

Writing Course-Level Learning Outcomes

FIT

All FIT programs have articulated program learning outcomes for each degree, which summarize what students learn through the courses in their major by the time of graduation. Course-level learning outcomes are more specific than program learning outcomes, describing what students should learn in an individual course. Course-level learning outcomes represent only the most important aspects of learning in the course, and should be limited in number (approximately 5-10). Smaller, more discrete learning outcomes are still important and may remain a goal for a particular unit or assignment.

Course-level learning outcomes will relate to program learning outcomes, as well as broader goals for education, such as written and oral communication, critical thinking, and information management, since it is through individual courses that students build and integrate their learning across their educational experience.

How to Begin Writing Outcomes

To begin to write course learning outcomes, consider the following question: "At the end of this course, students will be able to....". Brainstorm a list of answers to this question, keeping the following suggestions in mind:

- Focus on what you want students to learn and be able to do, rather than the content or coverage of what you will teach.
- Think long-term: What do you want students to be able to do a year or two after the course?
- Consider the course's function within the curriculum: Is the course required?
- Do students need to learn particular knowledge and skills to advance to the next level?
- What program-level outcomes are addressed in the course?
- Choose an appropriate level of "staged" learning: Generally, introductory courses introduce concepts ; in mid-level courses, students develop increased facility and engage in more complex, higher-level learning ; and in senior capstones, students demonstrate mastery.
- Consider including learning from different areas: In addition to specific disciplinary content/skills, what else is being taught in the course?
- Many courses strengthen student learning in a variety of areas, such as oral communication, critical thinking, quantitative reasoning, teamwork, and more.

Refining and Drafting

Once you have an initial list, your task will be to prioritize and narrow to no more than 5-10 learning outcomes. You may find that some outcomes can be grouped together. When you have drafted a final list, the next step will be to write these as learning outcomes.

Observable Language

Learning outcomes should be observable, since you'll want to judge whether or not your students have accomplished this learning. To ensure that outcomes are observable, precise language is necessary. In the context of a learning outcome, verbs such as "appreciate," "know," or "understand" are vague and difficult to observe.

To avoid vague terms, think of how students would demonstrate their knowledge, appreciation, or understanding more specifically - for example, students might explain concepts on an exam or in a paper. Identifying behaviors, activities, or student work that provides evidence may help you find more specific language. Outcomes are most commonly written with "action verbs". Write outcomes in language a student will understand.

Strategic Planning

Many faculty find beginning the course planning process by creating student learning outcomes to be effective. Once you have determined what students should learn, you can think about how they will apply and demonstrate this learning, as well as the instructional strategies that will aid students in meeting the learning outcomes. Since the ultimate goal of the course is for students to learn what you have identified as being most important, activities and assignments should be related to course learning outcomes.

Choosing Action Verbs

Choosing the appropriate verb is the most important aspect of writing an effective student learning outcome. Learning outcomes phrased with concrete verbs will help guide the choice of assessment methods. It is much easier to assess whether a student can "define" something than whether he or she "appreciates" something.

The "SINISTER Sixteen"

There are certain verbs that are fuzzy, passive, or unobservable and are best avoided in learning outcomes:

- Understand
- Appreciate
- Comprehend
- Grasp
- Know
- Have knowledge of
- Be aware of
- Value

- Apprehend
- See
- Be conscious of
- Learn
- Be familiar with
- Perceive
- ACCEPT

Bloom's Taxonomy

Bloom's taxonomy is widely used in education as a framework for cognitive learning. The taxonomy categorizes six levels of cognitive thought in order of increasing complexity; learning at the higher levels is dependent on having attained prerequisite knowledge and skills at lower levels. The categorization of these verbs into levels is useful to help faculty choose verbs appropriate to the educational degree and situation. While this taxonomy covers the cognitive domain, most programs will also have learning outcomes in other areas, such as skills or attitudes.

Action Words for Bloom's Revised Taxonomy

(Revised by Anderson and Krathwohl 2001)

Knowledge

- define
- identify
- describe
- list name
- state
- match
- select
- locate recall
- reproduce
- tabulate
- enumerate
- list

Understand

- explain
- describe
- interpret
- paraphrase
- summarize
- classify

- compare
- differentiate
- discuss
- distinguish
- estimate
- translate
- generalize
- give examples
- group
- report

Apply

- solve
- apply
- illustrate
- modify
- calculate
- sketch
- complete
- interpret
- teach
- administer
- employ
- establish
- examine
- predict

Analyze

- analyze
- contrast
- distinguish
- separate
- select
- categorize
- connect
- divide
- prioritize
- subdivide
- survey
- conclude
- correlate
- diagram
- dissect

- outline

Evaluate

- reframe
- criticize
- evaluate
- order
- appraise
- judge
- support
- compare
- discriminate
- recommend
- assess
- choose
- convince
- defend
- find errors
- measure
- predict
- rank
- test
- critique
- justify
- persuade

Create

- design
- compose
- create plan
- formulate
- invent
- hypothesize
- substitute
- write
- construct
- integrate
- modify
- produce
- rearrange
- rewrite
- adapt
- collaborate

- devise
- make
- negotiate
- originate
- propose
- reorganize