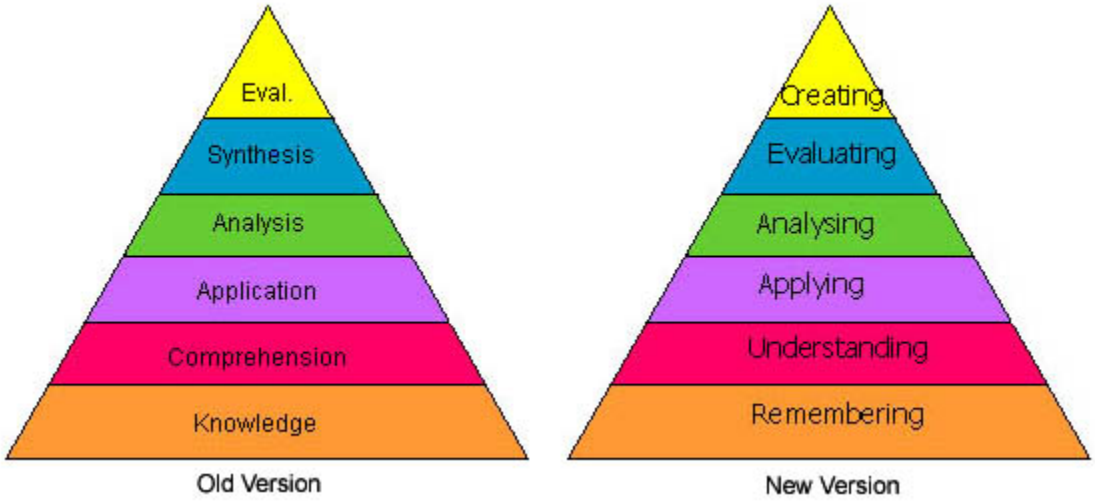
Revised Bloom's Taxonomy

A former student of Bloom's, Lorin Anderson, worked with cognitive psychologists, curriculum and assessment specialists, and educational researchers to update Bloom's taxonomy of the cognitive domain (Anderson & Krathwohl, 2001). The old and new versions of the taxonomy are shown below.



The new terms are defined as:

- **Remembering**: Retrieving, recognizing, and recalling relevant knowledge from long-term memory.
- **Understanding**: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.
- **Applying**: Carrying out or using a procedure through executing, or implementing.
- **Analyzing**: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organizing, and attributing.
- **Evaluating**: Making judgments based on criteria and standards through checking and critiquing.
- **Creating**: Putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing. (Forehand, 2005).

In addition to reframing the terminology from nouns to verbs that describe the cognitive processes individuals use to learn (remembering, understanding, applying, analyzing, evaluating, and creating), the revised taxonomy also adds a second dimension outlining a knowledge dimension defining the kind of knowledge to be learned (factual, conceptual, procedural, and meta-cognitive). A summary of this revised two-dimensional taxonomy is shown below:

Bloom's Taxonomy

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge	List	Summarize	Classify	Order	Rank	Combine
Conceptual Knowledge	Describe	Interpret	Experiment	Explain	Assess	Plan
Procedural Knowledge	Tabulate	Predict	Calculate	Differentiate	Conclude	Compose
Meta-Cognitive Knowledge	Appropriate Use	Execute	Construct	Achieve	Action	Actualize

References

Anderson, L. W., & Krathwohl, D. R. (Eds.). (2001). A taxonomy for learning, teaching and assessing: A revision of Bloom's Taxonomy of educational objectives: Complete edition, New York: Longman.

Forehand, M. (2005). Bloom's taxonomy: Original and revised. In M. Orey (Ed.), Emerging perspectives on learning, teaching, and technology. Retrieved June 10, 2013 from http://projects.coe.uga.edu/epltt/