

## Developing Effective Learning Outcomes

The following questions and explanations will help faculty design learning outcomes that provide students with clear guidance on what to expect from a course. Developing effective learning outcomes becomes a tool to systematically reflect on your teaching and give your course a coherent structure (see also the explanations on Syllabus construction elsewhere on this website).

### What are Learning Outcomes?

You can look at what happens in a course from two perspectives: (1) What the instructor does, and (2) what the students learn. Traditionally, faculty have taken the first perspective and described in their syllabi what they wanted to “cover” in the course. That generally lead to declarations of what content was important to the instructor (e.g., “Providing an overview of...,” “Addressing the differences between...,” “Exploring new concepts in...,” “Familiarizing students with the conventions of...”). While coverage statements may give students a vague idea of the knowledge domains the instructor values, they tell little about how the students are expected to use that knowledge. That’s where learning outcomes come in. They require the instructor to take the students’ perspective and make a realistic estimate of what students are supposed to know and be able to do by the end of the course. In other words, they force instructors to be more focused and purposeful in their planning and develop a system that aligns intended learning outcomes with appropriate assessment measures and instructional activities.

### What are characteristics of effective Learning Outcomes?

Writing good learning outcomes takes time and experience. It is very difficult to come up with good outcomes if you don’t know the students you will be teaching and have never taught the course before. A good set of learning outcomes requires considerable understanding of how to best relate the course content to your types of students: how to challenge without losing them; how to make the course meaningful to your students’ needs and life experiences; and how to educate for life while grading the accomplishments of just a few weeks. The following six guidelines summarize the essence of effective learning outcomes.

1. Student-focused, not professor-focused  
That means: learning not coverage-oriented
2. Alignment between course, program, and institutional levels  
Course outcomes need to reflect both the goals that the academic program represents as well as the broader mission of the institution as a whole
3. Focus on abilities central to the discipline  
Course outcomes should help prepare students for what is important to the discipline of which the course is a part
4. Focus on aspects of learning that will endure  
Teaching students new modes of thinking is likely to have an impact on their future; having them memorize facts tends to be much more short-lived
5. Are limited to manageable number  
Learning outcomes should focus a course on a few (say, 4-6) key purposes that have a realistic chance of being accomplished within a semester
6. Specific enough to be measurable

Learning outcomes should be general enough to capture important learning, but specific enough to allow for a fair assessment, whose criteria are clearly communicated to students

### **What types of Learning Outcomes are there?**

*Knowledge* outcomes are the most typical ones, especially in introductory-level courses. Many of these courses tend to focus on acquisition of facts, concepts, principles, and theories. While these are obviously crucial for developing competencies in any discipline, knowing what to do with this knowledge requires a large range of *skills* that need to be taught as well. But even a well-developed set of skills alone does not create an educated person. Students should be able to reflect on why they are pursuing certain knowledge and skills, i.e. they need to develop certain *values and attitudes* about the relevance of knowledge and their own role in using and pursuing it. While value/attitude outcomes may often not be suitable to include in the class grading system, instructors should always try to at least informally assess whether students are making progress in those areas. The following outline lists different types of outcomes and provides specific examples for each one.

#### **1. Knowledge Outcomes**

- a) Facts  
*e.g., Remembering historical data and events leading up to the American Civil War*
- b) Concepts  
*e.g., Being able to compare and contrast the genetic concepts of mutation, selection, inbreeding, gene flow, and genetic drift*
- c) Principles/Theories  
*e.g., Defining the strengths and weaknesses of humanistic, psychoanalytic, phenomenological, and cognitive-behavioral theories of personality*

#### **2. Skills Outcomes**

- a) Cognitive
  - i) Information Literacy  
*e.g., Framing (research) questions that can be answered, given the current knowledge status of a discipline*
  - ii) Thinking Strategies  
*e.g., Questioning the assumptions others (e.g., textbook authors) make in their statements and conclusions*  
*e.g., Making connections between different concepts and across domains*
  - iii) Computational/numerical Skills  
*e.g., Calculating mean and median of a sample*
- b) Social/Interaction
  - i) Communication Skills (written & oral)  
*e.g., Writing a short reflective paper that relates key concepts of the discipline to students' personal experience (using a grading rubric)*
  - ii) Collaboration/Team Skills  
*e.g., Filling the role of a synthesizer who periodically sums up key points in the group discussion such that consensus is established*

- iii) Initiative and Leadership Skills  
*e.g., Volunteering for tasks (in or out of class) and demonstrating commitment and ability to coordinate efforts of fellow students*
  - c) Aesthetic Sensitivity
    - i) Appreciation for Art, Literature, and Music  
*e.g., Writing a short paper that reflects on the associations and feelings a work of art has stimulated in oneself (using a grading rubric)*
    - ii) Proficiency in Basic Procedures for Creating Art, Literature, and Music  
*e.g., Producing a poem/drawing/song following elementary rules of the genre*
    - iii) Creativity in Art, Literature, and Music  
*e.g., Producing a poem/drawing/song going beyond traditional rules of the genre*
- 3. Values/Attitude Outcomes (“Habits of Mind”)**
  - a) Open-Mindedness and Love of Knowledge
    - i) Willingness to learn and change  
*e.g., Reconsidering one’s perspective in class discussion*
    - ii) Desire to develop personal interests  
*e.g., Taking the initiative to discuss personal interests with the instructor*
    - iii) Willingness to take (intellectual) risks  
*e.g., Volunteering to roleplay a person with an opposite viewpoint from oneself*
  - b) Diligence and Integrity
    - i) Perseverance in one’s work habits  
*e.g., Repeatedly coming to office hours prepared with a list of questions or work samples for discussion*
    - ii) Uncompromising in pursuing quality results  
*e.g., Submitting clearly improved drafts of a course paper*
    - iii) Humility about one’s own importance  
*e.g., Stepping aside for others in a team to play a leading role*
  - c) Social Responsibility
    - i) Ethical awareness  
*e.g., Critiquing research studies for ethically questionable procedures*
    - ii) Political accountability  
*e.g., Bringing up issues in class or office hour that relate course content to political problems on campus, in the community, and beyond*
    - iii) Appreciation for diversity  
*e.g., Selecting topics for paper or group projects that explore dimensions of human diversity*

**How Learning Outcomes align with other course elements?**

Effective student learning outcomes do not exist in a vacuum. They are not mere declarations of intent, but they determine the structure of the course. This involves a three-step process, responding to the questions:

1. What do you want your students to get out of the course?
2. How do you assess whether they got it?
3. What do you have them do (in class and at home) so that they will get it?

Each answer to one of these three questions can change the answers to the other two questions. In other words, the process is cyclical. Instructors start by developing what appear to be meaningful learning outcomes. Then they look for effective ways to assess achievement of those outcomes. In the process, they might find that no good methods exist for assessing the outcomes the way they were originally phrased (e.g., they might have been too general, vague, ambitious, etc.). Therefore, the available assessment design might lead to a revision of the original outcomes. Finally, as the instructor searches for appropriate course assignments and classroom activities to prepare students for the assessment, other assessment activities might become visible, or other outcomes might become desirable.

Making sure that there is a good “fit” between intended learning outcomes, assessment formats, and class activities/assignments is a matter of “curricular alignment.” Unless all three elements are properly aligned—outcomes, assessment, instructional format—the intended student learning outcomes, very likely, are never achieved.

That’s why the development of learning outcomes alone is insufficient, unless they are accompanied by a course design guaranteeing that these outcomes are systematically reinforced at all levels of the course.