Bloom’s Taxonomy:  
The Cognitive Domain

Part One

Based at the University of Chicago, Benjamin Bloom was a teacher, university examiner, scholar, and researcher in the field of education. In 1948, at the Convention of the American Psychological Association, Bloom gathered a group of educators for an important initiative: to develop a system for classifying educational objectives. In 1956 the group published *Taxonomy of Educational Objectives: Handbook 1: Cognitive Domain*, most commonly called Bloom’s Taxonomy. Fifty-one years later, this classification of education goals remains in widespread use by educators around the world. Good learning objectives define the behaviors and knowledge educators believe students need to achieve success in massage school and as a professional. Objectives help educators map meaningful learning experiences and organize courses or programs to provide continuity and sequence for learners. Bloom’s aim was to aid communication between instructors about educational goals and to stimulate thought about educational problems.
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**The Three Domains**
Bloom’s team categorized learning behaviors in three broad domains. The cognitive domain dealt with recall, recognition of knowledge, and each student’s development of intellectual abilities, such as critical thinking. The affective domain looked at learning behaviors that dealt with interests, attitudes, and values, and how these are developed through learning experiences. The psychomotor domain described changes in motor skills. Educators and researchers had difficulty precisely describing objectives and learning experiences specific to the affective and psychomotor domains, and focused first on the cognitive classifications. (A handbook for the affective domain was produced in 1964, but Bloom never participated on the development of objectives for the psychomotor domain. This came later as other educators and researchers built on Bloom’s work.)

This article looks at the cognitive taxonomy. The affective and psychomotor domains are explored in part two of this article in the winter issue of *The Massage Educator*.

**Bloom’s Taxonomy**
The cognitive taxonomy contains six major areas. They are, from most basic to most advanced: knowledge, comprehension, application, analysis, synthesis, and evaluation. Simple learning behaviors (knowledge, comprehension, and application) are involved in more complex learning behaviors (analysis, synthesis, and evaluation), so the taxonomy helps instructors plan experiences that promote greater complexity of learning behaviors as students progress.

The taxonomy seeks to classify the intended behavior of students, not the content, instructional methods, teaching materials, or the way in which the student and instructor relate. A foundation for the development of effective curricula, the taxonomy provides perspective on program design. For example, an instructor comparing the program’s existing learning objectives to the taxonomy may find that all of the learning objectives fall into the knowledge category. She must then create learning experiences that grow each student’s application and critical thinking skills. The focus will be the expansion of learning objectives in the comprehension, application, and analysis categories.

**A Revised Taxonomy**
In 2001, a group led by Lorin Anderson, a former student of Bloom, published a revision of Bloom’s original taxonomy. Composed of cognitive psychologists, curriculum theorists, and instructional researchers, the group evolved Bloom’s work based on current learning theory. The revised taxonomy is illustrated below.

The first change was a replacement of Bloom’s nouns with verbs (e.g., changing knowledge to remembering), based on the idea that thinking is an active process best described by verbs. The taxonomies are both designed as hierarchies and a major structural change was the movement of creating (originally referred to as synthesis) to a more advanced position than evaluating, (originally called evaluation). This move demonstrates the current educational theory that creative
thinking is more complex than critical thinking. Researchers explain that in critical thinking a student must judge an idea and justify his judgment.

In creative thinking a student must judge an idea, and accept or reject many ideas while creating a new idea or product.

Anderson’s group created a multi-tiered system with sub-categories. Understanding is broken out into its sub-categories of interpreting, exemplifying, classifying, summarizing, etc. The goal is to make the taxonomy easier to apply in the classroom. For example, it might be applied this way:

Remember. Describe where the hamstrings are located.
Understand. Summarize the general actions of the hamstrings.
Apply. Construct a theory about why hamstrings perform the actions they perform.
Analyze. Differentiate between the actions of the biceps femoris, semitendinosus, and semimembranosis.
Evaluate. Judge the quality of movement exhibited by your client when he/she rotates the hip (coxal joint) laterally and medially.
Create. Develop a treatment plan to address the quality of movement you observed during lateral and medial rotation of the hip.

Using the Taxonomies
When developing a curriculum for a massage program, educators often start at the most advanced and work to the most basic. They ask the question, “What skills and knowledge must our graduates possess to be successful in the massage profession?” This is a useful strategy, which Bloom’s Taxonomy and Anderson’s revision, help curriculum teams carefully define. The result is a series of purposeful learning events that lead to the attainment of specific objectives, forming a sequence that allows learners to integrate what might otherwise be viewed as isolated experiences.