Beyond Bloom: Expanding our ideas about learning objectives

Many college faculty have heard of Bloom's Taxonomy and have probably used one of the many helpful lists of accompanying verbs to craft measurable learning objectives. The six categories in Bloom's Taxonomy for the Cognitive Domain (revised in 2001) – **remember, understand, apply, analyze, evaluate, and create** – has been the go-to resource for writing learning objectives for over 50 years, assisting countless educators.

The goal of using Bloom's Taxonomy is to articulate and diversify our learning goals. So why has the writing of learning objectives, considered to be an essential aspect of creating effective and engaging learning experiences, too often been viewed as an uninspiring task? Shouldn't this be where our passion as teachers comes through? Could it be we are focusing on a limited aspect of learning?

Blooms Taxonomy has been used for so long because it makes sense and is useful, but perhaps it is time we move beyond Bloom to explore all the types of learning we are trying to achieve in a college-level course.

Luckily there are other taxonomies we can use. In fact, Bloom's taxonomy of the cognitive domain is only one of the taxonomies created by Bloom and his colleagues. A quick Internet search will uncover the work begun by Bloom and furthered by other scholars in the **psychomotor** and **affective** domains.

Additionally, L. Dee Fink's Taxonomy of Significant Learning Outcomes goes beyond cognitive processes and includes other aims of teaching. Fink's taxonomy contains six aspects of learning:

- **Foundational Knowledge** – understanding information and ideas
- **Application** – developing critical, creative, or practical thinking skills
- **Integration** – making connecting between information, ideas, perspectives or real life
- **Human Dimension** - Learning about oneself or others
- **Caring** - Developing new feelings, interests, or values
- **Learning How to Learn** - Becoming a better student, inquiring about a subject

Similarly, Wiggins and McTighe's backwards design model describes Six Facets of Understanding:

- **Explain** – provide justifiable accounts of phenomena, facts, and data
- **Interpret** — tell meaningful stories, make subjects personal or accessible through images, analogies, and models
- **Apply** — effectively use and adapt what they know in diverse contexts
- **Have perspective** — see and hear points of view critically; see the big picture
- **Empathize** — perceive sensitively on the basis of prior indirect experience
- **Have self-knowledge** — show metacognitive awareness; perceive the prejudices, projections and habits of mind that shape and impede our understanding

Both of these taxonomies start with the foundational knowledge necessary for deeper learning, and allow us to tease out the type of thinking we want students to be doing. But both go beyond cognitive processes and application of knowledge to also explore some of the larger goals of our courses. Nearly all courses including some affective goals, whether it is a deeper appreciation of culture, or simply to change someone's deep dislike of math or feelings of inadequacy about writing. And nearly all courses should include some metacognitive aspects, helping students develop the habits necessary of a lifelong learner in the 21st century.

Once we have clarified and articulated all the various objectives in our course, we can then choose the most appropriate teaching and assessment methods. For example, lectures and presentations are well suited for the transfer of foundational knowledge and could be useful for some cognitive processes, but are not effective for promoting application skills or perspective taking or self-discovery. Davis and Arend provide yet another categorization that can help educators determine which teaching methods are best suited for which learning objectives:

- Building skills – supported through practice and feedback
- Acquiring knowledge – supported through presentations and explanations
- Developing critical, creative, dialogical thinking – supported through question-driving inquiries and discussions
- Cultivating problem solving and decision-making abilities – supported through problems, case studies, labs, projects
- Exploring attitudes, feelings and perspectives – supported through group activities and team projects
- Practicing professional judgment – supported through role playing, simulations, scenarios and games
- Self-discovery and personal growth – supported through reflection on experience

Which taxonomy you choose, or how you mix them together, might be a matter of personal choice. But articulating our goals beyond what we are used to describing will allow us to capture the entirety of what we are teaching, and perhaps become more passionate about our work. It's worth a look into some of these other taxonomies, beyond Bloom, that can help us with these larger goals.

Resources:

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