

# Bloom's Taxonomy

Beginning in 1948, a group of educators undertook the task of classifying education goals and objectives. The intent was to develop a classification system for three domains: the cognitive, the affective, and the psychomotor. Work on the cognitive domain was completed in 1956 and is commonly referred to as *Bloom's Taxonomy of the Cognitive Domain* although the full title was *Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain* with the text having 4 other authors (M. Englehart, E. Furst, W. Hill, and D Krathwohl).

**Cognitive learning:** demonstrating by knowledge, recall, and the intellectual skills of comprehending information, organizing ideas, analyzing and synthesizing data, applying knowledge, choosing among alternatives in problem-solving, and evaluating ideas or actions.

80% to 90% of questions teachers ask and over 95 % of the test questions students encounter require to think only at the lowest possible level...the recall of information.

According to Bloom's Taxonomy, human thinking skills can be broken down into the following six categories.

**Knowledge:** remembering or recalling appropriate, previously learned information to draw out factual (usually right or wrong) answers. Use words and phrases such as: how many, when, where, list, define, tell, describe, identify, etc., to draw out factual answers, testing students' recall and recognition.

**Comprehension:** grasping or understanding the meaning of informational materials. Use words such as: describe, explain, estimate, predict, identify, differentiate, etc., to encourage students to translate, interpret, and extrapolate.

**Application:** applying previously learned information (or knowledge) to new and unfamiliar situations. Use words such as: demonstrate, apply, illustrate, show, solve, examine, classify, experiment, etc., to encourage students to apply knowledge to situations that are new and unfamiliar.

**Analysis:** breaking down information into parts, or examining (and trying to understand the organizational structure of) information. Use words and phrases such as: what are the differences, analyze, explain, compare, separate, classify, arrange, etc., to encourage students to break information down into parts.

**Synthesis:** applying prior knowledge and skills to combine elements into a pattern not clearly there before. Use words and phrases such as: combine, rearrange, substitute, create, design, invent, what if, etc., to encourage students to combine elements into a pattern that's new.

**Evaluation:** judging or deciding according to some set of criteria, without real right or wrong answers. Use words such as: assess, decide, measure, select, explain, conclude, compare, summarize, etc., to encourage students to make judgments according to a set of criteria.