

LEARNING OUTCOMES: THEORY



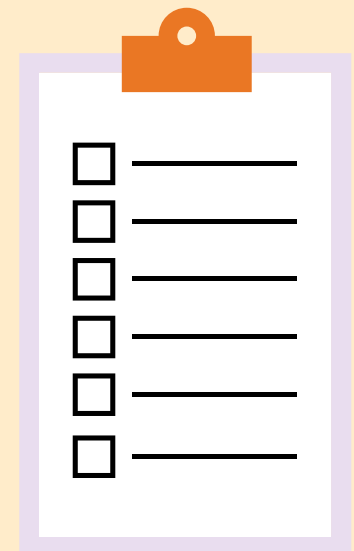
If you're an instructor at a post-secondary institution, chances are you've been asked to produce some learning outcomes. You've seen a lot of words and phrases like:

- Blooms!
- Don't forget about all three domains: cognitive, affective, and psychomotor
- It needs to be measurable and observable!
- Verbs, verbs, verbs!

But what are learning outcomes? Are they just another buzzy fad in the education world? This section of the Learning Outcomes Fast-Track Tutorial will give you some background as to what learning outcomes are and why they are important (so no, they aren't just a passing fad).

What does the literature have to say (briefly!) about learning outcomes?

Learning outcomes are statements that describe the **knowledge, skills, and abilities** that students are expected to acquire upon completing a course or program of study (Suskie, 2020). Learning outcomes are recognized as an important aspect of post-secondary education (Barkley et al., 2019; Huba & Freed, 2019); they play a crucial role in course design and assessment, and they help instructors and students understand what is **expected** and **achieved** in a course.



How are they different from learning objectives or learning goals?

It's all about **emphasis**. Learning objectives and learning goals are focused on what a program or course **aims to do**, whereas learning outcomes describe the **measurable and observable result** of what a student achieves after their learning experience.



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How many different kinds of learning outcomes are there?

That question might be a bit misleading. It might be more helpful to think about how many different purposes learning outcomes can serve. For example, academic projects will have learning outcomes, courses will have learning outcomes, and even units within a course will have learning outcomes. They all perform the same basic job – they are just situated for the purpose they serve (i.e. to describe the knowledge, skills, and abilities for a program, a course, or a unit of learning). When working with learning outcomes at multiple levels (program, course, or unit), it is important to consider their alignment with one another. You can consult our Fast-Track Tutorial on Alignment if you have questions about this concept.

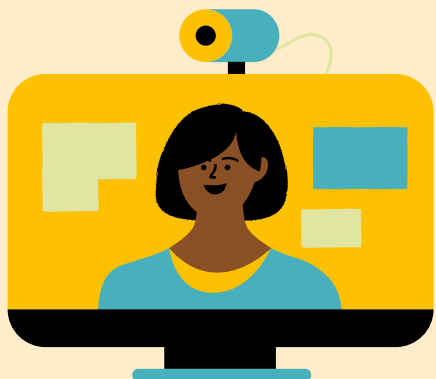


Functions of learning outcomes

2) Providing clear and explicit targets for assessments. In addition to aiding course design, learning outcomes provide a clear and explicit target for assessment (Huba & Freed, 2019). Learning outcomes can be used to evaluate and measure student learning, providing instructors with data to assess the effectiveness of their teaching strategies and make improvements as needed (Suskie, 2020).

1) Providing clear and explicit targets for course design. According to Huba and Freed (2019), learning outcomes provide a clear and explicit target for course design and assessment, allowing instructors to align their teaching strategies and methods with desired learning outcomes. This helps ensure that course content and instructional strategies are tailored to the intended learning goals.

3) Communicating course expectations to students. Learning outcomes can serve as a way to communicate course expectations to students, allowing them to understand what is expected of them and what they should be able to achieve by the end of the course. As noted by Barkley and colleagues (2019), clear and measurable learning outcomes can also help to enhance student engagement and motivation, as they help students connect their efforts and the intended learning outcomes.



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What are the benefits to using learning outcomes?

For **instructors**, having clear learning outcomes provides you with the means to **assess the relevance** of the content you wish to incorporate into various learning experiences. If the content you are thinking of using does not explicitly help your students develop the required knowledge, skills, or behaviours, the content is not likely suitable for inclusion in the course. The same holds true for the **instructional strategies** you wish to use, as well as the types of activities you might want to develop. **Everything needs to link back directly to your learning outcomes.**

At the same time, having explicit, measurable course and unit outcomes ensures your **content** and **assessments** are **aligned** (i.e. directly related to one another) and **fair**, as both content and assessments are referenced to the same starting point. In short, learning outcomes help to streamline instructional development and ensure that instructional time is used efficiently. By understanding where you would like your students to end up, you increase the chances of your learners getting there.



For **students**, good learning outcomes help them better manage their time and focus on what matters most in the course. They do this by helping students set **realistic** and **appropriate** learning priorities because learning expectations are clearly and explicitly articulated. If students are able to identify appropriate priorities, this helps them understand what they are expected to know and do in the course, aiding both their comprehension and learning. Effective learning outcomes situate learning and can aid in drawing links between the classroom and what happens “out there” beyond the classroom, thereby providing students with a **clear rationale** for learning, which increases their motivation and engagement.

References

- Barkley, E. F., Cross, K. P., & Major, C. H. (2019). Collaborative learning techniques: A handbook for college faculty (2nd ed.). Jossey-Bass.
- Huba, M. E., & Freed, J. E. (2019). Learner-centered assessment on college campuses: Shifting the focus from teaching to learning. Allyn & Bacon.
- Suskie, L. (2020). Assessing student learning: A common sense guide (3rd ed.). Jossey-Bass.

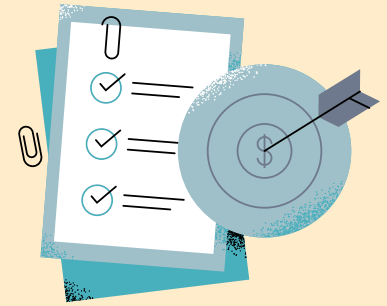
LEARNING OUTCOMES: ACTION



Okay, so you've been asked to write some learning outcomes – where do you start? Or, maybe you've received some feedback on ones you've already drafted – how can you act quickly on the recommendations you've received? You can start here with this quick-reference guide!

What goes into a learning outcome?

The purpose of learning outcomes is to clearly define and communicate what a learner will be able to do by the end of your course. If you need a quick reminder about the different functions of learning outcomes, you might want to review our Learning Outcomes – Theory section for this Fast-Track Tutorial.



While there is flexibility in terms of the actual writing, there are a few key characteristics of a learning outcome that you should include:

Learner-centered: Always keep in mind that learning outcomes are about articulating what a learner will be able to do when the instruction is completed. Learning outcomes are written from this point of view, and in a language that is easily understood by the learner.

Specific: Provide enough information to situate learning using active language. Outcomes should be specific about the knowledge, skills, and attitudes the learners must demonstrate.

Attainable: Provide reasonable expectations for learners based on their context (e.g. their level of prior knowledge and experience, where your course fits into broader curriculum) and within the time limit they have to work within.

Measurable: Ensuring that the outcome can be measured or observed in some manner.

Concise: Outcomes are written in short sentences. An effective way to maintain concision is to use the most complex action verb that fits your expectations and not list the other lower-order verbs (which are assumed to be required to complete the higher-level requirements).



LEARNING OUTCOMES: ACTION



So where to start the actual writing?

To ensure your learning outcomes are measurable, you'll want to start off your statements with a verb. But not just any verb – you'll want an action verb!

Bloom's Taxonomy is a framework that contains hierarchies of action verbs that is often used for creating learning outcomes. Most people in the education world are familiar with the cognitive domain of learning. However, there are 2 other domains: affective and psychomotor. Depending on your learning context, the intended group of learners you are working with, and program or other needs, you may want or need to branch out beyond just the cognitive domain of learning.

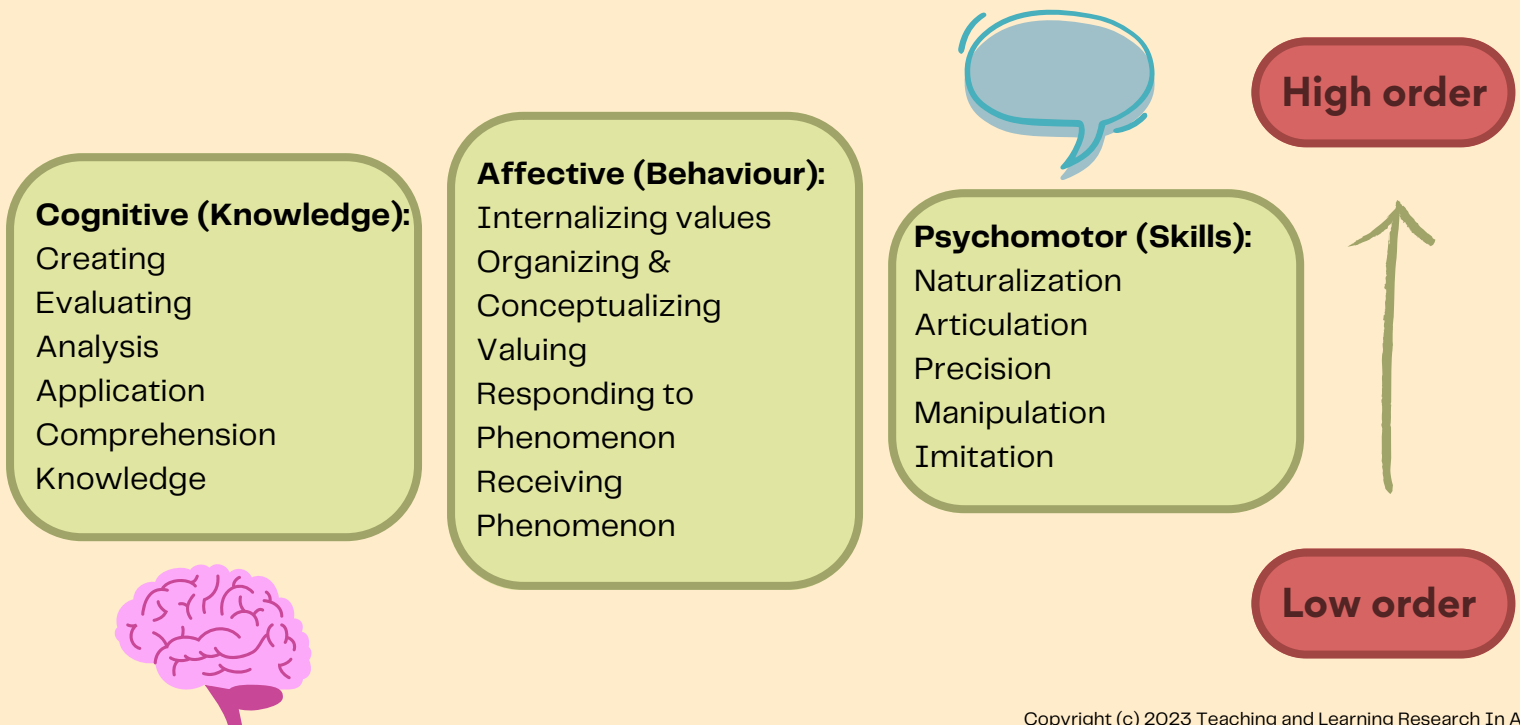
Cognitive skills referring to knowledge and critical thinking

Affective skills describing the learning of beliefs, attitudes, and values

Psychomotor skills denoting an individual's ability to manipulate an object or perform a physical task

One easy way to remember all three of these three domains is **thinking, feeling, and doing**.

The chart below lists the levels of learning associated with each domain. These levels move from lower order skills (least complex) to higher order skills (most complex).



LEARNING OUTCOMES: ACTION



Can we look at some examples of alignment in action?

Sure, let's look at two examples that encompass different learning domains and disciplines.

Cognitive Domain: English Literature

Analyze and interpret literary texts from diverse genres and historical periods using close reading and critical analysis techniques, demonstrating an understanding of the cultural and historical contexts that inform these texts.



This learning outcome is effective because it is specific and measurable, outlining the skills and knowledge that students are expected to acquire an English course. It also reflects higher-order thinking skills, requiring students to analyze and interpret texts using close reading and critical analysis techniques. The outcome also emphasizes the importance of understanding cultural and historical contexts, which can help students develop a deeper appreciation and understanding of the texts they are reading.

Affective Domain: Psychology

Develop a sense of empathy and compassion towards individuals with diverse psychological needs and backgrounds and demonstrate an ability to apply this understanding in their professional conduct.

This affective learning outcome emphasizes the development of attitudes, values, and beliefs. Empathy and compassion are essential qualities for building positive relationships with clients and helping them to achieve their goals. The outcome emphasizes the importance of applying this understanding in professional conduct, promoting the development of practical, and professional skills. The outcome also highlights the importance of diversity and inclusion, promoting cultural competence and the ability to serve a diverse range of clients. Overall, this outcome explicitly promotes the development of values and skills that are highly valued in the field of psychology.

LEARNING OUTCOMES: EXAMPLES



You've read some of the theory, you've learned about some of the elements that go into an outcome – this section of the Fast-Track Tutorial will provide you with some practical examples of what may (or may not) work when it comes to learning outcomes.

How can I start?

Let's start by looking at the basic construction of a learning outcome. Keep in mind the key elements we covered in the Action component of the Fast-Track Tutorial: learner-centered, specific, attainable, measurable, and concise. Let's start with a simple example. Imagine we're writing an outcome for a history course on Canadian foreign policy. This is a 2nd or 3rd year course.

1. First, start your outcome with: **Learners will be able to...**
2. Now, let's think about the measurable or observable outcome and our expectations around what the student should be able to do – this is where Bloom's comes into play. Given this is a 2nd or 3rd year course, we'll want our learners to do more than just memorize facts. We want them to engage with the learning in a more complex or applied manner. Perhaps we want them to analyze some element of policy.
3. So now we need to ask ourselves, what do we want them to analyze? We need to add some context. For this course, it's going to be historical policy trends and how those trends have impacted Canada's current relationship with the United States.
4. So, let's put it all together, write it up, and take a look:

Student Centered: The focus is on the learner

There are specific details about the learning to situate it and provide learners with clarity

Learners will be able to **analyze** how historical trends in Canadian foreign policy have impacted its contemporary relationship with the United States.

A measurable action verb – one requiring high-order level thinking (i.e. going beyond the memorization of facts) and is reasonably attainable for a 2nd or 3rd year course.

Overall this sentence is a concise statement

LEARNING OUTCOMES: EXAMPLES



Can you show me the difference between a less effective and more effective learning outcome?

Sure, but let's also look at what's going on with them and clarify why an outcome might not be as effective as we might initially believe. Imagine each outcome starts with the phrase: Learners will be able to...

Chemistry – Original version (less effective): appreciate the importance of chemistry in everyday life.

Revised version (more effective): identify at least three real-world examples of how chemistry impacts their daily lives, and explain the underlying chemical concepts involved in each example.

What's going on? There is an issue with measurability. In the first version, the outcome is not measurable because it is difficult to define or quantify what it means to "appreciate." The revised version is measurable because it specifies a concrete task that students should be able to perform, which can be assessed through observation, evaluation of student work, or other forms of assessment.

Engineering – Original version (less effective): design and build a variety of mechanical systems, such as engines, pumps, and turbines, using a range of materials and tools, and incorporating principles of thermodynamics, mechanics, and fluid dynamics, to meet specific performance criteria and engineering standards.

Revised version (more effective): demonstrate proficiency in designing and building mechanical systems that meet performance criteria and engineering standards.

What's going on? There is an issue with concision. The revised version is more concise, focusing on the key skill that students are expected to demonstrate (designing and building mechanical systems) and the criteria for success (meeting performance criteria and engineering standards). This version of the learning outcome is still specific enough to guide instruction and assessment, but it avoids unnecessary details found in the less effective version.



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Nursing – Original version (less effective):

Students will develop effective communication skills for working with patients.

Revised version (more effective):

Students will be able to demonstrate effective communication skills with patients by using active listening, empathetic responses, and clear explanations of health information.

What's going on? There is an issue with clarity/specificity. In the original version, the learning outcome is not clear because it does not specify what "effective communication skills" means or how these skills will be demonstrated. In the revised version, the learning outcome is clearer because it specifies the particular communication skills that students are expected to develop (active listening, empathetic responses, and clear explanations of health information) and the context in which these skills will be demonstrated (with patients).



The more specific and concrete language in the second version makes the learning outcome clearer and more meaningful for both students and instructors.