



UNIVERSITY OF
NORTHERN COLORADO

Center for the Enhancement of
Teaching & Learning

Guide for Developing Course-Level Student Learning Outcomes

Table of Contents

| | |
|---|---|
| Guide Overview | 1 |
| What is a Course-Level Student Learning Outcome? | 2 |
| Guidelines for Writing Course-Level Student Learning Outcomes | 3 |
| Writing SLOs Step-by-Step Process | 5 |
| Lesson-Specific Learning Outcomes | 8 |
| Bloom’s Taxonomy and Action Verbs | 9 |

Guide Overview

This guide provides guidelines for developing course-level student learning outcomes and a step-by-step process to follow to ensure your course outcomes meet the guidelines. There is also information about lesson-specific outcomes that can help you formatively gauge student progress on course learning outcomes throughout the semester.

This guide can be used to create course outcomes individually or the process can be used by multiple instructors teaching the same course.

What is a Course-Level Student Learning Outcome?

Student learning outcomes, or SLOS, answer the question “What do I want my students to know or be able to do at the end of the semester?” They help instructors determine the organization of a course, including lesson-specific outcomes, assessments, activities, and lecture content.

When writing course-level outcomes it is important to consider what skills and knowledge students bring into the classroom from prerequisite courses and also what skills or knowledge students need to leave with for success in the next course in the major.

Assessing course level SLOs helps instructors determine if the course is effectively preparing students to succeed in another course in the program and, if not, what curricular changes to make for future semesters.

Guidelines for Writing Course-Level Student Learning Outcomes

1. Write outcome statements that flow directly from, and support, the course description/purpose.

The connection to the course description/purpose should be evident in your program outcomes.

2. Write outcome statements that relate directly to the academic discipline and course content to reflect the knowledge and skills students should acquire in the course.

It can be tempting to write outcomes that are based on knowledge or skills that are important but may not be attributable to the curricular content of the course. It is very common to see outcomes that emphasize writing or critical thinking. Everyone would agree that these are important skills, but students ordinarily acquire those skills across an undergraduate curriculum as general education outcomes. Are they directly attributable to learning acquired in your course? Is that the focus of your course? Consider the example below.

| Weak | Better |
|---|---|
| At the end of this course students will be critical thinkers. | At the end of this course students will be able to evaluate an historical debate. |

3. Write outcome statements that are observable and measurable.

Focus on observable behaviors rather than what students think, understand, appreciate, etc. We cannot measure what students know or understand, but we can measure how they demonstrate evidence of knowledge and understanding. Avoid outcome statements that say, “Students will know ...,” or “Students will understand” When you’re tempted to use these, think about what students who *know* or *understand* can do with that knowledge or understanding. Consider the example below.

| Weak | Better |
|---|--|
| At the end of this course students will understand the 4th Amendment to the Constitution. | At the end of this course students will be able to analyze a current search and seizure issue. |

Refer to Bloom’s Taxonomy and the list of action verbs on p. 9 to help guide you.

4. Write outcome statements that do not combine multiple outcomes in a single statement.

Avoid the temptation to bundle everything you value about your course into a lengthy outcome statement. Stay focused on clear and simple outcomes that will yield high quality information. A

course-level outcomes is about summative learning at the end of a course, so focus on high-level learning. Most outcomes that are long combine a low-level outcome with a high-level outcome. Consider the example below.

| Multiple outcomes (2-3) | Single outcome (1) |
|--|--|
| At the end of this course students will be able to identify and critique an argument using anthropological evidence to support their argument. | At the end of this course students will be able to <u>critique an argument.</u> |

“Identify” is probably a 100-level course outcome and “critique” is a higher level, perhaps a 400-level course outcome. Or, “identify” is an outcome for the start of a course or unit and “critique” is something students can do by the end of the course. As you are writing your outcomes consider the level of your course and the level of achievement and skill possible to achieve in your course.

In the example above many aspects of critiquing an argument are listed. Through the use of a structured rubric, faculty can separately evaluate students’ ability to design a study, collect data, analyze data, interpret results, write research reports, and communicate their findings to others. Or perhaps these skills are taught over a series of courses, so consider which skill should be assessed in your course. Such a rubric will permit faculty to give feedback (and grades) for each of the separate components, and then arrive at an overall grade for the project. This same approach can be used for any individual or group written or performance projects that can be assigned to students.

6. Write outcome statements that are short and concise.

Longer statements tend to be vague or include multiple outcomes.

7. Write your outcome statements that follow a similar form for consistency.

Consistent formatting will help you to avoid many of the problems described in the preceding paragraphs. It will also be more organized for your students. Consider these statement templates:

“At the end of this course students will be able to _____;”

“Students completing _____ will be prepared to _____.”

Writing SLOs Step-by-Step Process

You can develop course-level learning outcomes following a 5-step process. You will follow this process for each course learning outcome separately. This is an activity that instructors can do individually or in a group. To complete this activity you will need markers, sticky notes, and paper.

Step 1: Brainstorm Knowledge, Skills, & Dispositions

What are the knowledge, skills, and/or dispositions students need to possess when they are finished with this class? Use *sticky notes* to jot down as many knowledge areas, skills, or dispositions as you can think of. At this point, don't put a lot of thought into this. Don't begin to think about the dos and don'ts for outcomes – just get your ideas down as fast as you can.

Consider the examples of knowledge and skill areas below (this is not an exhaustive list).

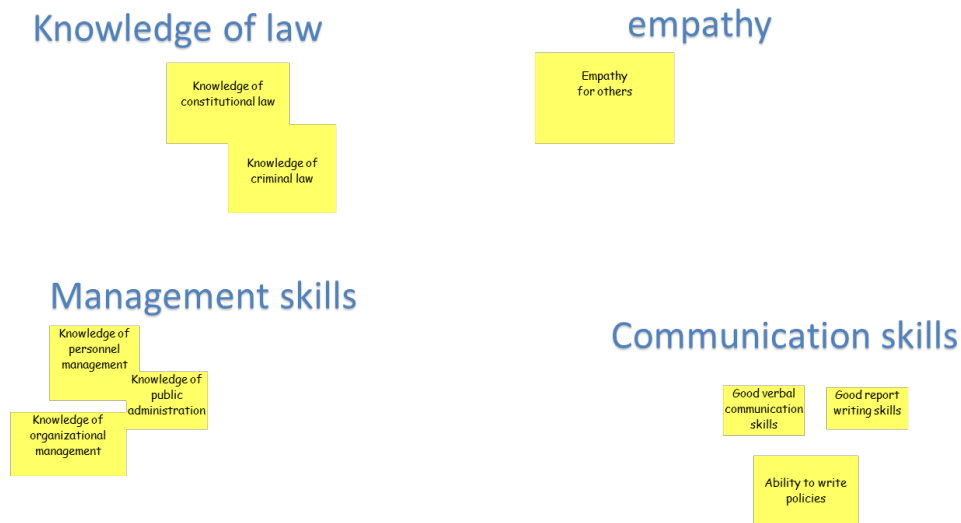
| Knowledge | Skills | Attitudes, Dispositions |
|-------------------|--|--|
| Theory | Analysis | Appreciation Integrity Character |
| Content knowledge | Clinical skills Critical thinking Ethics Oral communication Research methods Technical skills | Creativity Design skills Leadership Problem solving Team participation Written communication Empathy |



Step 2: Batch & Label Sticky Notes

Organize your sticky notes into related batches. You may identify areas of content knowledge that are closely related. You may realize that some sticky notes represent subsets of knowledge or skill represented on other sticky notes. Group those sticky notes together in a way that makes sense to you. As you do this, you may see some sticky notes that you want to discard. Set them aside, but don't discard them just yet – they may give you other ideas.

Determine an overarching name to the batches (e.g. oral communication, written communication, email communication might be titled Communication skills).



Step 3: Drafting a Course-Level Student Learning Outcome

Review the writing guidelines, then write the first draft of your first course-level outcome. Don't worry about perfection – you'll have an opportunity to review this draft and revise.

Step 4: Check the Guidelines

Does your learning outcome meet the guidelines provided on p. 3?

- Supports course description/purpose
- Directly relates to discipline/program
- Observable and measurable (action verbs)
- Avoids combining multiple outcomes
- Short and concise
- Follows a consistent format

Step 5: Revise and Recheck.

Revise until all guidelines are met. When the outcome meets the guidelines repeat steps 3-5 with another batch of sticky notes from Step 2.

| Student Learning Outcome Revision | Are the guidelines met? |
|-----------------------------------|--|
| | <ul style="list-style-type: none"><input type="checkbox"/> Supports course description/purpose<input type="checkbox"/> Directly relates to discipline/program<input type="checkbox"/> Observable and measurable (action verbs)<input type="checkbox"/> Avoids combining multiple outcomes<input type="checkbox"/> Short and concise<input type="checkbox"/> Follows a consistent format |

Lesson-Specific Learning Outcomes

Learning Outcomes for specific course lessons (or units or modules) are directly related to the course learning outcomes. They specifically address the content and activities that students will experience throughout the semester.

Once you develop your course-level learning outcomes ask yourself – “how will students gain the knowledge, skills, and dispositions to achieve these outcomes?” This is when you take a look at the course as a whole and map out the lessons or units with specific learning outcomes. Once you have your overall course goals and your more specific learning outcomes for each lesson, then it will be easier to develop lesson content, reading and learning activities, and graded assessments, including quizzes, exams, assignments, and projects. You will design these course components so that they relate to, and are therefore aligned, with the learning outcomes.

Bloom's Taxonomy and Action Verbs

Bloom's Taxonomy is a hierarchical system of ordering thinking skills from lower to higher, with the higher levels including all of the cognitive skills from the lower levels. This table contains samples of verbs associated with student response at the different levels of Bloom's Taxonomy.

| | | | Critical Thinking | | |
|-----------|---------------|-------------|-------------------|-------------|------------|
| Knowledge | Comprehension | Application | Analysis | Synthesis | Evaluation |
| Count | Associate | Add | Analyze | Categorize | Appraise |
| Define | Compute | Apply | Arrange | Combine | Assess |
| Describe | Convert | Calculate | Breakdown | Compile | Compare |
| Draw | Defend | Change | Combine | Compose | Conclude |
| Identify | Discuss | Classify | Design | Create | Contrast |
| Label | Distinguish | Complete | Detect | Drive | Criticize |
| List | Estimate | Compute | Develop | Design | Critique |
| Match | Explain | Demonstrate | Diagram | Devise | Determine |
| Name | Extend | Discover | Differentiate | Explain | Grade |
| Outline | Extrapolate | Divide | Discriminate | Generate | Interpret |
| Point | Generalize | Examine | Illustrate | Group | Judge |
| Quote | Give examples | Graph | Infer | Integrate | Justify |
| Read | Infer | Interpolate | Outline | Modify | Measure |
| Recall | Paraphrase | Manipulate | Point out | Order | Rank |
| Recite | Predict | Modify | Relate | Organize | Rate |
| Recognize | Rewrite | Operate | Select | Plan | Support |
| Record | Summarize | Prepare | Separate | Prescribe | Test |
| Repeat | | Produce | Subdivide | Propose | |
| Reproduce | | Show | Utilize | Rearrange | |
| Select | | Solve | | Reconstruct | |
| State | | Subtract | | Related | |
| Write | | Translate | | Reorganize | |
| | | Use | | Revise | |
| | | | | Rewrite | |
| | | | | Summarize | |
| | | | | Transform | |
| | | | | Specify | |