

Briefing: Bloom's (Revised) Taxonomy

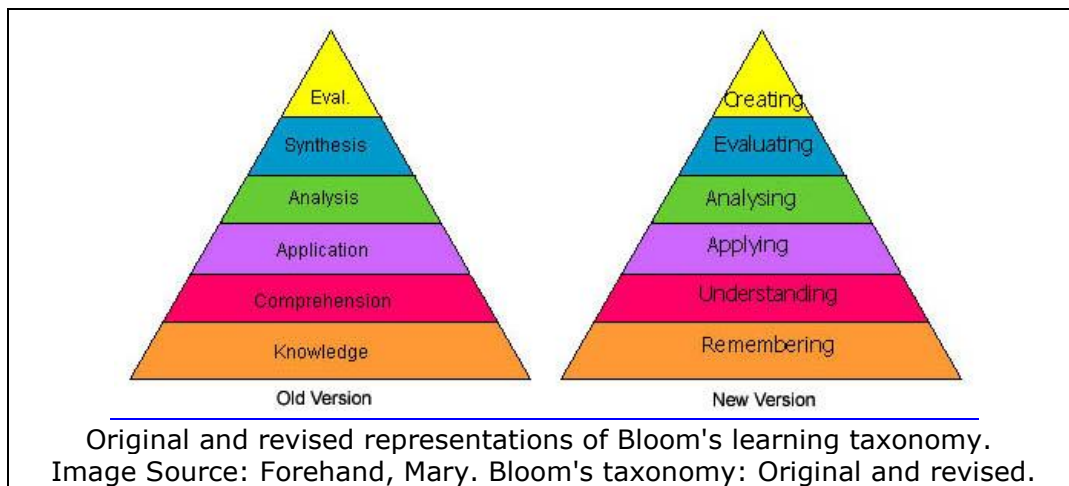
General Concepts

Benjamin Bloom's taxonomy of learning—first published in 1956 and today the widely-cited foundation for defining what our students learn at the assignment, course, program, and degree levels—is a hierarchical classification of types of learning. Presented as a pyramid, it implies that student abilities increase in complexity and maturity the higher up on the spectrum they go.

In the original version, Bloom identified **Knowledge** as the basic ability to recall facts, **Comprehension** as the ability to understand relationships among facts, and **Application** as the ability to use factual information in varied contexts. These three constitute the "lower levels" of learning or skill. The higher levels, requiring more complex thinking processes, include **Analysis**, or the ability to determine how parts relate to one another and to an overall purpose; **Synthesis**, or the ability to combine varied information into a new, coherent whole; and **Evaluation**, or the ability to make and defend judgments.

More recently, revisions have been suggested to the original taxonomy, as illustrated with the "new version" below. Although smaller changes to wording and at the lower levels are mainly for clarification, substantive changes are applied to the pyramid's top. Evaluating is now the second-most complex activity, and **Creating is at the top**. This recognizes the inherent complexity in forming something novel.

Before we can **understand** a concept we have to **remember** it
Before we can **apply** the concept we must **understand** it
Before we **analyze** it we must be able to **apply** it
Before we can **evaluate** its impact we must have **analyzed** it
Before we can **create** we must have **remembered, understood, applied, analysed, and evaluated**.
--From *Educational Orgami*



For both the original and revised Bloom's taxonomies, learning can be further classified in three types: Cognitive, mental skills and processes; Affective, attitudes and feelings; and Psychomotor, physical skills.

Application

As faculty, we often think in terms of final *products*—understanding illustrated through a research paper, performance on a test, or completion of a project. This focus on the "end" can create a communication gap when with external audiences: those outside of our field, department, or university. If we say, "a student is successful in my class when she shows me her conceptual understanding through a major term paper," we are obscuring the complex knowledge and skill sets inherent in development of that product.

Thinking in terms of skills—what we want our students to be able *to do*—when they leave our classes is a more effective way of communicating because doing so helps us reveal the complex processes inherent in what we require. Describing our courses in terms of skill outcomes is more concrete and aids in communication both internally (e.g., helping faculty see how performance levels should build through course sequences) and externally (e.g., helping students understand our expectations). This is not to disregard the central nature of knowledge in the teaching-learning exchange. Think in terms of how you, as the instructor, see that knowledge expressed—how do you know the student has learned the concept? Typically, this is through observable behaviors, using the knowledge to accomplish a task.

*Learning is not attained by chance,
it must be sought for with ardor and attended to with diligence.
Abigail Adams*

For More Information

Churches, Andrew. (2009) Bloom's taxonomy: introduction, Educational orgami. Retrieved 4 November 2009, from <http://edorigami.wikispaces.com/Bloom%27s+-+Introduction>

Forehand, M. (2005). Bloom's taxonomy: Original and revised. In M. Orey (Ed.), *Emerging perspectives on learning, teaching, and technology*. Retrieved 3 November 2009, from <http://projects.coe.uga.edu/epltt/>

Krathwohl, D. R. (2002). A revision of bloom's taxonomy: An overview. *Theory into Practice*, 41 (4), 212-218.

Wilson, Leslie Owen. (2006) Beyond Bloom-A new version of the cognitive taxonomy. Retrieved 3 November 2009, from <http://www.uwsp.edu/education/lwilson/curric/newtaxonomy.htm>