

STUDY MATERIAL FOR

UG SEMESTER VI STUDENTS

PAPER: EDCACOR13T / CURRICULUM STUDIES

TOPIC: UNIT 2, SUB UNIT B


Dr. S. Sen

Head and Associate Professor

Department of Education

BLOOM'S TAXONOMY

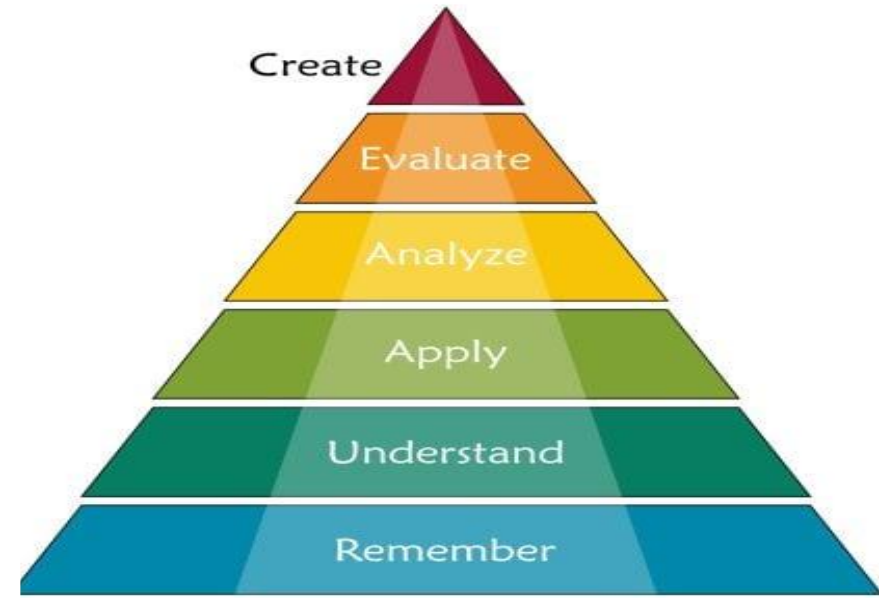
- ❖ Bloom's Taxonomy first published in 1956, was modified each year for 16 years and in 2001, Bloom's original taxonomy was revised to suggest how learning is an active process and not a passive one.
- ❖ Bloom's Taxonomy includes three learning domains: cognitive, affective, and psychomotor. Within each domain, learning can take place at a number of levels ranging from simple to complex with the learning objectives in cognitive, affective, and psycho-motor or sensory domains.

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- ❖ As per the syllabus our focus is primarily on the Cognitive domain involving the understanding and thinking skills.
 - ❖ Bloom's Taxonomy is a hierarchical model that classifies learning objectives into varying levels of complexity, from basic knowledge and comprehension to advanced evaluation and creation.

BLOOMS TAXONOMY



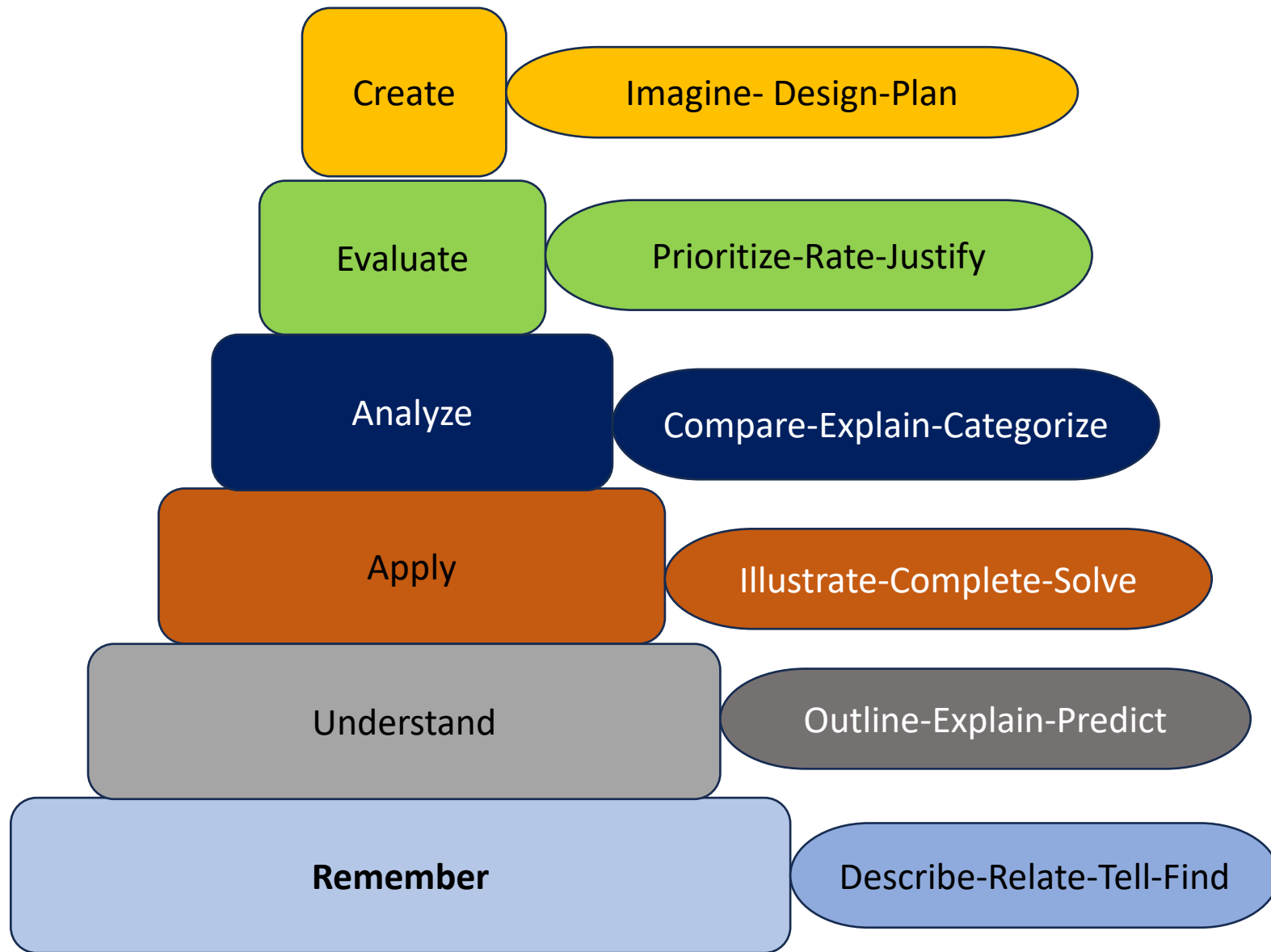
REVISED BLOOMS TAXONOMY



*Charlotte Ruhl
2002*

- ❖ The original taxonomy is one-dimensional and focuses on the knowledge domain stressing on acquiring and applying knowledge.
- ❖ The revised taxonomy highlights the interactions between, two dimensions: cognitive processes and knowledge content. It, exchanged the levels of Evaluation and Synthesis (renamed as Creation), and presented the actions associated with the intended cognitive processes as verbs and the knowledge content as nouns.

- ❖ Moreover, the knowledge dimension in the revised model is broken down into four different types of knowledge:
 - **Factual knowledge** denotes knowledge of terminology and specific details.
 - **Conceptual knowledge** refers to knowledge of categories, principles, theories, and structures.
 - **Procedural knowledge** includes all forms of knowledge related to specific skills, algorithms, techniques, and methods.
 - **Metacognitive knowledge** describes knowledge related to thinking — knowledge about cognitive tasks and self-knowledge.

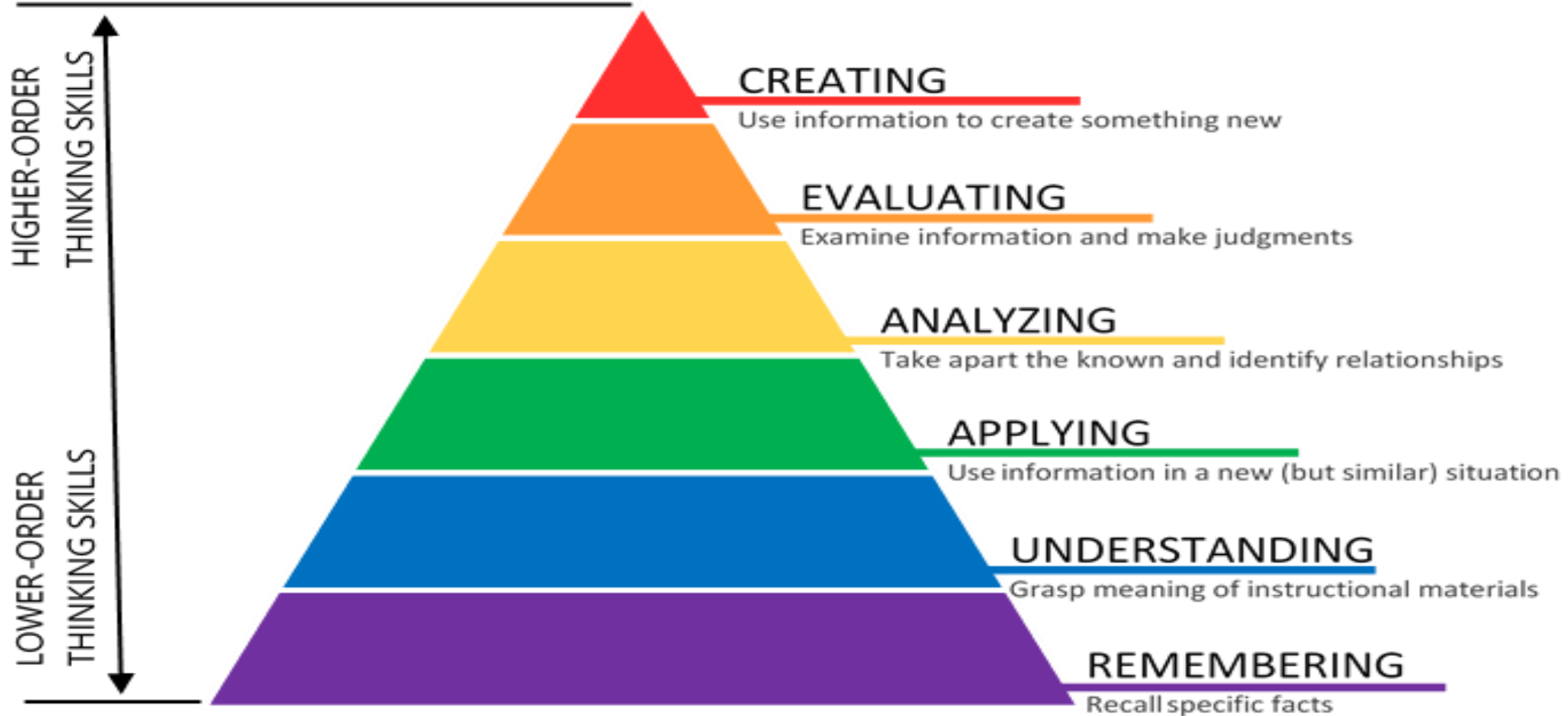


❖ Here verbs are used to describe the active process of learning.

❖ This hierarchy helps teachers-students to understand the process of learning and provides more concrete guidance on how to create effective learning objectives.

- ❖ Bloom's Taxonomy being hierarchical in nature, the higher levels of the pyramid are dependent on having achieved the skills of the lower levels. Thus, three lower levels in the Taxonomy are related to the initial levels of knowledge construction and concept building and applied more at school levels. The application of the upper three levels are more popular in HEIs.
- ❖ However, the process of knowledge construction or concept formation, at any age or phase depends upon the ease and speed of overcoming all the levels present in Taxonomy one by one from lowest to the topmost level of the pyramid.

BLOOM'S TAXONOMY – COGNITIVE DOMAIN (2001)



Krathwohl, D. R. (2002)

Bloom's Level	Key Verbs (keywords)	Example Learning Objective
Create	design, formulate, build, invent, create, compose, generate, derive, modify, develop.	By the end of this lesson, the student will be able to design an original homework problem dealing with the principle of conservation of energy.
Evaluate	choose, support, relate, determine, defend, judge, grade, compare, contrast, argue, justify, support, convince, select, evaluate.	By the end of this lesson, the student will be able to determine whether using conservation of energy or conservation of momentum would be more appropriate for solving a dynamics problem.
Analyze	classify, break down, categorize, analyze, diagram, illustrate, criticize, simplify, associate.	By the end of this lesson, the student will be able to differentiate between potential and kinetic energy.
Apply	calculate, predict, apply, solve, illustrate, use, demonstrate, determine, model, perform, present.	By the end of this lesson, the student will be able to calculate the kinetic energy of a projectile.
Understand	describe, explain, paraphrase, restate, give original examples of, summarize, contrast, interpret, discuss.	By the end of this lesson, the student will be able to describe Newton's three laws of motion in her/his own words
Remember	list, recite, outline, define, name, match, quote, recall, identify, label, recognize.	By the end of this lesson, the student will be able to recite Newton's three laws of motion.

Bloom's Taxonomy (1956) question samples:

- Knowledge: How many...? Who was it that...? Can you name the...?
- Comprehension: Can you write in your own words...? Can you write a brief outline...? What do you think could have happened next...?
- Application: Choose the best statements that apply... Judge the effects of... What would result ...?
- Analysis: Which events could have happened...? If ... happened, how might the ending have been different? How was this similar to...?
- Synthesis: Can you design a ... to achieve ...? Write a poem, song or creative presentation about...? Can you see a possible solution to...?
- Evaluation: What criteria would you use to assess...? What data was used to evaluate...? How could you verify...?

Revised Bloom's Taxonomy (2001) question samples:

- Remember: Who...? What...? Where...? How...?
- Understand: How would you generalize...? How would you express...? What information can you infer from...?
- Apply: How would you demonstrate...? How would you present...? Draw a story map...
- Analyze: How can you sort the different parts...? What can you infer about...? What ideas validate...? How would you categorize...?
- Evaluate: What criteria would you use to assess...? What sources could you use to verify...? What information would you use to prioritize...? What are the possible outcomes for...?
- Create: What would happen if...? List the ways you can...? Can you brainstorm a better solution for...?

