

BLOOM'S AND BEYOND

UNIVERSITY OF NEW ENGLAND, OFFICE OF ASSESSMENT

BLOOM'S COGNITIVE, AFFECTIVE, AND PSYCHOMOTOR DOMAINS

At the 1948 American Psychological Association Convention in Boston, Massachusetts, a group of college and university professionals formed the Committee of College and University Examiners to create a classification system that provided a framework for communicating educational goals and assessing the level at which students have met those objectives. The *Taxonomy of Educational Objectives* (1956), which resulted from their subsequent meetings, established three learning domains: **cognitive, affective, and psychomotor**.

Benjamin S. Bloom, educational psychologist and the handbook's editor, became the cognitive taxonomy's namesake. The widely used Bloom's taxonomy classified cognitive learning into six, hierarchical levels, beginning with remember and culminating in evaluate.

Then in 1964, Krathwohl, Bloom, and Bertram Masia put forth a five-level scale of learning in the **affective** domain. In *Taxonomy of Educational Objectives: Book 2: Affective Domain*, the authors found that the affective domain defines the various levels of students' "interests, attitudes, appreciations, values, and emotional sets or biases" (p. 7). The taxonomy begins with receiving or demonstrating an awareness of an attitude or value and culminates in absorbing that attitude or value into a "life outlook" (p. 27).

While Bloom and his colleagues in their 1956 handbook introduced the **psychomotor** domain as entailing kinesthetic skills or physical dexterity, the Committee of College and University Examiners did not publish work on the domain. Other scholars, however, have explored the domain. In the 1960s and 1970s, Simpson, Dave, and Harrow contributed to the discussion. Dave's (1970) five-level taxonomy begins with imitation (or copying others) and culminates in the naturalization of those physical skills or movements.

BEYOND BLOOM'S

Since Bloom, other scholars have modified the cognitive taxonomy and offered their own frameworks. Anderson and Krathwohl, in *A Taxonomy for Learning, Teaching, and Assessing* (2001), revised the original Bloom's cognitive taxonomy by modifying the hierarchical order of cognitive development and changing each category name from a noun to a verb. The revised taxonomy begins with the basic function of remembering and culminates in the action of creating.

Other scholars have also created frameworks beyond Bloom's taxonomy that classify and measure learning in various fields (e.g., business and medicine), environments (e.g., clinics and online), and learning domains (e.g., indigenous approaches). Examples of those taxonomies include:

- Kirkpatrick's four-level model for organizational training (1954)
- Miller's four-level pyramid for clinical competence (1990)
- Salmon's five-stage learning model for online learning (2000)
- Fink's taxonomy of significant learning experiences (2003)
- Moore's seven-level outcomes model in continuing medical education (2003)
- LaFever's four-domain indigenous medicine wheel (2016)

UNE's Library Services and Center for Excellence in Teaching and Learning (CETL) have also developed resources to support inclusive and equity-minded learning environments. For Library Services' Diversity, Equity and Inclusion Resources web pages, start [here](#). For CETL's Diversity, Equity, and Inclusion programs and resources, start [here](#).

SELECTED REFERENCES

Bloom's Taxonomy

Bloom, B. (Ed.). (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain*. David McKay.

Affective Taxonomy

Allen, K. N., & Friedman, B. D. (2010). Affective learning: A taxonomy for teaching social work values. *Journal of Social Work Values and Ethics*, 7(2), 2-13.

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of educational objectives. Handbook II: Affective domain*. Longman.

Psychomotor Taxonomy

Dave, R. H. (1970). Psychomotor levels. In R. J. Armstrong (Ed.), *Developing and writing behavioral objectives* (pp. 33-34). Educational Innovators Press.

Harrow, A. H. (1972). *A taxonomy of the psychomotor domain: A guide for developing behavioral objectives*. David McKay.

Simpson, E. J. (1966). *The classification of educational objectives, psychomotor domain*. U.S. Department of Health, Education, and Welfare.

Beyond Bloom's: Selected Sources of Other Taxonomies

Bloom's taxonomy revised

Anderson, L. W., & Krathwohl, D. R. (Eds.). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives* (Abr. 2nd ed.). Longman.

Kirkpatrick's four-level model for organizational training

Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). *Evaluating training programs: The four levels* (3rd ed.). Berrett-Koehler Publishers.

Kirkpatrick, D. L., & Kirkpatrick, J. D. (2007). *Implementing the four levels: A practical guide for effective evaluation of training programs*. Berrett-Koehler Publishers.

Miller's four-level pyramid for clinical competence

Miller, G. E. (1990). The assessment of clinical skills/competence/performance. *Academic Medicine*, 65(9), Supplement, S63-S67.

Salmon's five-stage learning model for online learning

Salmon, G. (2011). *E-moderating: The key to online teaching and learning*. (3rd ed.). Routledge.

Fink's taxonomy of significant learning experiences

Fink, L. D. (2013). *Creating significant learning experiences: An integrated approach to designing college courses* (2nd ed.). Jossey-Bass.

Moore's seven-level outcomes model in continuing medical education

Moore, D. E., Jr. (2003). A framework for outcomes evaluation in the continuing professional development of physicians. In D. A. Davis, B. E. Barnes, & R. D. Fox (Eds.), *The continuing professional development of physicians: From research to practice* (pp. 249-277). American Medical Association Press.

Moore, D. E., Jr., Green, J. S., & Gallis, H. A. (2009). Achieving desired results and improved outcomes: Integrating planning and assessment throughout learning activities. *The Journal of Continuing Education in the Health Professions*, 29 (1), 1-15.

LaFever's four-domain indigenous medicine wheel

LaFever, M. (2016). Switching from Bloom to the medicine wheel: Creating learning outcomes that support indigenous ways of knowing in post-secondary education. *Intercultural Education*, 27(5), 409-424.



UNIVERSITY OF
NEW ENGLAND

INNOVATION FOR A HEALTHIER PLANET