

REVISED BLOOM'S TAXONOMY

for Writing Course and Program Outcomes



Use this guide to develop outcomes at the appropriate course and program level. The revised Bloom's Taxonomy differs from the original Bloom's Taxonomy in that it features a Knowledge Dimension in addition to the Cognitive Dimension.

THE COGNITIVE PROCESS DIMENSION

The cognitive process dimension is a continuum of increasing cognitive complexity – from lower order thinking skills to higher order thinking skills.

Remember

Retrieving relevant knowledge from long-term memory.

- Recognizing
- Recalling

Understand

Determining the meaning of instructional messages, including oral, written, and graphic communication.

- Interpreting
- Exemplifying
- Classifying
- Summarizing
- Inferring
- Comparing
- Explaining

Apply

Carrying out or using a procedure in a given situation.

- Executing
- Implementing

Analyze

Breaking material into its constituent parts and detecting how the parts relate to one another and to an overall structure or purpose.

- Differentiating
- Organizing
- Attributing

Evaluate

Making judgements based on criteria and standards.

- Checking
- Critiquing

Create

Putting elements together to form a novel, coherent whole or make an original product.

- Generating
- Planning
- Producing

THE KNOWLEDGE DIMENSION

Classifies types of knowledge that learners may be expected to acquire from concrete to abstract.

Factual

The basic elements students must know to be acquainted with a discipline or solve problems in it.

Knowledge of:

- Classifications and categories
- Principles and generalizations
- Theories, models and structures

Conceptual

The interrelationships among the basic elements within a larger structure that enable them to function together.

Knowledge of:

- Classifications and categories
- Principles and generalizations
- Theories, models and structures

Procedural

how to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.

Knowledge of:

- Subject-specific skills and algorithms
- Subject-specific principles and generalizations
- Criteria for determining when to use appropriate procedures

Metacognitive

knowledge about cognition in general and awareness and knowledge about one's own cognition.

- Strategic knowledge
- Knowledge about cognitive tasks, including appropriate contextual and conditional knowledge
- Self-knowledge

THE TAXONOMY TABLE

When developing an outcome, first, consider whether it involves lower or higher order thinking skills, Second, determine the level of knowledge from concrete or abstract. Finally, use this table to guide in targeting the appropriate dimensions and writing the outcome.

*Green cells = cognitive and knowledge dimension outcomes appropriate at the program level.

		COGNITIVE PROCESS DIMENSION					
		VERB					
KNOWLEDGE DIMENSION OBJECT		REMEMBER	UNDERSTAND	APPLY	ANALYZE	EVALUATE	CREATE
		FACTUAL KNOWLEDGE	List food groups	Summarize attributes of diesel engines	Respond to a patient's questions	Select activities to increase strength	Check for coding errors
CONCEPTUAL KNOWLEDGE	Recognize types of soil	Classify muscles by function	Provide advice to novices	Differentiate the concepts of public safety	Determine relevance of play	Assemble a team of experts	
PROCEDURAL KNOWLEDGE	Recall how to make pasta	Clarify proper mask use	Implement plans for wellness	Integrate learning theory into instruction	Judge efficiency of sampling techniques	Design instructional techniques	
MEGA-COGNITIVE KNOWLEDGE	Identify strategies for retaining information	Predict one's response to culture shock	Exhibit respectful interaction	Deconstruct one's biases	Reflect on one's progress	Create an innovative learning portfolio	

Krathwohl, D.R., (2002). A Revision of Bloom's Taxonomy: An Overview. Theory into Practice, 41(4), 212-218