



BACKWARD DESIGN

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IDENTIFY DESIRED RESULTS



BACKWARD DESIGN - IDENTIFY DESIRED RESULTS

Learning outcomes are statements referring to the specific knowledge, practical skills and higher-order thinking skills that instructors expect students to develop, or master by the end of their learning (Suskie, 2009). Learning outcomes are described “as a basic educational building block” and they provide a powerful framework for building curriculum (Adam, 2004, p. 5).



A good learning outcome should have the following characteristics:

- Being S.M.A.R.T.T.T
- Following ABCD method
- Being consistent with Bloom’s Taxonomy

Please refer to [Writing Learning Outcomes-1](#) for further information on these characteristics.

Learning outcomes typically include the following elements:

- a short and consistent *stem*,
- an *action verb* that identifies the depth of learning expected,
- a statement of the *learning* to be demonstrated - addressing the *what*,
- a statement of the *context* in which this learning will occur - addressing the *how* or *why*.

Below is a sample learning outcome made up of all these elements;

Learning Outcome	
STEM	By the end of the lesson, students will be able to
ACTION VERB	describe
LEARNING	the relationship between form and function of the human art
CONTEXT	in an oral presentation



Below are some suggestions to develop learning outcomes.

Learning outcomes must be measurable. “By the end of the course, students will **learn** how to evaluate outside sources of information.” “**Learn**” is not a measurable verb. We can observe a student reading an article or searching for information but we can't observe a student learning something. It is not possible for us to decide on the cognitive development process that the verb "**learn**" refers to. So this learning objective can be revised to,

- Students will be able to **evaluate** outside sources of information.

Learning outcomes usually start with an action verb; that explicitly describes what students will do.

[Writing Learning Outcomes-1](#) provides a list of common active verbs for each of Bloom's Taxonomy levels.

Learning outcomes should be specific and well defined. For example, the learning outcome “*Students completing the BS in Chemistry should be well practiced in the relevant skills of the field*” is too vague. In this example, we do not know what the relevant skills of the field of chemistry include. This will create problems in measuring the behavior of interest and drawing valid conclusions about the program’s success.

Avoid the use of compound statements that join the elements of two or more outcomes into one statement. “By the end of the course, students will be able to list the four characteristics of effective leadership and explain how to develop leadership skills.” This learning outcome uses measurable verbs. We can observe a student listing the characteristics and explaining things. However, “**List**” and “**explain**” refer to two different levels of learning. So this learning outcome can be revised to,

- Students will be able to list four characteristics of effective leadership.
- Students will be able to explain how to develop leadership skills.



Learning outcomes should focus on what the student will do. “*This course will provide learners with an overview of historical perspectives of our world.*” This statement describes what instructors will do.

So this learning outcome can be revised to,

- By the end of the course, students will be able to compare historical perspectives of our world.

Learning outcomes should focus on different levels of learning, not just on acquiring content knowledge. [Writing Learning Outcomes-1](#) provides a list of different levels of learning according to Bloom's Taxonomy.

Learning outcomes should rely on active verbs in the future tense. It is important that outcomes be stated in the future tense in terms of what students should be able to do as a result of instruction. For example, the learning outcome “*Students have demonstrated proficiency in...*” is stated in terms of students’ actual performance instead of what they will be able to accomplish upon completion of the program.

WHAT ACTION VERBS SHOULD I AVOID USING?

We should refrain from using the “sinister verbs that are passive, internal and/or otherwise unobservable” (Potter & Kustra, 2012). Some sinister verbs are as follows:

Understand	Learn	Know
Have a knowledge of	Be aware of	Be acquainted with
Be conscious of	Be familiar with	Be exposed to



Examples of Poorly Written Learning Outcomes



Here are some examples of poorly written learning outcomes along with explanations.

By the end of the lesson, students will **understand** the significance of World War II.

Mistake: “Understand” is not a measurable verb. There’s no way for students to demonstrate their knowing of whether World War II was significant.

Students will be able to **write** a full-length research paper and **present** their findings by the end of the class period.

Mistake: This is not an attainable goal for one class period and this objective lists two distinct skills such as writing and presenting. The instructor needs to adjust the time or their expectations.

Students will be able to **recall** parts of the story, **write** a summary of what happened, and **predict** what will happen next.

Mistake: This objective lists three distinct skills. Each lesson should only have one or two objectives, and one skill per objective.



Learning Outcomes Generator

The links below are free outcomes generators that are designed to walk you through the process of developing measurable outcome statements.

- [Learning Outcomes Generator](#) from Easygenerator.com
- [Outcome Generator](#) from the University of Nevada, Reno



Checklist

Whether you are devising or reviewing learning outcomes of your own, the following questions can help to ensure whether the outcome has all the critical elements:

- Have I begun each outcome with an active verb?
- Have I used only one active verb per learning outcome?
- Are my outcomes observable and measurable?
- Have I avoided verbs like *know, understand, learn, be familiar with, be exposed to, be acquainted with* and *be aware of*?
- Have I included learning outcomes across the range of levels of Bloom's Taxonomy?
- Are my outcomes specific and clearly stated?
- Are the number of outcomes reasonable to assess?
- Are my outcomes realistic and achievable for students?
- Are my outcomes attainable by students?
- Is it realistic to achieve the learning outcomes within the time and resources available?
- Is the language unambiguous and understandable?
- Are the outcomes available in a variety of areas in the course within the syllabus and each individual learning unit?



Still need help? [Contact CTL](#) to speak with a consultant or arrange a departmental workshop.

References

Adam, S. (2004). *Using learning outcomes. A consideration of the nature, role, application and implications for European education of employing 'learning outcomes' at the local, national and international levels*. United Kingdom Bologna Seminar, Edinburgh, Scotland.

Potter, M. & Kustra, E. (2012). *Course design for constructive alignment*. Centre for Teaching and Learning, University of Windsor: Ontario, Canada.

Suskie, L. (2009). *Assessing student learning: A common sense guide (2nd ed.)*. San Francisco: Jossey-Bass.

Learning Objectives. Northern Virginia Community College.

https://novaonline.nvcc.edu/TOTAL_Workshops/LearningObjectives_v4/LearningObjectives_v4_print.html

Creating Learning Outcomes. Stanford University.

<https://www.bu.edu/provost/files/2017/06/Creating-Learning-Outcomes-Stanford.pdf>

Developing Effective Learning Outcomes A Practical Guide. Teaching and Learning in Higher Education. Queen's University.

https://www.queensu.ca/teachingandlearning/modules/principles/08_intro-s3.html

Learning Outcomes. Centre for Teaching and Learning. University of Western University.

<https://teaching.uwo.ca/curriculum/coursedesign/learning-outcomes.html>

Course Design. Office of Teaching and Learning. Utah Valley University.

<https://utah.instructure.com/courses/148446/pages/course-design>



Writing Course Learning Objectives. University of Washington.

<https://sph.washington.edu/faculty/academic-resources/course-learning-objectives>

Writing Measurable Student Learning Outcomes. Clackamas Community College.

https://www.clackamas.edu/docs/default-source/about-us/accreditation-and-policies/writing-measurable-student-learning-outcomes-kg-6-8-15.pdf?sfvrsn=3badb568_2

Well-Written Examples of Learning Objectives.

<https://examples.yourdictionary.com/well-written-examples-of-learning-objectives.html>

Further Reading and Resources

- [Writing Effective Learning Outcomes and Objectives. Michigan State University.](#)
- [A B C D of Writing Learning Objectives. Tammy Haislip.](#)
- [Why Do We Need Learning Objectives? Center for the Integration of Research, Teaching and Learning. University of Colorado.](#)