

# The Center for Teaching and Learning

Where Partnerships Begin

## Tips for Writing Student Learning Outcomes

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*By the end of a program of study, what do you want students to be able to do? How can your students demonstrate the knowledge the program intended them to learn? Student learning outcomes are statements developed by faculty that answer these questions, typically expressed as knowledge, skills, attitudes, behaviors, or values.*

### Characteristics of Student Learning Outcomes

- Describe what students should be able to demonstrate, represent or produce based on their learning histories (Maki, 2010)
- Rely on active verbs that identify what students should be able to demonstrate, represent, or produce over time (Maki, 2010)



Student learning outcomes also:

- Should align with the institution's curriculum and co-curriculum outcomes (Maki, 2010)
- Should be collaboratively authored and collectively accepted (Maki, 2010)
- Should incorporate or adapt professional organizations outcome statements when they exist (Maki, 2010)
- Can be quantitatively and/or qualitatively assessed during a student's studies (Maki, 2010)

### Examples of Student Learning Outcomes

The following examples of student learning outcomes are too general and would be very hard to measure: (T. Banta personal communication, October 20, 2010)

- will appreciate the benefits of exercise science.
- will understand the scientific method.
- will become familiar with correct grammar and literary devices.
- will develop problem-solving and conflict resolution skills.

The following examples, while better are still general and again would be hard to measure. (T. Banta personal communication, October 20, 2010)

- will appreciate exercise as a stress reduction tool.
- will apply the scientific method in problem solving.
- will demonstrate the use of correct grammar and various literary devices.
- will demonstrate critical thinking skills, such as problem solving as it relates to social issues.

The following examples are specific examples and would be fairly easy to measure when using the correct assessment measure: (T. Banta personal communication, October 20, 2010)

- will explain how the science of exercise affects stress.
- will design a grounded research study using the scientific method.
- will demonstrate the use of correct grammar and various literary devices in creating an essay.
- will analyze and respond to arguments about racial discrimination.

### Importance of Action Verbs and Examples from Bloom's Taxonomy

- Action verbs result in overt behavior that can be observed and measured (see list below).
- Certain verbs are unclear or relate to covert, internal behaviors that cannot be observed or measured. These types of verbs should be avoided (e.g., appreciate, become aware of, become familiar with, know, learn, and understand).

<b>Knowledge</b>	<b>Understand</b>	<b>Apply</b>	<b>Analyze</b>	<b>Evaluate</b>	<b>Create</b>
define	explain	solve	analyze	reframe	design
identify	describe	apply	compare	criticize	compose
describe	interpret	illustrate	classify	evaluate	create
label	paraphrase	modify	contrast	order	plan
list	summarize	use	distinguish	appraise	combine
name	classify	calculate	infer	judge	formulate
state	compare	change	separate	support	invent
match	differentiate	choose	explain	compare	hypothesize
recognize	discuss	demonstrate	select	decide	substitute
select	distinguish	discover	categorize	discriminate	write
examine	extend	experiment	connect	recommend	compile
locate	predict	relate	differentiate	summarize	construct
memorize	associate	show	discriminate	assess	develop
quote	contrast	sketch	divide	choose	generalize

## References

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Palomba, C.A., & Banta, T.W. (1999). *Assessment essentials: Planning, implementing, and improving assessment in higher education*. San Francisco: Jossey-Bass.



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