

What is Taxonomy ?



Taxonomy is the practice and science of classification.



PREREQUISITI

- Differentiate...
- Aim
- Objective
- Specification SOC



Aim

An aim is an ultimate goal, which an individual strive to achieve.

Long term, general in nature, limited in number.

Lacks time frame & measurability.

Influenced by the school as well as the society.



Objective

- An objective is a statement that describes what the pupil will do or be able to do once the instruction has been completed.



Objective

- Short term immediate goal & reality.
- Specific in nature & more in number.
- Strict time frame , measurable.
- Mainly accomplished in schools.



Specific Objective

□ Measurable observable change in behaviour of the learner with the presentation of learning experience by the teacher is known as specifications or specific outcome of learning (*sol*).



Specific Objective

- Learning Experiences are the **stimuli** and **responses** of the students are the specifications.
draw, explain, list etc.

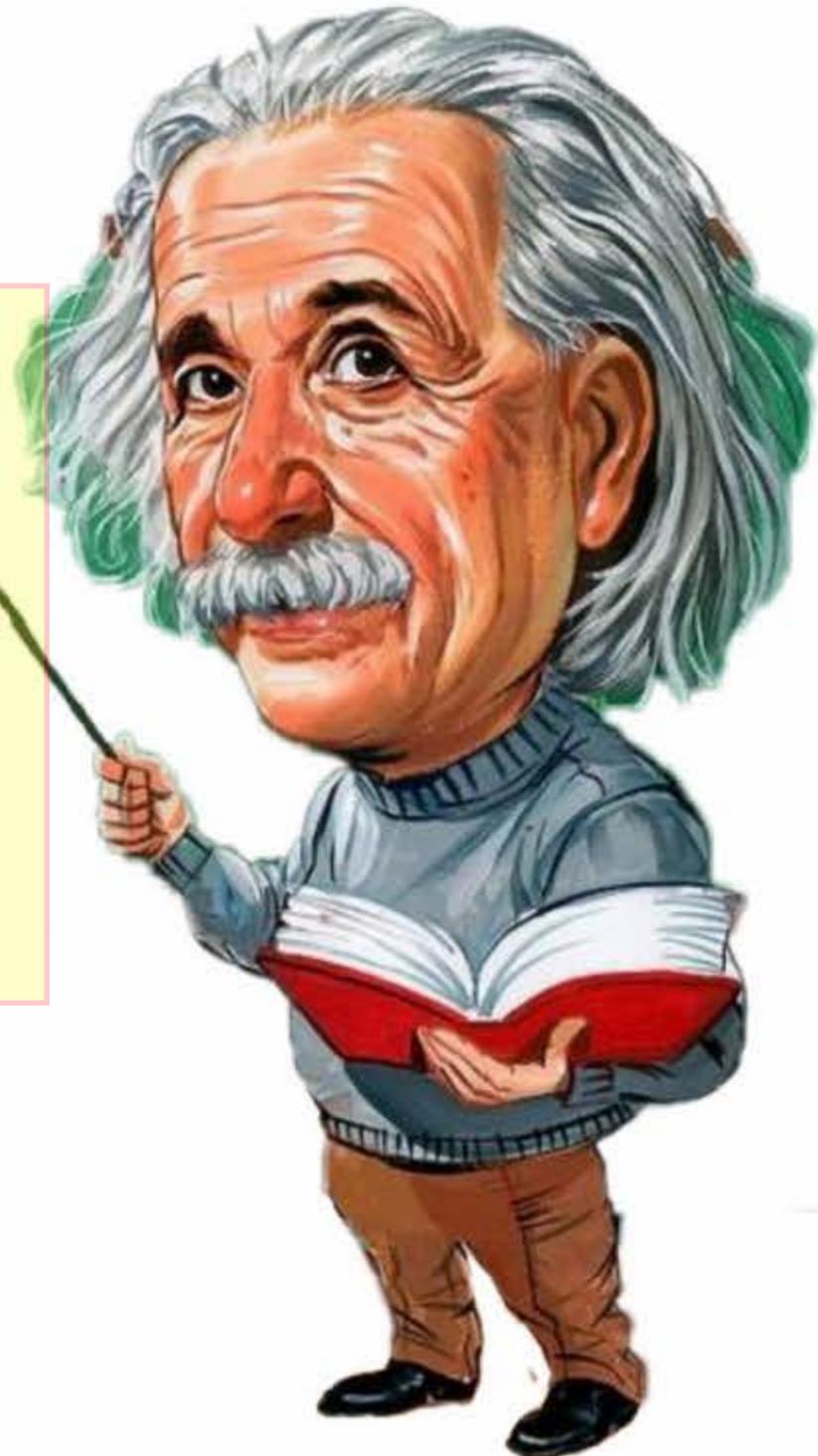


Education is not the learning of facts, it's the training of mind to think creatively & act purposefully.



ALBERT EINSTEIN

Education is not the learning of facts, it's the training of mind to think creatively & act purposefully.



BLOOM'S TAXONOMY OF EDUCATIONAL OBJECTIVES



BENJAMIN S BLOOM

American Educational Psychologist

Born: 21st February 1913, Pennsylvania, United States

Great works : Taxonomy of Educational Objectives



BLOOM (1956) UNIVERSITY OF CHICAGO

Proposed classification of educational objectives.

The objectives of all type of instructions are to bring about desired behavioural changes in learners.

Bloom & his co-workers systematically organized these behavioural changes under 3 categories/domains.



BLOOM'S TAXONOMY

The implications of Bloom's taxonomy is to motivate educators to focus on all 3 domains , satisfying a more holistic form of learning.



BLOOM'S TAXONOMY

All behavioural changes fall under 3 domains

- Cognitive domain
- Affective domain
- Psychomotor domain



BLOOM'S TAXONOMY

Within each domain the instructional objectives are arranged in sequential development of abilities in a hierarchical, logical and psychological order..
ie simple to more complex level
lower to higher order abilities



COGNITIVE DOMAIN

(Knowing)

The cognitive domain involves knowledge and the development of intellectual skills.

It deals with how we acquire, process, and use knowledge. It is the "thinking" domain.



AFFECTIVE DOMAIN (Feeling)

This domain focus on the behavioural changes in the feelings and values of the learners.

It typically target the awareness and growth in emotion, interest, attitude, appreciation & values



PSYCHOMOTOR DOMAIN (Doing)

It is the "doing" domain.

The objectives focuses on neuro-muscular coordination.

It deals with the action or performance level viz speed ,

accuracy, consistency etc.

It aims in developing proficiency in performing manipulative or motor skills.

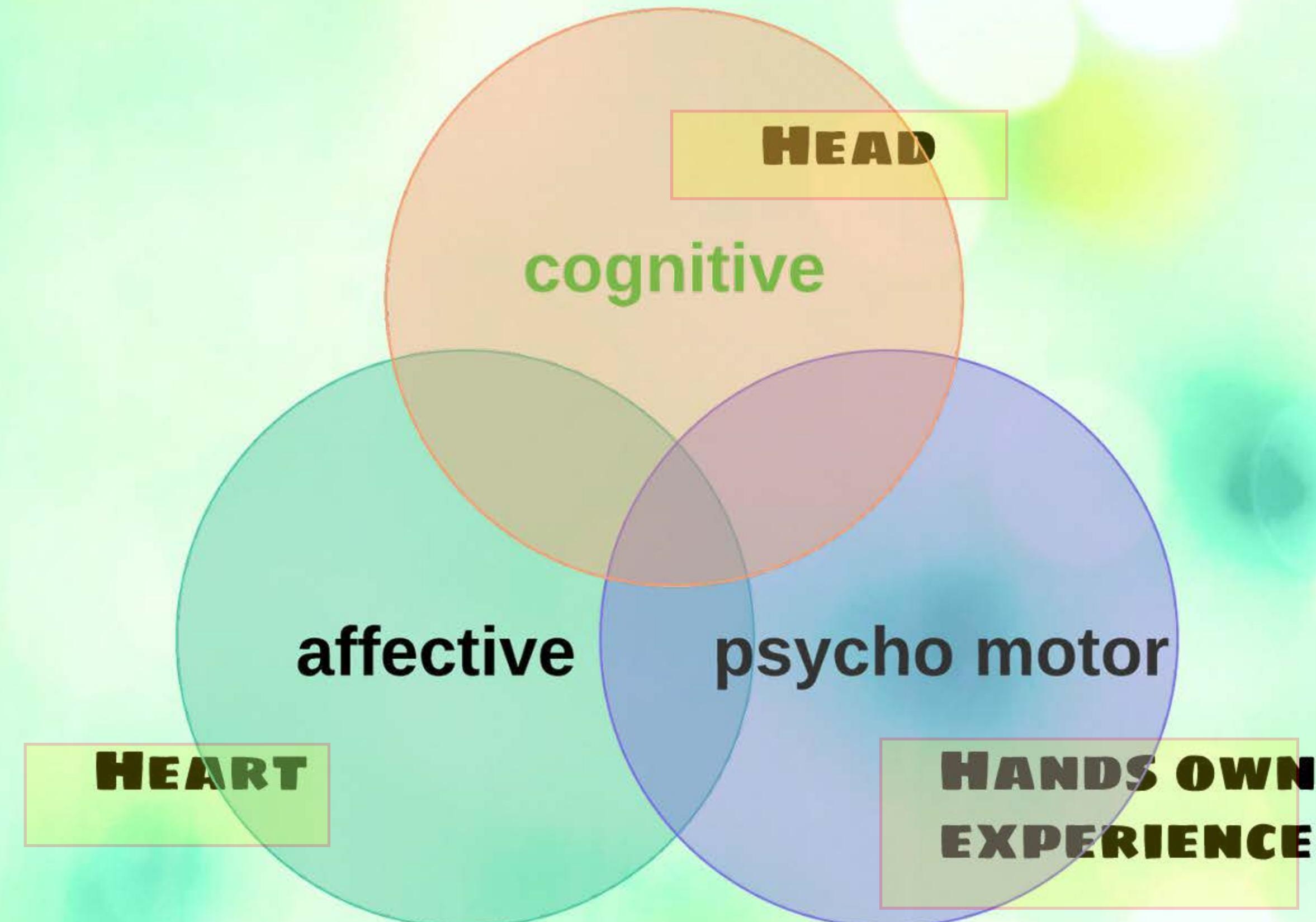


These 3 domains of learning do not occur in isolation
but rather works together to make up one whole being.

The inter relationships & mutual dependence of three domains can be diagrammatically represented as



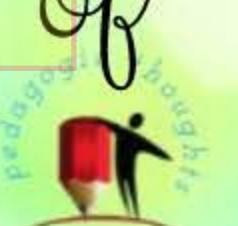
BLOOM'S TAXONOMY



The harmony of these 3 domains ensures fruitful outcome of learning.

For eg: Titration

- Knowledge level to which one must pipette and type of indicator used etc. belongs to **cognitive domain**.
- Muscles co-ordinate to pipette and operate burette ,**speed accuracy & precision** determines the **psychomotor skill**.
- Interest & attitude towards work and appreciation of the findings are **affective aspects**



COGNITIVE DOMAIN



COGNITIVE DOMAIN

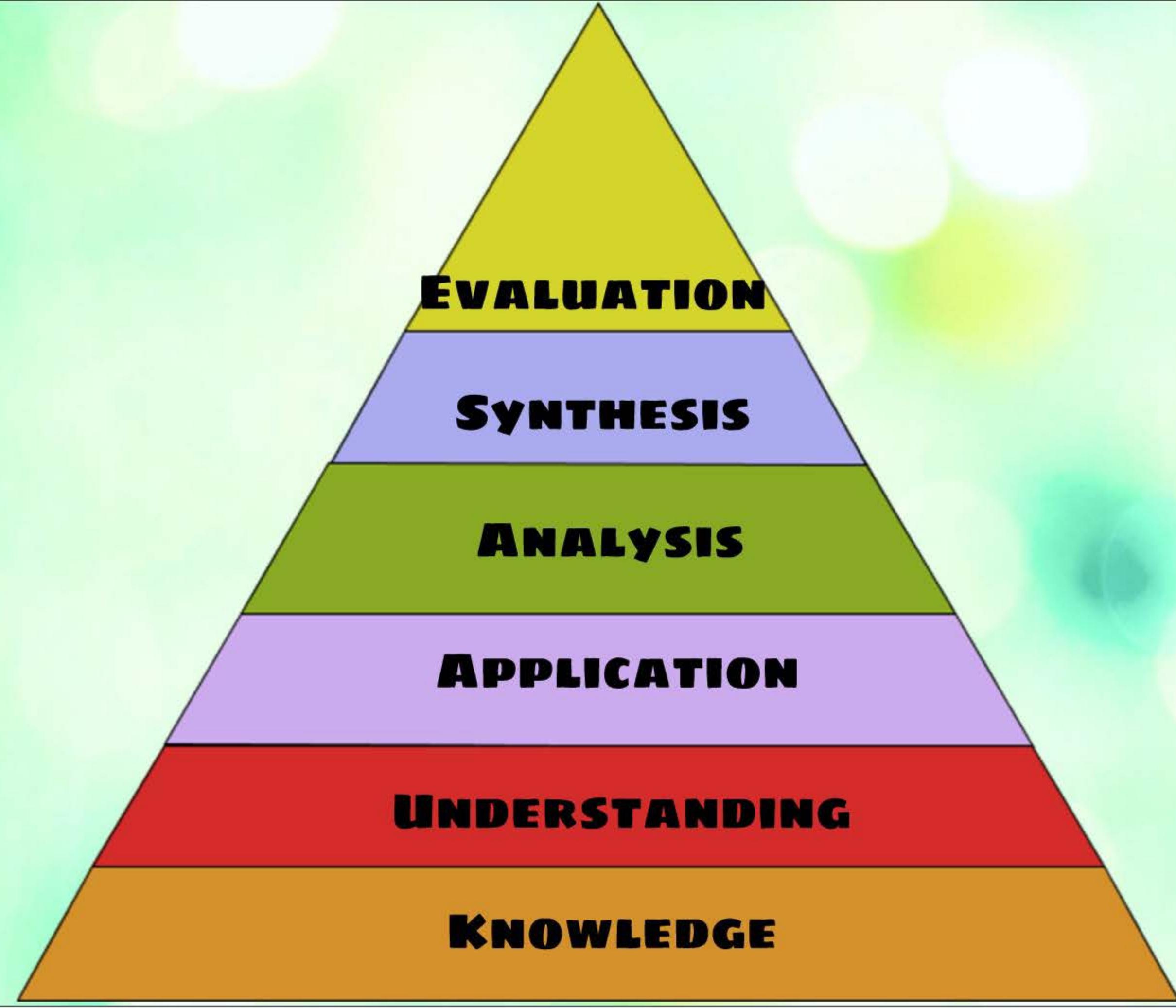
The cognitive domain represents the **intellectual components of mental processes.**

This domain deals with **knowing, thinking , problem solving etc.**

This domain focuses on six major categories of objectives arranged in the hierarchical order, simple to complex.

The **6 categories are**





KNOWLEDGE

- ❖ Lowest level of cognitive model.
- ❖ It involves the remembering either by recall or recognition of ideas, materials, structure, pattern etc.

Eg: Knowledge of specific dates, events, persons, places etc.



KNOWLEDGE

Specifications/ Action verbs.

- recall
- recognize
- identify
- name
- label
- retrieve
- locate
- quote
- find
- list



UNDERSTANDING / COMPREHENSION

- ❖ Understanding of facts, ideas & concepts by comparing , translating, summarizing, interpreting etc.
- ❖ The individual is expected to go beyond the level of recall & recognition by intellectual processing of information.



UNDERSTANDING / COMPREHENSION

Three types of comprehensive behaviour

- Translation
- Interpretation
- Extrapolation



Transalation :

The material to be communicated is rendered from one language to another especially regional.

It is judged on the basis of faithfulness and accuracy, ie on the extent to which the material in the original communication is preserved although the form of communication is altered.



Intrepretation :

The explanation or summarization of a communication,
ie it involves a reordering , rearrangement or anew view of
the material.



Extrapolation :

The additional inferences...

The explanation of trends or tendencies beyond the given

data to determine implications, consequences which are in

accordance with the conditions described in the original

communication



UNDERSTANDING / COMPREHENSION

Specifications/ Action verbs.

- **describe**
- discuss
- report
- explain
- summarize
- paraphrase
- review
- interpret



APPLICATION

- ❖ Application of the acquired knowledge in real life situations.
- ❖ Ability to use the learned content in new & concrete situations.
- ❖ The learner make use of information in a context different from the one in which it has learned.



APPLICATION

Specifications/ Action verbs.

- demonstrate
- execute
- solve
- utilize
- apply
- establish relations
- produce
- use
- implement
- formulate



ANALYSIS

- ❖ The meaningful breakdown of the materials into its various components and to identify the inter relationships between the elements and find out how they are organized and related.
- ❖ It includes analysis of language elements, ability to see hidden meaning.



ANALYSIS

Three levels of analysis are

- Analysis of elements
- Analysis of relationships
- Analysis of organizational principles



ANALYSIS

Analysis of elements :

Identification of elements included in the content



ANALYSIS

Analysis of relationships :

The connection and interaction between elements and parts of learning material



ANALYSIS

Analysis of organizational principles:

The organisation, systematic arrangement and structure which holds the content together.

Making the underlying concepts & interrelationships explicit as well as implicit.



ANALYSIS

Specifications/ Action verbs.

- Discriminate
- Differentiate
- **Distinguish**
- **Compare**
- **Examine**
- Categorise
- Classify
- **Find relations**



SYNTHESIS

- ❖ The putting together of elements and parts so as to form a whole.
- ❖ It is the mental ability of the learner to integrate the acquired, comprehended, applied and analyzed knowledge in to a comprehensive whole.
- ❖ It involves the ability to give a new structure to statements or procedures



SYNTHESIS

- ❖ The ability to combine related ideas, creatively apply knowledge to novel situation, integrate new knowledge, propose research design to test hypothesis etc. come under this category



SYNTHESIS

Specifications/ Action verbs.

- Compile
- Design
- Plan
- Organize
- Create
- Generate
- Produce
- Modify
- Integrate
- Devise



EVALUATION

- ❖ The highest level of cognitive domain.
- ❖ It enables the learner to judge about the value of material, method, process or product against a standard.
- ❖ The learner makes decision based on in-depth reflection, criticism & assessment.
- ❖ The judgements are based on definite criteria.



EVALUATION

Specifications/ Action verbs.

- Critique
- Assess
- Justify
- Estimate
- Test
- Evaluate
- Check
- Appraise
- Argue
- Review



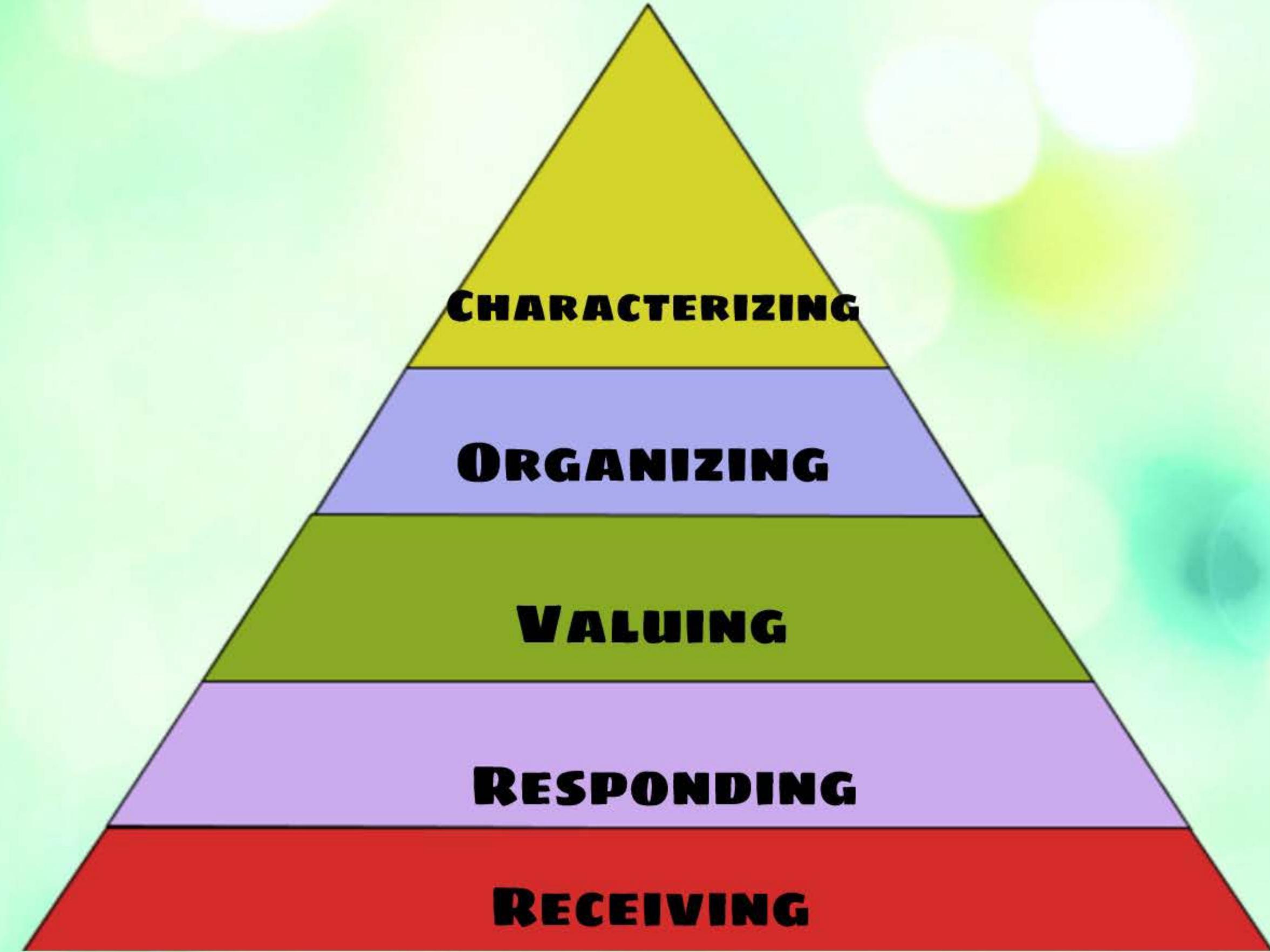
AFFECTIVE DOMAIN



AFFECTIVE DOMAIN

- ❖ Developed by Krathwohl, Bloom & Masia (1964)
- ❖ Concerned with feelings & emotions
- ❖ This domain includes attitudes, interests, values and appreciation.
- ❖ The 5 components constitutes this domain are hierarchically categorized as





AFFECTIVE DOMAIN

RECEIVING

- Ability of an individual to receive information.
- On the basic level the learner is sensitized to the existence of a certain phenomena and stimuli.



AFFECTIVE DOMAIN

RECEIVING

- Awareness of the source of information, willingness to receive information, controlled or selected attention are the sublevels of this objectives.
- eg: shows sensitivity towards social issues.



AFFECTIVE DOMAIN

RESPONDING

- The learner actively participates in the learning process, not only attend to the stimulus, also reacts in someway.
- It is concerned with responses that goes beyond merely attending to a information



AFFECTIVE DOMAIN

RESPONDING

- The learner shows great interest in dealing with it.
- Regularity in attention & motivation leads to responding.

3 subcategories of this level are



AFFECTIVE DOMAIN

RESPONDING

- ❖ Acquiescence in responding
- ❖ Willingness to respond
- ❖ Satisfaction in response



AFFECTIVE DOMAIN

RESPONDING

Acquiescence in responding :

Forced or make somebody to act under external force.

Eg: Obedient to traffic rules



AFFECTIVE DOMAIN

RESPONDING

Willingness to respond:

At this stage learner responds according to his inner compulsion.

Act under internal self.

Eg: Empathy towards the marginalized.



AFFECTIVE DOMAIN

RESPONDING

Satisfaction in response:

The learner responds emotionally, gain satisfaction in his response.

Eg: hobbies - reads for pleasure, enjoyment



AFFECTIVE DOMAIN

VALUING

Concerned with the worth or value which a learner attached to a particular object, phenomenon or behaviour.

By responding in good ways, the students set guidelines for their behavior.



AFFECTIVE DOMAIN

VALUING

- Accepting values,
- Preference for values,
- Commitment to values

are the important behavioural changes in this level.

Eg: positive attitude towards non violence, honesty ,

democracy, nature conservation etc



AFFECTIVE DOMAIN

ORGANIZING

An individual attitude is not ordinarily motivated by
an isolated value.

A system of values form it.

This includes conceptualization of a value and
organization of a value system.



AFFECTIVE DOMAIN

ORGANIZING

Value conflict and value crisis are resolved.

Eg : Pupil identifies the inseparability of the values like non violence, truthfulness and tolerance of Indian tradition.



AFFECTIVE DOMAIN

CHARACTERIZING

Highest level of attitude formation & internalization process.

The learner acts persistently and consistently in accordance with values he has internalized.



AFFECTIVE DOMAIN

CHARACTERIZING

Values are imbibed and become the lifestyle of the individual.

The values turns into consistent philosophy of life.

Eg: maintain ideal healthy habits



PSYCHOMOTOR DOMAIN



PSYCHOMOTOR DOMAIN

Includes those objectives that deals with manipulative & motor skills.

The higher the neuro-muscular co ordination the learners tasks become more refined, automatic, rapid and natural.



PSYCHOMOTOR DOMAIN

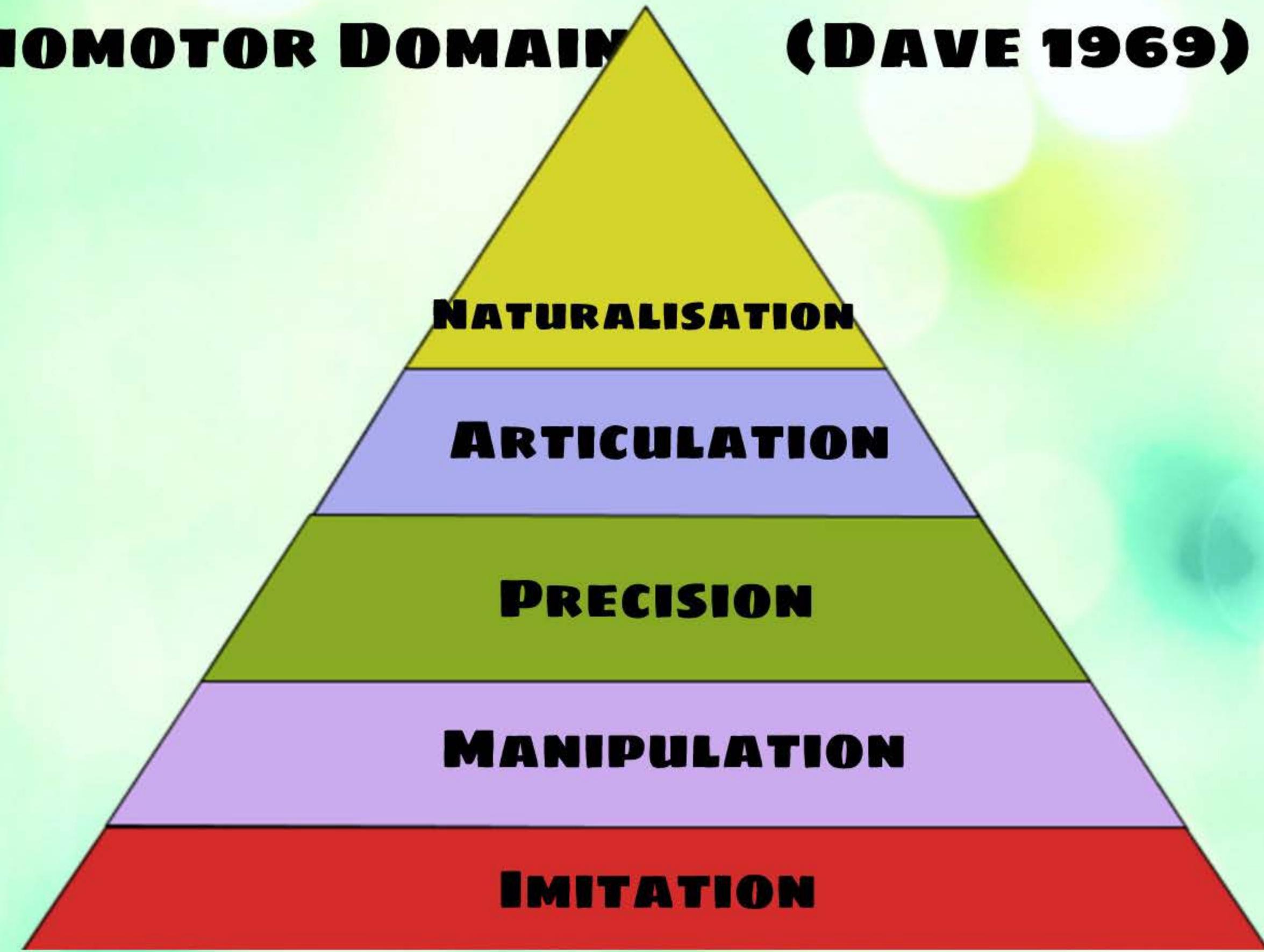
The teacher's duty is to provide such activities which develops neuro-muscular co ordination.

ABL - learning by doing.

5 components of this domain are hierarchically categorized as...



PSYCHOMOTOR DOMAIN (DAVE 1969)



PSYCHOMOTOR DOMAIN

IMITATION

Imitation is the highest form of flattery

Lowest level of neuro muscular activity, **early stage in learning a complex skill.**

It indicates an **overt behaviour or readiness to take a particular type of action.**

Repeating an act that has been demonstrated or explained.



PSYCHOMOTOR DOMAIN

IMITATION

ie , it begins with an inner rehearsal of muscular system that is guided by an inner push or impulse to imitate action.

This is done through trial & error until appropriate response is achieved.



PSYCHOMOTOR DOMAIN

MANIPULATION

Here the learner continues to practice to the next level.

It involves differentiating among various movements

and selecting the proper one. This can be subleveled as

- Following direction
- Selection
- Fixation



PSYCHOMOTOR DOMAIN

PRECISION

Practice or repetition of act will decrease the fault in performance.

In this level student attain a desired level of

proficiency in speed, accuracy, proportion, exactness,

neatness in performing the act.

i.e reproducing the act with good control



PSYCHOMOTOR DOMAIN

ARTICULATION

The student able to handle many actions in unison.

It refers to the co ordination of series of acts by

establishing appropriate sequence and accomplishing

harmony and internal consistency among different

acts.



PSYCHOMOTOR DOMAIN

NATURALIZATION

This refers to the ability to perform an act automatically & spontaneously.

It refers to the level of perfection where action becomes natural

i.e Proficiency & perfection in performance.



The behaviour of a child is governed by his development in 3 domains, viz cognitive, affective & psychomotor.

For fruitful learning to occur, it is the duty of the teacher to provide appropriate learning experience to bring desired behavioural changes among pupils in respective domains.



Thank You!



pedagogicthoughts.blogspot.in

