



# BLOOM'S TAXONOMY of Learning Domains



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Presented By:

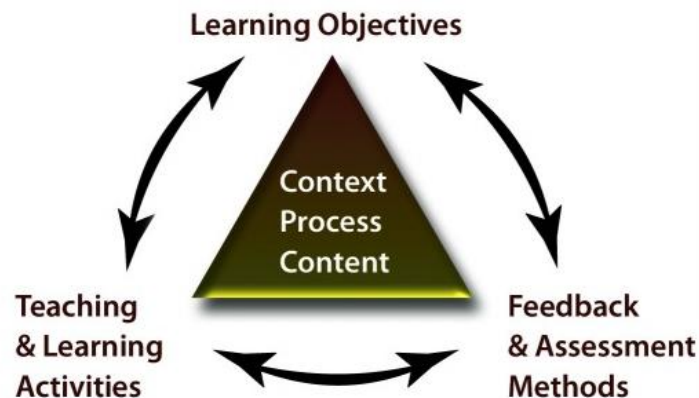
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# Content

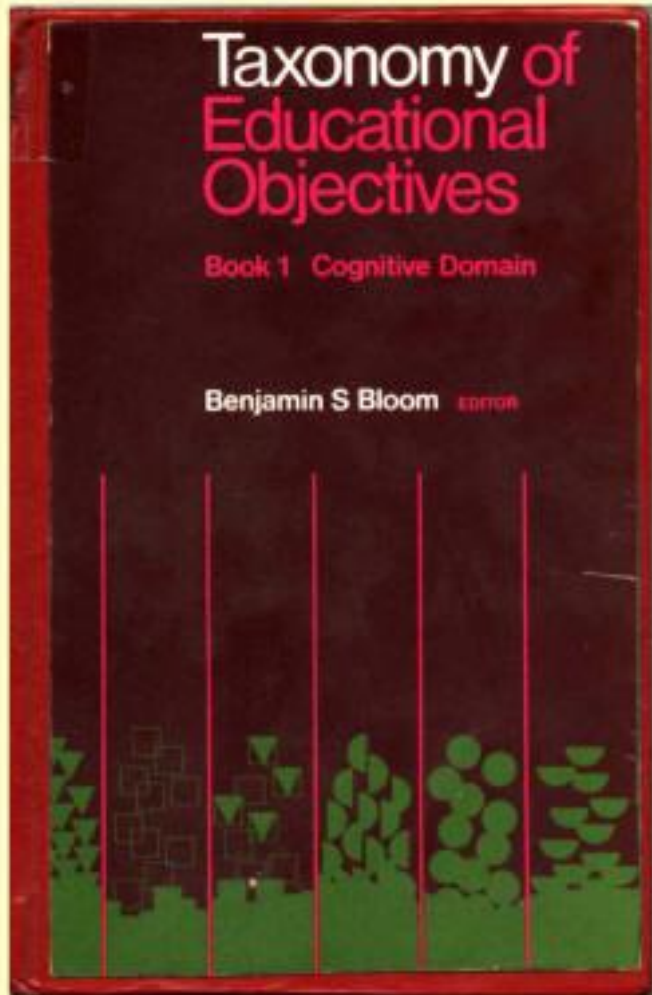
- Meaning of Learning Objectives
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# Learning Objectives

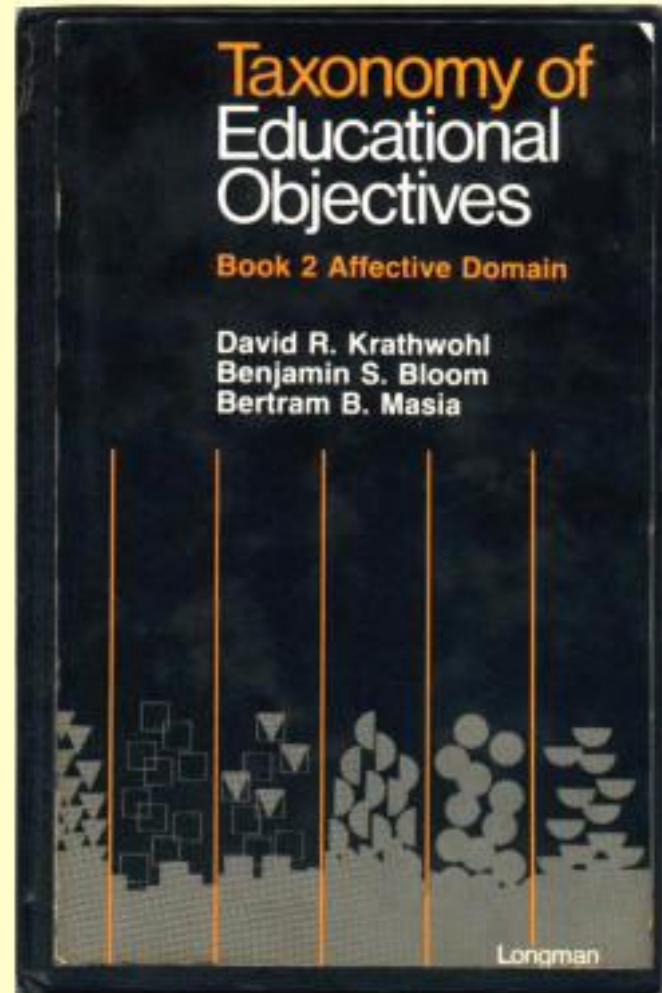
- Learning objectives are brief statements that describe what students will be expected to learn by the end of school year, course, unit, lesson, project, or class period. In many cases, learning objectives are the interim academic goals that teachers establish for students who are working toward meeting more comprehensive learning standards.



# LITERATURE



1956



1964

# Classification of Learning Domains

- **Cognitive:**

Mental skills (*Knowledge*)

- **Affective:**

Growth in feelings or emotional areas (*Attitude*)

- **Psychomotor:**

Manual or physical skills (*Skills*)

# Cognitive Domain

*Bloom, B. S.; Engelhart, M. D.; Furst, E. J.; Hill, W. H.; & Krathwohl, D. R.:*

*Taxonomy of educational objectives: the classification of educational goals; Handbook I: Cognitive Domain*

*New York, Longmans, Green, 1956.*

# Cognitive Domain

*\*Knowledge*

\*Comprehension

\*Application

\*Analysis

\*Synthesis

\*Evaluation

# Cognitive Domain

## Knowledge

Recall data or information

- **Examples:** Recite a policy. Quote prices from memory to a customer. Knows the safety rules.
- **Key Words:** defines, describes, identifies, knows, labels, lists, matches, names, outlines, recalls, recognizes, reproduces, selects, states.



# Cognitive Domain

## Comprehension

Understand the meaning, translation, interpolation, and interpretation of instructions and problems. State a problem in one's own words.

- **Examples:** Rewrites the principles of test writing. Explain in one's own words the steps for performing a complex task.
- **Key Words:** comprehends, converts, defends, distinguishes, estimates, explains, extends, generalizes, gives an example, interprets, predicts, rewrites, summarizes, translates.

# Cognitive Domain

## Application

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.

- **Examples:** Use a manual to calculate an employee's vacation time. Apply laws of statistics to evaluate the reliability of a written test.
- **Key Words:** applies, changes, computes, constructs, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses.

# Cognitive Domain

## Analysis

Separates material or concepts into component parts so that its organizational structure may be understood. Distinguishes between facts and inferences.

- **Examples:** Troubleshoot a piece of equipment by using logical deduction. Recognize logical fallacies in reasoning. Gathers information from a department and selects the required tasks for training.
- **Key Words:** analyzes, breaks down, compares, contrasts, diagrams, deconstructs, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, relates, selects, separates.

# Cognitive Domain

## Synthesis

Builds a structure or pattern from diverse elements. Put parts together to form a whole, with emphasis on creating a new meaning or structure.

- **Examples:** Write a company operations or process manual. Design a machine to perform a specific task. Integrates training from several sources to solve a problem. Revises and process to improve the outcome.
- **Key Words:** categorizes, combines, compiles, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, tells, writes.

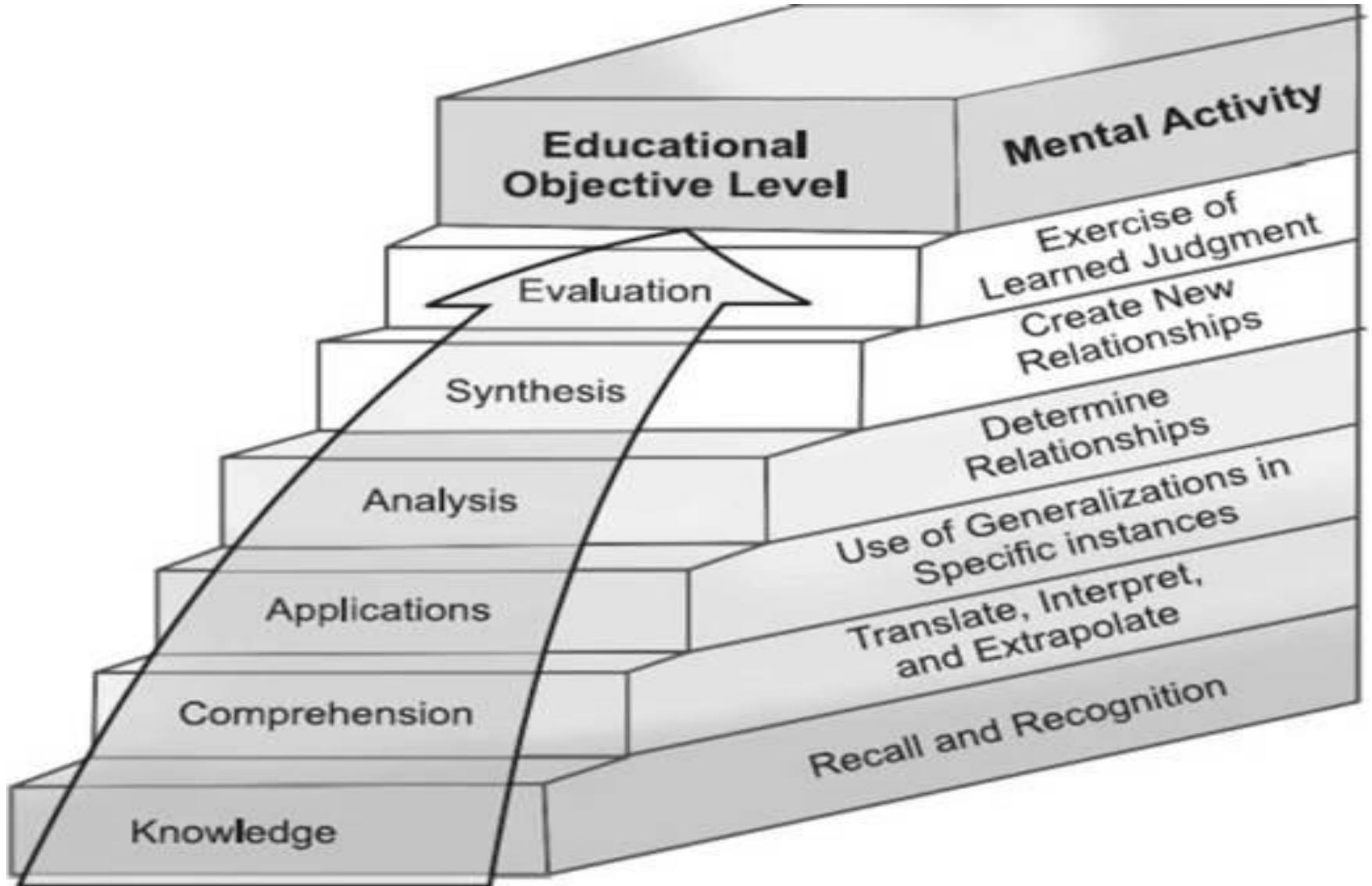
# Cognitive Domain

## Evaluation

Make judgments about the value of ideas or materials.

- **Examples:** Select the most effective solution. Hire the most qualified candidate. Explain and justify a new budget.
- **Key Words:** appraises, compares, concludes, contrasts, criticizes, critiques, defends, describes, discriminates, evaluates, explains, interprets, justifies, relates, summarizes, supports

# Cognitive Domain



# Affective Domain

Krathwohl, D. R., Bloom, B. S., &  
Masia, B. B.

Taxonomy of educational objectives; the classification of educational goals. Handbook II: The affective domain.

New York: Longman, Green, 1964.

# Affective Domain

- Receiving Phenomena
- Responding to Phenomena
- Valuing
- Organization
- Internalizing values (characterization)



# Affective Domain

## Receiving Phenomena

Awareness, willingness to hear, selected attention.

- **Examples:** Listen to others with respect. Listen for and remember the name of newly introduced people.
- **Key Words:** asks, chooses, describes, follows, gives, holds, identifies, locates, names, points to, selects, sits, erects, replies, uses.

# Affective Domain

## Responding to Phenomena

Active participation on the part of the learners. Attends and reacts to a particular phenomenon. Learning outcomes may emphasize compliance in responding, willingness to respond, or satisfaction in responding (motivation).

- **Examples:** Participates in class discussions. Gives a presentation. Questions new ideals, concepts, models, etc. in order to fully understand them. Know the safety rules and practices them.
- **Key Words:** answers, assists, aids, complies, conforms, discusses, greets, helps, labels, performs, practices, presents, reads, recites, reports, selects, tells, writes.

# Affective Domain

## Valuing

The worth or value a person attaches to a particular object, phenomenon, or behavior.

- **Examples:** Demonstrates belief in the democratic process. Is sensitive towards individual and cultural differences. Shows the ability to solve problems. Proposes a plan to social improvement and follows through with commitment.
- **Key Words:** completes, demonstrates, differentiates, explains, follows, forms, initiates, invites, joins, justifies, proposes, reads, reports, selects, shares, studies, works.

# Affective Domain

## Organization

Organizes values into priorities by contrasting different values, resolving conflicts between them, and creating a unique value system. The emphasis is on comparing, relating, and synthesizing values.

- **Examples:** Recognizes the need for balance between freedom and responsible behavior. Accepts responsibility for one's behavior. Explains the role of systematic planning in solving problems. Accepts professional ethical standards.
- **Key Words:** adheres, alters, arranges, combines, compares, completes, defends, explains, formulates, generalizes, identifies, integrates, modifies, orders, organizes, prepares, relates, synthesizes.

# Affective Domain

## Internalizing values (characterization)

Has a value system that controls their behavior. The behavior is pervasive, consistent, predictable, and most importantly, characteristic of the learner. Instructional objectives are concerned with the student's general patterns of adjustment.

- **Examples:** Shows self-reliance when working independently. Co-operates in group activities (displays teamwork). Uses an objective approach in problem solving. Displays a professional commitment to ethical practice on a daily basis. Revises judgments and changes behavior in light of new evidence. Values people for what they are, not how they look.
- **Key Words:** acts, discriminates, displays, influences, listens, modifies, performs, practices, proposes, qualifies, questions, revises, serves, solves, verifies.

# Affective Domain

Acts consistently due to an internal belief,  
Can articulate a philosophy or world-view,  
Can break down complex situations and  
respond accordingly based on values, develops  
and lives by a code of personal behavior

Characterizing

Values become systematic, can compare  
and contrast values and choices,  
begins to order and prioritize values,  
chooses to commit to certain  
values and behaviors

Organizing

Motivated to invest, Chooses to behave in a  
certain way frequently, Begins to identify  
with a behavior and commit to it

Valuing

Willingly participating,  
obedient, volunteers, finds  
satisfaction in participating,  
ready to respond

Responding

Willing to be aware of the  
setting or situation, gives  
attention by choice,  
open to the  
experience

Receiving/Attending

# Psychomotor Domain

Simpson, E.J.

*The Classification of Educational Objectives in  
the Psychomotor Domain*

Washington DC: Gryphon House, 1972.

# Psychomotor Domain

- Perception
- Set
- Guided Response
- Mechanism
- Complex Overt Response
- Adaptation
- Origination



# Psychomotor Domain

## Perception

The ability to use sensory cues to guide motor activity. This ranges from sensory stimulation, through cue selection, to translation.

- **Examples:** Detects non-verbal communication cues. Estimate where a ball will land after it is thrown and then moving to the correct location to catch the ball. Adjusts heat of stove to correct temperature by smell and taste of food. Adjusts the height of the forks on a forklift by comparing where the forks are in relation to the pallet.
- **Key Words:** chooses, describes, detects, differentiates, distinguishes, identifies, isolates, relates, selects.

# Psychomotor Domain

## Set

Readiness to act. It includes mental, physical, and emotional sets. These three sets are dispositions that predetermine a person's response to different situations.

- **Examples:** Knows and acts upon a sequence of steps in a manufacturing process. Recognize one's abilities and limitations. Shows desire to learn a new process (motivation).
- **Key Words:** begins, displays, explains, moves, proceeds, reacts, shows, states, volunteers.

(This subdivision of Psychomotor is closely related with the “Responding to phenomena” subdivision of the Affective domain.)

# Psychomotor Domain

## Guided Response

The early stages in learning a complex skill that includes imitation and trial and error. Adequacy of performance is achieved by practicing.

- **Examples:** Performs a mathematical equation as demonstrated. Follows instructions to build a model. Responds hand-signals of instructor while learning to operate a forklift.
- **Key Words:** copies, traces, follows, react, reproduce, responds.

# Psychomotor Domain

## Mechanism

This is the intermediate stage in learning a complex skill. Learned responses have become habitual and the movements can be performed with some confidence and proficiency.

- **Examples:** Use a personal computer. Repair a leaking faucet. Drive a car.
- **Key Words:** assembles, calibrates, constructs, dismantles, displays, fastens, fixes, grinds, heats, manipulates, measures, mends, mixes, organizes, sketches.

# Psychomotor Domain

## Complex Overt Response

The skillful performance of motor acts that involve complex movement patterns. Proficiency is indicated by a quick, accurate, and highly coordinated performance, requiring a minimum of energy.

- **Examples:** Maneuvers a car into a tight parallel parking spot. Operates a computer quickly and accurately. Displays competence while playing the piano.
- **Key Words:** assembles, builds, calibrates, constructs, dismantles, displays, fastens, fixes, grinds, heats, manipulates, measures, mends, mixes, organizes, sketches.

(The Key Words are the same as Mechanism, but will have adverbs or adjectives that indicate that the performance is quicker, better, more accurate, etc.)

# Psychomotor Domain

## Adaptation

Skills are well developed and the individual can modify movement patterns to fit special requirements.

- **Examples:** Responds effectively to unexpected experiences. Modifies instruction to meet the needs of the learners. Perform a task with a machine that it was not originally intended to do (machine is not damaged and there is no danger in performing the new task).
- **Key Words:** adapts, alters, changes, rearranges, reorganizes, revises, varies.

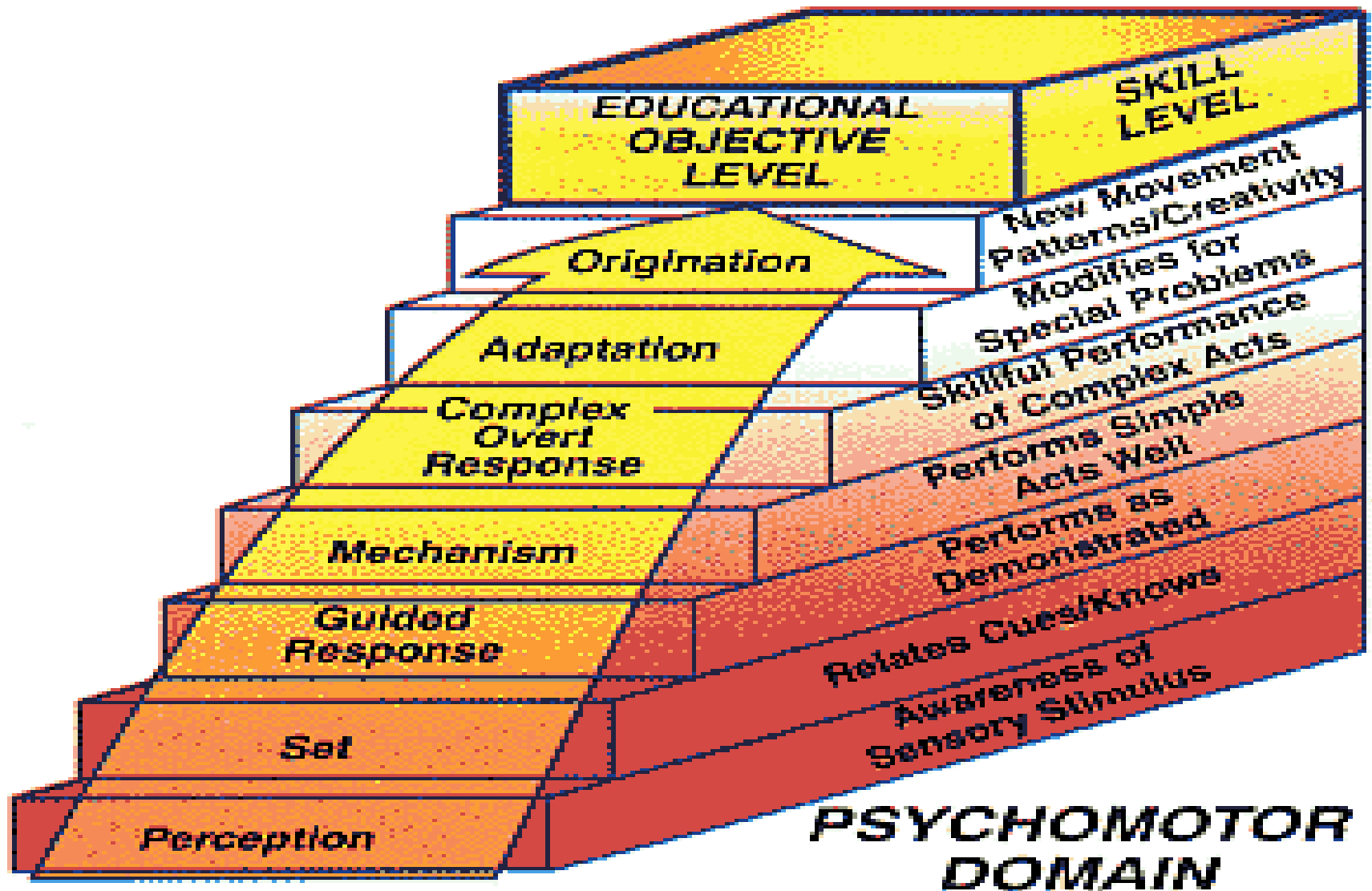
# Psychomotor Domain

## Origination

Creating new movement patterns to fit a particular situation or specific problem. Learning outcomes emphasize creativity based upon highly developed skills.

- **Examples:** Constructs a new theory. Develops a new and comprehensive training programming. Creates a new gymnastic routine.
- **Key Words:** arranges, builds, combines, composes, constructs, creates, designs, initiate, makes, originates.

# Psychomotor Domain





# Psychomotor Domain

## Dave's (1975):

- **Imitation** — Observing and patterning behavior after someone else. Performance may be of low quality. Example: Copying a work of art.
- **Manipulation** — Being able to perform certain actions by following instructions and practicing. Example: Creating work on one's own, after taking lessons, or reading about it.
- **Precision** — Refining, becoming more exact. Few errors are apparent. Example: Working and reworking something, so it will be “just right.”
- **Articulation** — Coordinating a series of actions, achieving harmony and internal consistency. Example: Producing a video that involves music, drama, color, sound, etc.
- **Naturalization** — Having high level performance become natural, without needing to think much about it. Examples: Michael Jordan playing basketball, Nancy Lopez hitting a golf ball, etc.

# Psychomotor Domain

## Harrow's (1972):

- **Reflex movements** — Reactions that are not learned.
- **Fundamental movements** — Basic movements such as walking, or grasping.
- **Perception** — Response to stimuli such as visual, auditory, kinesthetic, or tactile discrimination.
- **Physical abilities** — Stamina that must be developed for further development such as strength and agility.
- **Skilled movements** — Advanced learned movements as one would find in sports or acting.
- **No discursive communication** — Effective body language, such as gestures and facial expressions.

# Conclusion

Learning outcomes are statements that describe the knowledge or skills students should acquire by the end of a particular assignment, class, course, or program, and help students understand why that knowledge and those skills will be useful to them. They focus on the context and potential applications of knowledge and skills, help students connect learning in various contexts, and help guide assessment and evaluation.

*Thank  
you*

