A Quick Introduction to "Bloom's Taxonomy" for Higher Education

What is Bloom's Taxonomy?

Educational researcher Benjamin Bloom and his collaborators created the original taxonomy to organize learning into three domains: **Cognitive** (thinking/knowing), **Affective** (emotional/feelings aspects), and **Psychomotor** (physical/manual skills). In higher education (HE), we often address all three but the most attention goes to cognitive. Anderson and Krathwohl revised the cognitive domain, emphasizing what learners do to learn, looking at how learners remember, understand, then apply, analyze, evaluate and create? This revision, emphasizing what learners *do*, coincided with an increased HE assessment focus on learning objective and outcome statements, focused on these six cognitive categories shown in the diagram.

What do I need to know about it?

HE educators need to know how you can use the categories to express to many audiences (students, administrators, accreditors—but most of all yourselves) what students will learn through a course and a whole program of instruction. To create outcomes, educators can look at programmatic outcomes in the major or in Gen Ed and use disciplinary expertise about what students need to be able to know and do. Often the taxonomy is provided along with lists of suggested verbs useful for writing **learning objectives** (what students will do) and **outcomes** (what students, hopefully, will have done by the end of the curriculum).

A learning outcome sentence often goes like this:

> **In this X** (course or program) **students will be able to do X** (some aspect of learning, such as defining or analyzing or computing), **through X** (give some detail here on how this happens, such as activities or major assignments) **for X reason** (sometimes, not always, added to explain the why, the purpose).

For example:

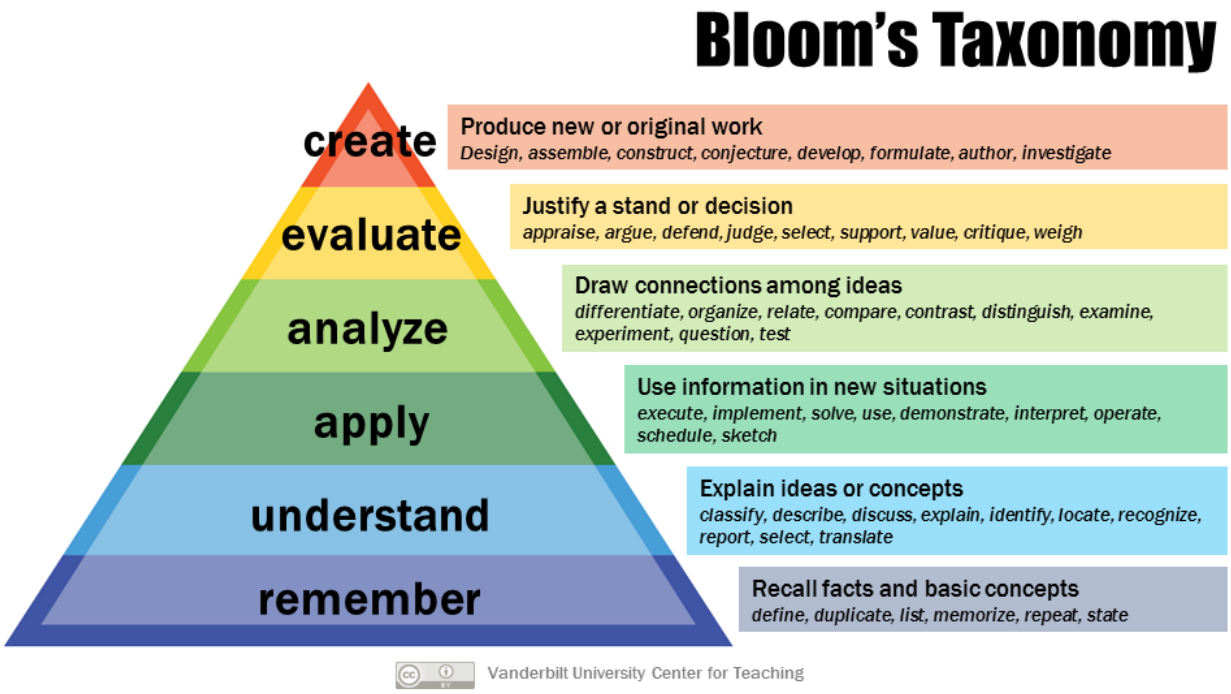
Through this course, students will be able to:

- apply chemical concepts to draw conclusions about chemical reactions produced in lab work
- identify diseases that afflict trees in the northern hemisphere, through diagnosis of specific indicators given in case studies, for the purpose of building analytic skills

- analyze the artistic elements of a work of art in order to discuss its impact on the viewer, through connections of your knowledge of art history to new artifacts

To create these objective/outcome statements, start with a verb chart like the one below. The work comes with thinking intentionally about your discipline, your program, and your courses that you teach. What should students know, do, and value by the end of the curriculum? Then, add the statements to your syllabus and post the program's intended learning outcomes on the departmental web page.

Side note: you will see nearly interchangeable references to statements as objectives or as outcomes which is simply a result of different disciplinary preferences.



That seems simple(ish)—do I need to know anything else?

Yes, just this one last piece. There should be a direct connection between any course objectives and what you ask students to demonstrate (what they are asked to do to show learning). In other words, align these learning objectives/outcome statements with the assignments and tests.

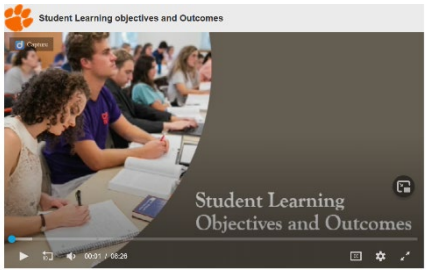
For example, if you ask them to learn to evaluate material in the subject you are teaching but only test their recall and understanding, then the course design is flawed and needs adjusting. In another example, If the course is designed to teach students to understand, apply, and evaluate key concepts in the subject area, and you:

1. Test students on knowledge,
2. Ask them to solve problems or demonstrate thinking on homework, quizzes, or case studies,
3. Assign a final project where they evaluate some product in your field,

Then, the course is well-designed. This is often called “backward design” when you are moving from outcomes to assessment. And next, you can easily and logically align all lectures and activities to help students achieve this learning.

Where can I get more information?

We are glad you asked! Here are some resources:



1. This video is a short (8 minute) introduction by Misty Stewart, Director of Graduate Student Success, Clemson Graduate School, provided by OTEI here.
2. “Bloom’s Taxonomy of Learning Domains”, on the website “Big Dog Little Dog’s Performance Juxtaposition” by Don Clark, has been around for years and is very brief, clear and easy to follow.
3. OTEI has a full list of verbs for you to use here, on our course design resource page.
4. OTEI staffer Dr. Leslie Lewis has a video guide to how to write learning outcomes for individual units and lessons, using the One Sentence Lesson Plan model (posted on this same resource page).
5. Writing learning outcomes and sharing with students is a top evidence-based teaching practice (consult this list for our top 10).

References

Anderson, L. W. and Krathwohl, D. R., et al (Eds.) (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom’s Taxonomy of Educational Objectives*. Allyn & Bacon. Boston, MA Pearson Education Group.

Bloom, B.S. and Krathwohl, D. R. (1956). *Taxonomy of Educational Objectives: The Classification of Educational Goals, by a committee of college and university examiners. Handbook I: Cognitive Domain.* NY, NY: Longmans, Green.

Fink, D. (2013). *Creating significant learning experiences : an integrated approach to designing college courses.* San Francisco : Jossey-Bass.

McTighe, Jay author. (2004). *Understanding by Design: Professional Development Workbook.* Alexandria, Va., Association for Supervision and Curriculum Development.

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