there won't be any role of a teacher but the guidance will be limited to discussing their experiences and progress and understanding problem solving.

- **Four Main Aspects of Andragogy-**

1. Learners must be involved in their planning and evaluation.
  2. The subjects must be based on real-life to drive the learners.
  3. Must have experience in learning.
  4. The learning process of students should be problem-centric.
- Adult Education
  - Learner's are self-directed & self-evaluation is done
  - Role play and simulation is done here
  - Learners are independent and strive for self-direction in learning
  - Help students only when they ask
  - Motivation stems from moral, confidence and recognition that comes from successful performance
  - The teachers facilitate the learning of students and help them by offering chance to learn themselves and acquire new knowledge and develop new skills.
  - It is based on a humanistic conception of self-directed and autonomous learners where educators or guides are defined as facilitators of learning.
  - It is completely different from pedagogy, which is the teaching of children.
  - Adults learn best through their previous experience, that includes making mistakes.
  - For adults to develop a readiness to learn, they always need to know the effect the subject/topic they're learning will have on their personal lives, careers, or sociability.
  - This method ignores the role of learning in communities (Disadvantage)

### Techniques for Andragogy Instructions :

1. Role Play
2. Storytelling
3. Microlearning
4. Immersive learning

### The following are some key principles of andragogy:

- **Self-directed:** Adult students choose to be self-directed and take control of their own learning, rather than being told what to learn.
- **Experienced:** Adults bring a wealth of life experiences and knowledge or understanding to the learning process, and this should be valued and leveraged.
- **Relevance:** Adults are more motivated to learn something new when the content is related to their personal or professional needs.
- **Problem-centered:** Adults are generally motivated to learn by real-world problems or challenges, and always ready to learn through problem-solving and practical applications.
- **Internal motivation:** Adults are internally motivated or self-motivated to learn, driven by personal goals and needs, rather than external rewards or consequences.

### Heutagogy Model

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- Self determined learning
- Learners are highly autonomous
- Double loop learning is done here
- Management of learning for self-managed learners
- Focus on development of autonomy, capacity & capabilities
- It is not planed & not linear

## 1. Heuristic Method

- Based on trial-and-error theory of psychological principle. It needs logical and imaginative thinking.
- In this method teacher give questions to students and ask them to find solution from various techniques like library, lab etc.
- Its aim to develop problem solving attitude of student.
- It helps in all round development of learner.
- Students need higher intelligence.
- Topics must be related to course.

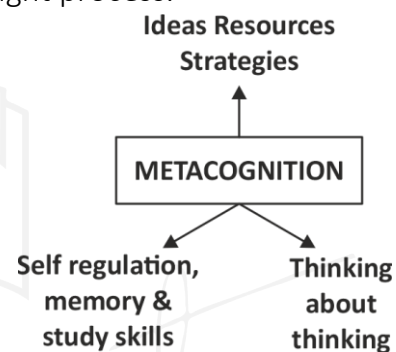
## Cognition (2021-22,23,24)

- Cognitive development means thinking, understanding, and concept formation.
- It include cognitive processes such as knowing, thinking, remembering, recognizing, categorizing, imagining, reasoning, decision-making, and so forth.
- It refers to the mental processes used in gaining knowledge and comprehension.
- These cognitive processes involve thinking, knowing, remembering, judging, and problem-solving.
- These are higher-level functions of the mind and encompass language, imagination, perception, and planning.
- According to Piaget, learner's understanding of the world expands as they come in contact with new ideas and challenges. Learners construct their own knowledge through interaction with their surroundings.
- The cognitive theory of learning elaborates why the brain is the most incredible network of information processing and interpretation in the body. The processes that go inside the brain are important to be acknowledged.

- This is the reason cognitive theory is important. It declares that knowledge of internal processes is important to understand learning.
- Groups of learning strategies that are more task-specific, are called cognitive.

## Meta Cognition (2022,23,24)

- It is a type and application part of cognition.
- Scientific study of individual cognition.
- It always makes a difference in how well & quickly student's learn material.
- Awareness & understanding of one's own thought process.



### Meta cognition Practices

1. Setting goals
2. Monitoring processes
3. Reflecting on their learning strategies
4. Regulation
5. Strategic planning
6. Problem solving & critical thinking
7. Reflection & evaluation

### In self-directed learning, meta cognition knowledge includes :

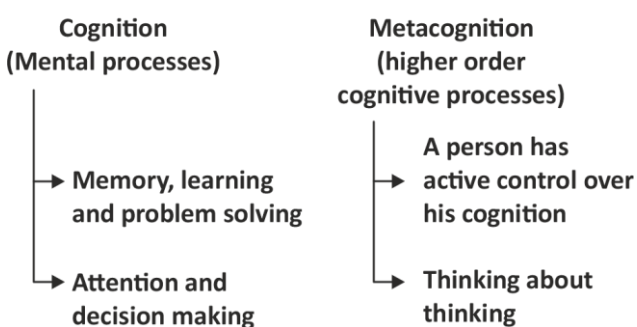
1. Content knowledge
  2. Factual knowledge
  3. Procedural knowledge
  4. Declarative knowledge
  5. Conditional knowledge
- Meta cognition to the processes that allow one to guide, regulate and supervise our own learning activities. It refers to the capability to think about one's own thinking processes.

- It always includes being aware of and understanding one's cognitive processes, that include planning, monitoring, and evaluating one's own learning and problem-solving activities.
- Developing metacognitive skills includes enhancing students' awareness and control over their own learning process.
- This motivates them to think about their thinking (metacognition) and helps them become more conscious of their learning strategies, strengths, and areas for improvement.

**Important components of metacognition include:**

- **Planning:** This component involves setting goals, choosing strategies, and organizing the steps required to achieve a particular learning objective.
- **Monitoring:** During learning or problem-solving activities, individuals with strong metacognitive skills regularly assess their progress and growth. They always check whether their current strategies are effective and make adjustments if necessary.
- **Evaluation:** After completion of a task or learning activity, individuals reflect on their performance. They evaluate the success of their strategies and consider what could be done differently in the future.

**Cognition Vs Meta-Cognition**



**Characteristics of Teaching**  
(2012, 2017, 2019, 2021)

The characteristics of teaching are as follows -



1. Teaching is an effective interaction between teacher and students.
2. Teaching is both arts as well as science. Teaching is an art as it calls for the exercise of talent and creativity. Teaching as science involves a repertoire of techniques, procedures and skills, that can be systematically studied, described and improved. A good teacher is one who adds creativity and inspiration to the basic repertoire.
3. Teaching has various forms, like formal and informal raining, conditioning or indoctrination, etc.
4. Teaching is dominated by the skill of communication.
5. Teaching is a triploid process; the three poles are, educational objectives, learning experiences and change in behavior.
6. Teaching should be well planned and the teacher should decide the objectives methods of teaching and evaluation techniques.
7. Teaching is suggesting and not dictating.
8. Good teaching is democratic and teacher respects the students, encourages them to ask questions, answer questions and discuss things.
9. Teaching provides guidance, direction and encouragement to the students.
10. Teaching is a cooperative activity and teacher should involve students in different classroom activities, such as organization, management, discussion, recitation and evaluation of results.



11. Teaching is kind and sympathetic, and a good teacher develops emotional stability among children.
12. Teaching is remedial, and the teacher must solve the learning problems of students.
13. Teaching helps children to make adjustments in life.
14. Teaching is a professional activity that helps to bring about harmonious development of children.
15. Teaching stimulates students' power of thinking and directs them towards self-learning.
16. Teaching can be observed, analyzed and evaluated.
17. Teaching is a specialized task and may be taken as a set of component skills for the realization of a specified set of instructional objectives.

## Teaching Style

1. Formal Authority
2. Demonstrator
3. Facilitator
4. Delegator

### 1. Formal Authority

- Autocratic i.e. [Teacher centered]
- Focus on content only
- Teacher gives into a student receives.

### 2. Demonstration of Personal model Teaching

- Teacher centered
- Focus on Demo & modeling

**Ex.** lab experiment

- Teachers give demonstration and Students learn from them. Students are allowed only to view

### 3. Facilitator

- Who support / help in completion of task
- focus on activity

- Student centered, Example: Students done experiment in the lab by their own.
- Done group activities for student collaboration, active learning and problem solving.
- Activity is learning through role-play, games etc.

### 4. Delegator

- have control or responsibility of learning on students (single / group)
- Ex. - school Projects made by students only. Teachers give only topics.
- used in higher education
- Teacher work as consultative role, is help students in problem solving only.

## Different levels of Teaching

**(2014, 2015, 2018 -2022)**

The teacher has to choose the level of teaching based on the concepts and the intensity of the subject matter. A teacher takes different roles in a classroom based on the situation. Let us explore the levels of teaching.

We all know that teaching is a purposeful activity. Through teaching, a teacher brings a desirable change in the learners. Both the concepts of teaching and learning are interrelated to each other. The development of the 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 one (student). Here the main aim is to bring change in the behavior of the student.

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.

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## These Three Levels are as Follows -

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1. **Memory level-** Thoughtless teaching
2. **Understanding level-** Thoughtful teaching
3. **Reflective level-** Upper thoughtful level

### 1. Memory Level of Teaching (MLT)

- The objective of the Memory Level of teaching is just to impart information or knowledge to the learner. This knowledge or information is factual in nature, which is acquired through a mechanical process (i.e. memorization or rote learning).
- Memory Level of teaching covers only the knowledge-based objective of Bloom's taxonomy where the students learn to identify, recall or remember the objects, events, ideas and concepts and retain them in memory.
- Memory level teaching lacks insight. Psychologically, it is cognitive level teaching.

#### (A) Memory level by Herbart

- Initial stage of teaching (Base) (Lowest level)
- Rote learning Ex Nursery class me bacho ko A, B, C, D, ratta marwate hai.
- Stimulus - Response is done
- Evaluation is done oral and written.
- It does not improve intelligence and increase students capability but is required for other types of teaching levels.

#### (B) Important Points of Memory Level of Teaching (MLT)

- It is supported by Herbart Theory of Appreciation, which states that this level of teaching seeks the learner to acquaint himself with the relationship between the facts and symbols.

- It is the first stage of teaching to get factual information. Useful for children in the lower classes because of their intellect is under development and they have a rote memory.
- MLT aims to get factual information, to train memory, to retrain the learning material in-memory storage, to reproduce and recognize the learned information when required
- Teacher dominated methods are used- like drill, review, and revision and asking questions.
  - The evaluation system mainly includes oral, written, and essay-type examinations.
  - Good memory includes rapidity in learning, stability of retention, rapidity in recalling, and ability to bring only desirable contents to the conscious level.
  - Memory level teaching acts as the first step for understanding and reflective levels of teaching. It is a pre-requisite for understanding level teaching.

#### (C) Merits/ Advantages Memory Level of Teaching

- Useful for young children
- Useful for the acquisition of facts, information of models and structure
- Help children learn a new concept
- Useful for slow learners

## (D) Demerits / Disadvantages of Memory

### Level of Teaching

- Not suitable for higher classes
- Use of rote memory
- Dominance of teacher
- Little interaction in the classroom
- No room for initiation and self-learning for the students
- Not intrinsic motivation
- Problem of classroom management
- Loss of recall and retention.

## 2. Understanding Level of Teaching (ULT)

- It comes in between the memory level and reflective level. This stage of teaching involves a moderate level of thoughtful behaviour. It is a pre-requisite for the reflective level teaching-learning, which requires the use of higher mental processes. The term "understanding" literally means to comprehend, to grasp, and to have knowledge of, to learn, to interpret and to infer, etc.
- Morrison very clearly stated that understanding is not merely being able to recall something; it is not mere generalization deduced from specific facts; it is an insight into how it may be used in future situations. Morrison asserted that the outcome of all teaching is 'Mastery' and not memorization of facts. He proposed a unit plan, each unit representing an insight which is relatively complete in itself.
- Understanding level teaching (ULT)
- Develop intellectual behavior
- Memory + insight

- Evolution method = written + objective
- Means perceive the meaning your lifetime.

**Example:** - In MLT we rote everything and never try to get the meaning but in ULT we try to understand the meaning of every word and try to use them.

- So, it is somehow based on MLT.
- Focus on mastery of subject (subject centric)

### (A) Important Points

- Morrison is the main proponent of understanding level of teaching.
- It is 'memory plus insight' as it goes beyond just memorizing facts.
- It focuses on the mastery of the subject.
- It makes pupils understand generalizations, principles, and facts.
- It provides more and more opportunities for the students to develop 'intellectual behaviour'.
- It provides an active role for both the pupil and the teacher for the assimilation of facts.
- The evaluation system mainly includes both essay and objective-type questions.

### (B) Merits/ Advantages of Understanding Level of Teaching (ULT)

- Effective learning
- Development of different cognition abilities
- Sets stages for entering into the Reflective Level of Teaching
- Effective classroom interaction

### (C) Demerits or Disadvantages of Understanding Level of Teaching (ULT)

- Ignores higher cognitive abilities
- Less emphasis on intrinsic motivation
- No individualized learning
- Teacher centered

### 3. Reflective Level of Teaching (RLT) (2016)

- This Level of teaching is the highest level of teaching # learning activity. It is the stage of learning when students do not merely repeat and revise or answer the questions as asked for; nor do they only understand, learn, interrelate or interpret the concepts but also, they ponder upon, contemplate and pay serious thoughtful consideration to the presented contents.

#### (A) The main objectives of Reflective Level of Teaching are

- To develop insight into the learner to solve problems.
- To develop rational and critical thinking in the students. To develop the ability of independent thinking and decision making in the students.

#### (B) Important Points

- Hunt is the main proponent of reflective level of teaching.
- It is the highest level of teaching and includes both TILT and MIT Select Language
- It is problem-centric approach of teaching.
- It is the highest level of teaching and includes both ULT and MLT.
- It is problem-centric approach of teaching.

- The students are assumed to adopt some sort of research approach to solve the problem.
- Classroom environment is to be sufficiently 'open and independent. The learners are self-motivated (intrinsic) and active.
- The aim is to develop the reflective power of learners so that they can solve problems of their lives by reasoning, logic, and imagination, and lead successful and happy lives.
- The pupil occupies the primary place and teacher assumes the secondary place.
- Essay-type test is used for evaluation. Attitude, belief and involvement are also evaluated.

#### (C) Merits or Advantages of Reflective Level of Teaching (RLT)

- It is the most thoughtful mode of operation.
- Learner-centered approach
- Development of problem-solving ability
- Useful for gifted children.
- Provides maximum flexibility
- Self-motivation
- Development of creativity

#### (D) Five steps of understanding level of teaching (according to Morrison)

**2022,23**

1. **Exploration** - In this step, the teacher tries to know the student's "entry-level behavior (previous knowledge)
2. **Presentation** - The overview of the subject matter is given and the structure of the whole unit is discussed with the students.

3. **Assimilation** - In this step, the students study the subject matter deeply and try to relate the presented material to their internal selves.
4. **Organization** - The students present the acquired knowledge in a systematic manner without the help of a teacher.
5. **Recitation** - This step is related to the students' verbal expression of the subject matter which is learned by them. They revisit the whole content.

#### (E) Demerits of Reflective Level of Teaching

- It is not suitable for lower classes
- It is a time-consuming process.
- It is not applicable for dull students.
- There is an excess burden to the teacher

#### (F) Reflective level (RLT) - or Introspective level

- Problem centered - Teaches how one can solve - real life problems.
- Based on ULT + MLT (Student Centric)
- Open and independent in class environment.
- Attitude + belief + involvement is evaluated mostly using essay type.
- **Ex.** In SSC and other exams, we have to write an essay. This is because examiner wants to know our mentality, thinking level.
- Highest level- Thinking deeply about something
- Role of teacher is Democratic

## 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 behavior. 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. 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 call** and the mental development of students happens 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 in fact school has changed** - 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 nothing** - 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 learner's logical order is emphasized more.
9. **From analyses to synthesis** Initially the students have little or vogue knowledge about the topics follow stop analyses means dividing problems into its constituent parts, and then these are studied very nice synthesis means to understand by connecting the knowledge acquired through analyzing the parts full stop a teacher should use analytics very nice synthesis means to understand by connecting the knowledge acquired through analyzing 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 sensors, like side, hearing Kumar test Kumar smell and touch are gateways to knowledge. It is better if all are maximum of these sensors can be applied in teaching.
12. **Encouragement to self-study** - Dalton's system is based on self-study

## Bloom's Taxonomy

(2019, 20, 21, 22)

- Bloom's Taxonomy is a categorization that defines different levels of intelligence including thinking learning, and understanding. Institutes make use of bloom's taxonomy to improve curriculum assessments, and teaching methods.

- Originally introduced in 1956, Bloom's taxonomy was a concept created by Mr. Benjamin Bloom along with Mr. Edward First, Mr. Max Englehart, Mr. David Krathwohl and Mr. Walter Hill. The concept or rather the educational model has categorized the levels of education as well as the skills that need to be imparted whenever a teacher teaches something.

## Three Domains of Bloom's Taxonomy

### 1. Cognitive Domain

In the cognitive domain of Bloom's taxonomy, the major focus is given to the development of knowledge and intellectual skills. As per the complexity, there are six sub-heads of the cognitive domain.

- (i) Knowledge - Gaining knowledge about facts, figures, and basic concepts.
- (ii) Comprehension - Understanding the facts gathered during the knowledge stage.
- (iii) Application - Applying the knowledge and the concepts in the best way possible.
- (iv) Analysis - Analyzing the application, making conclusions, and understanding relationships between the different aspects of the application.
- (v) Evaluation - Judging and defending conclusions about the information generated from the application.
- (vi) Creation - Creating new results by planning, designing, developing the actual application.

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## 2. Affective Domain 2005

This domain of Bloom's taxonomy deals with the feelings and the emotions associated with the passage. It contains complex ideas and conscience, phenomena, and characters. Thus, it 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. The main aspects of the affective domain are as follows -

- **Reception** - Willingness to listen.
- **Response** - Willingness to participate.
- **Values** - Willingness to participate willingness to be involved.
- **Organization** - Willingness to be involved willingness to be an advocate of an idea.
- **Characterization** - Willingness to change one's behavior or way of life.

## 3. Psychomotor Domain

The psychomotor domain of bloom's taxonomy deals with coordination, sensory organ movement, and the physical movement of the body of a student. Basically, it deals with the acquisition of technical skills. A great practice is required to be good at these skills. The physical act of driving, playing the keyboard, guitar, are major examples of the psychomotor domain.

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## Five levels of psychomotor Domain

1. **Imitation** - It includes demonstration of a skill by a skilled person and the learners try to follow the same.
2. **Manipulation** - A learner tries to experiment various aspects, like manipulating machinery, equipment etc.
3. **Precision** - Accuracy in performing various acts increases with practice.
4. **Articulation** - Achieving a desired level of efficiency and effectiveness through practice.
5. **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.

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## Applications of Bloom's Taxonomy

- Finding meanings of words, phrases, idioms that are used in the paragraph using application and understanding.
- Concluding the passage and its points using evaluation and analysis.
- Gaining details and remembering them using understanding and remembering.
- Understanding the author's tone by using the concept of evaluation.
- Give a proper title for the passage using the concept of evaluation and understanding.

## CHAPTER – 2 Learner's Characteristics

(2012, 16, 17, 18, 19)

- Learning is strongly based on intellectual level, cognitive ability, perception, personality & attitude of a learner.
- Learners are bound to get influenced by social arena, cultural habits & willingness of person to adopt change.
- Can be identified by collecting info based on, their **cognitive, academic, emotional & social**



### Characteristics (4 heads of learners)

1. Related to memory, mental pressure a problem solving etc.
2. Emotional - include mood swings, self-consciousness etc.
3. Personal age, gender, language, maturation etc.
4. Social-social image, interaction etc.

### Learner's Characteristics (2018)

#### Learner's characteristics can be

- Psychological Personal - related to demographic info like age, gender, language, status, background etc. skills, disability etc.

- Academic - related to education like learning goals, prior knowledge, education type and level etc.
- Social/Emotional related to individual person in a group, eg place of individual in a group, social ability, self-image, mood etc.
- Cognitive - related to things as memory, mental prosodic and intellectual skills which determine, how a learner think, remember and solve problems in brain.
- Based on Human Behavior.
- Related to thoughts, feeling, idea, knowledge.
- Habit of Readiness, Exercise, Effect.
- Absence of anger and jealousy
- Slow beginning, gradual development.

### Categories of Learner's Characteristics

- Social & personal quality.
- Growth & development.
- Willingness to learn.
- Interest & attitude of learner.
- Easily adjustment to change.
- internal motivation.
- Social- cultural background.

### Characteristics of Adolescent learner

(2019, 2020)

<p><b>Academic</b></p> <ul style="list-style-type: none"> <li>• Demand the relevance in learning &amp; what is being taught.</li> <li>• Moving from concrete to abstract thinking.</li> <li>• High achievement when challenged &amp; engaged.</li> <li>• Prefers active over passive learning experiences.</li> <li>• Interest in interacting with peers during learning activities.</li> </ul>	<p><b>Social</b></p> <ul style="list-style-type: none"> <li>• Modeling behavior after that of older students, parents' other adults etc.</li> </ul> <p><b>E.g.</b> we try to copy the behavior of people around us.</p> <ul style="list-style-type: none"> <li>• At this age, we try to make a social position (image)</li> <li>• Adolescent learners love to make groups of with people having some big or mentality.</li> </ul>
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<p><b>Emotional</b> <span style="float: right;"><b>2017, 2018, 2019</b></span></p> <ul style="list-style-type: none"> <li>• Mood swings that are unpredictable.</li> <li>• High energy &amp; is se ye bad activity me bhi involve ho jate hai.</li> <li>• Needing to release energy with sudden outburst of activity. eg game playing ese hi kudna ete jis se inki energy use hogi Desire to become independent &amp; search you adult identity &amp; acceptance.</li> </ul>	<ul style="list-style-type: none"> <li>• Adolescent always feel frightened by MSE &amp; always thinks what will happen next.</li> <li>• linking gads &amp; being interested in popular culture.</li> </ul> <p><b>E.g.</b> Bollywood of Hollywood attacks us at this age.</p>
<p style="text-align: center;"><b>Emotional</b></p>	<p style="text-align: center;"><b>Cognitive</b></p>
<ul style="list-style-type: none"> <li>• Sell consciousness &amp; being sensitive to personal criticism.</li> <li>• Concern about physical growth &amp; maturity.</li> <li>• Belief that their personal problems, feelings &amp; experiences are unique to themselves.</li> <li>• Overreacting to ridicule embarrassment &amp; rejection.</li> <li>• An intense curiosity &amp; wide range of intellectual pursuit that are for long term. (cognitive)</li> <li>• We have to control &amp; direct adolescent learners &amp; this is done by family and teachers.</li> </ul>	<ul style="list-style-type: none"> <li>• An understanding of complexity of moral issues E.g. A very famous moral issue is that we say "If a cat cross over your path, then you should stop you're a while". Every adolescent learner focusses on such things &amp; started questioning.</li> <li>• Interested in democracy.</li> <li>• Impatient with the pace of change in society, family etc. They want to get things changed in a fast way &amp; according to them, all these changes are very easy to accept.</li> <li>• Ability to be self-reflective that means they implement everything.</li> </ul>

### Characteristics of Adult Learners

<p><b>Academic</b> <span style="float: right;"><b>(2018, 2020)</b></span></p>	<p style="text-align: center;"><b>Social</b></p>
<ul style="list-style-type: none"> <li>• Require big picture view of what they are learning. They need to know how small parts fit into larger landscape. <ul style="list-style-type: none"> <li>○ Adult Learners know how to get big things if we start preparing today.</li> </ul> </li> <li>• Are result oriented. They have specific expectations for what they will get out of learning &amp; if they know that goal then definitely, they will give up.</li> <li>• If not, they will give up like this.</li> <li>• Prefer practice rather than listening to lectures.</li> </ul>	<ul style="list-style-type: none"> <li>• Prefer a learning community with whom they can interact &amp; discuss questions &amp; issues.</li> <li>• Many learners have family issues &amp; responsibilities, it affects their learning.</li> <li>• Want to be treated with respect.</li> <li>• There is no need to control &amp; direct adult learners.</li> </ul> <p style="text-align: center;"><b>Emotional</b></p> <ul style="list-style-type: none"> <li>• Prefer a sense of control &amp; self-direction.</li> <li>• They like options &amp; Choice in their learning environment.</li> </ul>

<p><b>Cognitive</b></p> <ul style="list-style-type: none"> <li>• Take responsibility for their own success in failure.</li> <li>• Pre-self-motivated &amp; ready to earn &amp; are more intellectually stable.</li> <li>• Are autonomous &amp; self-directed.</li> <li>• Want to apply new knowledge &amp; skill immediately.</li> </ul>	<ul style="list-style-type: none"> <li>• May acquire psychomotor skills more slowly &amp; have more - difficulties reading small font &amp; images.</li> <li>• Adults may year a subject, have anxiety or feel anger about forced changes in job responsibility.</li> <li>• They like to gain competence in workplace skill as it boosts confidence &amp; self-esteem.</li> <li>• Adjustment to change - Not easy.</li> </ul>
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**Individual Differences**

- Rate of development is not same for all individual.
- Learning is most effective when differences in learner’s language, culture, social behavior are taken into a/c.
- ID is the weave rate of growth & development among individuals.
- **Major Factors of Difference in Individuals**
  - [Heredity & Environment] with the help of these two factors, it becomes easier for us to find individual differences.
- **Heredity Types**
  - Physical condition - tells us about reacting time speed of action etc. Born handicapped (Deaf, no leg / arm etc.)

**Aptitude & Special Talent**

**Talent in music, acting, science etc.**

- Gender, e.g. males are aggressive, etc. Females are passive, sensitive etc.
- Age
- Temperament
 

**E.g. 1** A is emotional in every situation & B is not so it may create difference in learning speed & other factors.

**E.g. 2** Stability + maturity + negative and positive mentality i.e. person with negative thinking will not be able to cope

up but person with the thinking learns fast. Somehow it is related to heredity.

**Introversion**

**Eg. Calm personality**

**Extroversion**

**Eg. Loud, talkative person.**

- Introversion like to work in peace, quite & with less contact of people.
- Extroversion enjoy interaction & always want to lead a group, like teamwork.
  1. Effort Making Capacity - It may be different in two individuals.
 

**E.g.** person A makes an effort to learn driving but person B don't. so there results will be different.
  2. Criminal Tendency - If person has criminal background then you sure A’s mind always work on a different path. That why A’s learning will be slow.

**Environment Type**

1. Family Background.
2. Community Background.
3. School Background.
  - Teacher should be sensitive to individual differences.
  - It is wrong to expect uniformity in students.
  - Not everyone has equal level of capabilities.

## (CTM)

- All student cannot be benefited by particular method or instruction so a teacher should focus to change on his methods of teaching so that no student will suffer.
- A teacher must work to maximize the growth of each child.

## Memory (2023,24)

Memory refers to the capability to keep or retain information and reproduce it over a period of time when required to perform a cognitive task. It has been conceptualized as a process comprised of three stages: (i) Encoding, (ii) Storage, and (iii) Retrieval.

- **Implicit Memory: A Non Declarative Memory**
  - Long Term Memory
  - Unconsciously formed & retrieved without conscious awareness

### Subdivisions of Implicit (Unconscious) memory

1. Classical Conditioning Effect
  2. Priming
  3. Procedural Memory
- The information people don't deliberately try to remember or recall gets stored in implicit memory, which is also sometimes referred to as unconscious or automatic memory.
  - This type of memory is both unconscious and unintentional. Implicit memories are non-conscious and not verbally articulated. It is procedural and focused on the step-by-step processes that must be performed in order to complete a task.
  - Procedural memories, like, how to perform a specific task like swinging a

baseball bat or making toast, are one type of implicit memory.

- It does not include steps to be recalled.
- It is retrieved automatically.
- This can influence our behavior.
- This kind of memory was found in many patients suffering from brain injuries.
- **Explicit Memory: A Declarative Memory**
  - It is a Long Term memory that involves consciously formed awareness & intentional recall of facts, events & knowledge.
  - If we try to remember or learn something intentionally, this information is stored or captured in our explicit memory.
  - One can use these memories every day, from remembering information for a test to recalling the date and time of a doctor's appointment. It is also known as declarative memory it is consciously recognized and explained.
  - It refers to the conscious recollection of events that happened previously.
  - It is synonymous with recall and recognition.
  - It is a Consciousness aspect of Explicit memory.
- **Episodic memory:**
  - A type of explicit memory.
  - Recollection of specific events, experiences or episodes in one's life.
  - Time, place, emotions, people are involved.
  - It allows us to remember and recall past events & recall them consciously.
  - These are long-term memories of particular events, such as what you did yesterday or your high school graduation.

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- It involves to biographical details of individuals.
  - This type of Memories are related to our personal life experiences.
  - One's Own experiences are part of episodic memory.
  - **Semantic memory:** It is a memory of facts, concepts, names, and other general knowledge.
  - **Retroactive Memory:**
    - New information interferes with the potential to recall previously learned information.
    - It is always Unconsciously formed & retrieved without conscious awareness
- **Eidetic Memory:**
    - Recall Visual Images
    - Photographic Memory
  - **Procedural Memory**
    - It is long-term memory.
    - It refers to memories relating to procedures for accomplishing various tasks and skills.
    - For example, how to ride a bicycle, how to make tea, etc.
    - The contents of procedural memory cannot be described easily.
    - Motor skills are related to procedural memory.

