**Qualities of Effective Student Learning Outcomes**

This guide can be used alongside the SLO Review Checklist.

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| **Student Learning Outcome Qualities** | **Common Problems** | **Examples** |
| **1. Student-centered*** Focus is on what students will be able to do as a result of learning, not on what the instructor will do to teach.
* Written in a way that students can understand.
 | Common problems:* Uses jargon or unnecessarily technical language. WHY PROBLEMATIC: Could be confusing to students and others. Does not convey welcome and belonging.
* [DEPENDING ON CONTEXT] Uses specific terminology that may shift with changes in the field (e.g. proprietary computer program, technology, or slang). WHY PROBLEMATIC: Can require frequent updates and restricts flexibility for instructors.
 | Less student-centered:The course will introduce students to the fundamental concepts of calculusMore student-centered:Upon successful completion of this course, students should be able to calculate derivatives (a fundamental concept of calculus). |
| **2. Measurable*** Active verbs indicate cognitive processes that could be observed through products, performances, or other actions.
* Possible ways of measuring are either suggested by the statement or are not too difficult to imagine.
 | Common problems:* Verbs such as “know,” “understand,” and “demonstrate knowledge of.” WHY PROBLEMATIC: These words and phrases are vague; a student or instructor who reads the outcome would not be able to easily identify or imagine concrete ways students could learn and demonstrate learning.
* Lists of specific content (rather than broad concepts as the “umbrella”). WHY PROBLEMATIC: This might indicate that the outcome is focused on content rather than concepts and skills. Also, lists of specific content can restrict flexibility for instructors.
* Multiple verbs or multiple concepts in one outcome. WHY PROBLEMATIC: This can complicate course design and the assessment process.
* Outcome statement includes specific assignments or activities. WHY PROBLEMATIC: It is okay to suggest a *broad type* of demonstration of a skill. However, the focus should be the transferable knowledge and skills rather than specific activities/assignments.
 | Less measurable:Students will think critically.More measurable:Students will evaluate sources of information for relevance and authority.Less measurable:Understand appropriate instructional approaches to different situations.More measurable:Plan a unit of instruction for a particular teaching situation.Less measurable:Prepare classical and modern desserts including fillings, icings, custards, mousses, and glazes.More measurable:Apply creaming and foaming methods to prepare desserts. |
| **3. Inclusive** * Does not present any unnecessary barriers.
* Does not assume prerequisite knowledge or experiences that aren’t integral.
* Represents and recognizes student diversity.
 | Common problems:* Outcome includes a particular modality or means of demonstration that is not necessary and intentional. WHY PROBLEMATIC: If learning is tied to a particular modality or means of demonstration without good reason this can be exclusive of some students. This can also limit flexibility for instructors. (This problem might also show up in “Measurable” above.)
* Outcome assumes knowledge or experiences that privilege certain students, such as implicit rather than explicit definitions of “professionalism.”
 | Less inclusive: Students will trace their own family migration to the United States by exploring family primary documentsMore inclusive:Student will trace patterns of migration in the United States through primary documentsLess inclusive:Students will maintain professionalism in their laboratory workMore inclusive:Students will adhere to the American Chemical Society Academic Professional Guidelines by following and enforcing safe laboratory practices; maintaining high standards of honesty, integrity, and ethics; treating lab partners with respect; and documenting work in a laboratory notebook |
| **4. Higher-order*** Wherever possible and appropriate, learning outcomes focus on higher-order skills.
 | NOTES:* Students can learn lower-order skills such as recognition and recall on the way to learning higher-order skills such as apply and evaluate.
* Introductory courses don’t have to be limited to low Bloom’s verbs.
* The best cognitive level for a course can vary based on the type of degree/certificate and the discipline or profession.
* Depending on context and needs, it might be okay for a list of course outcomes to include one or more lower-order outcomes as long as the list overall aims at higher-order skills.
 | Lower order:Students will **identify** the reactants and products in all the reactions of photosynthesis.Higher order:Students will **predict** outcomes when changes are made to the reactions of photosynthesis. |