

A Guide to Learning Outcomes at the University of Alberta



UNIVERSITY OF ALBERTA
CENTRE FOR TEACHING AND LEARNING

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FOREWORD

by Steven Dew, Ph.D.
Provost and Vice-President (Acad)

I am pleased to see this resource coming from the Centre for Teaching and Learning. The work to develop and implement learning outcomes is ongoing at the University of Alberta. I have seen a strong desire to learn more about the advantages of learning outcomes for students, faculty and administrators from across the University. The tools in this document will support the work to develop learning outcomes at the course and program level, and the assessment of learning outcomes.

As Provost and Vice-President (Academic), I see much value in the transparency that learning outcomes provide. This transparency is valued by students, who appreciate the understanding of what their program and what their degree will allow them to do. Learning outcomes are also useful for course design and delivery, providing a rational approach to lesson and activity design, sequencing and evaluation. Finally, learning outcomes are important for our external stakeholders, they let potential students, employers, government and community members see and understand the knowledge, skills and attitudes our graduates will possess.

At the University of Alberta, proposals for new programs are already required to articulate Program Learning Outcomes for Ministerial and Quality Assurance purposes. Our provincial context and the national and international move towards implementing learning outcomes are important factors for us to consider.

In closing, using learning outcomes represents a change to education but only if they are used and assessed in an authentic manner and seen as a valuable process. I hope this tool will serve you well and I'd like to thank CTL for their leadership in this area.

STUDENTS' UNION PREFACE

by Shane Scott
VP Academic, Students' Union

As a representative of University of Alberta Undergraduate Students I will be the first to express my excitement about the creation of a document on learning outcomes. These outcomes are ultimately a tool for both instructors and students alike to use when navigating a course. At their core, learning outcomes are intended to improve the learning experience of students through a clear description of the competencies and skills that students are supposed to take away from a course. Put simply, helping us understand how courses complement our degree, what skills we are supposed to be learning and what the end goals are, will not only improve our experience but also help us learn.

To those of you who are exploring learning outcomes - be it as beginners or veterans - I applaud you. Thank you for taking the time to guide students on their learning journey in a transparent, succinct way.

EDITOR'S PREFACE

by Janice Miller-Young, Ph.D.
Academic Director, Centre for Teaching and Learning

Learning outcomes are direct statements that describe the essential knowledge and abilities that students should possess, and the depth of learning that is expected upon completion of a course or program. For instructors, defining outcomes requires a shift in thinking away from the topics and content they want to cover, to the things they want learners to be able to *do* with that content. This is an important shift since learners don't automatically do the same thing with new information that experts do. Therefore, well-written learning outcomes are a useful guide for students to help them understand the learning goals and self-monitor their own learning in a course or program. Having clarity on what they want students to *do* can also help instructors to design an appropriate variety of activities, assessment methods and criteria, which is especially useful when they are designing a course which is quite different from what they have taken or taught in the past. Note that pre-written learning outcomes statements are only meant to describe the essential learning in a course - they do NOT prevent an instructor from teaching in a way they think is appropriate for them and their students, nor do they prevent them from having flexibility in their courses or even co-developing additional learning outcomes with their students. As this document demonstrates, well articulated learning outcomes at the course level are useful for program planning and review as well.

It is true that a learning outcome, no matter how well written, is a simplistic way to describe the messy, nonlinear, and challenging learning process that we as teachers attempt to guide our students through. Reducing complex, messy things to simplistic models is not an approach that all disciplines like to use, I realize. My own engineering-influenced perspective is that the models we use to describe the ways of the universe are necessarily more simplistic than reality. But if we acknowledge their limitations and use them appropriately, they can be extremely useful.

So for those who are writing or revising learning outcomes, we offer this guide as a helpful first step. CTL staff are also available to consult with individual instructors who wish to write/review their course learning outcomes. Further, should a department or faculty wish to review their curriculum for alignment and coherence, sequencing and continuity of student learning outcomes across a program, and the like, CTL's faculty and staff are able to provide counsel to guide the process.



GETTING STARTED

HOW TO USE THIS GUIDE

This introductory guide has been designed to be used flexibly to meet a wide variety of needs. We recognize that not everyone is at the same stage in their thinking about learning outcomes nor may they need to approach learning outcomes in the same way. You may find that certain approaches, suggestions, and ideas resonate and work for you or you may wish to modify them to meet your specific needs.

The document is comprised of the following sections. Each section corresponds to a possible action that you can take with respect to learning outcomes.

Did you want to:

1. Get an introduction to learning outcomes; learn what they are, and why and when you might use them.
2. Consider learner needs and characteristics, course level, and program structure before writing learning outcomes.
3. Learn how to write learning outcomes well.
4. Write course and unit level learning outcomes starting with knowledge, skills, and attitudes.
5. Revise or evaluate your course using learning outcomes.
6. Structure courses and programs using learning outcomes.
7. Write program level outcomes.
8. Assess program level outcomes and create a curricular map.

GIVE IT A TRY

For each action you can:

- Read a scenario and learn from others' experiences;
- Get answers to key questions, and suggestions to consider for your own context and needs.

SECTION 1

DEFINITIONS AND CONSIDERATIONS

1. Introduction to Learning outcomes
2. Before You Begin

DEFINITIONS AND CONSIDERATIONS

1

Introduction to Learning Outcomes

SCENARIO



IDENTIFYING ENDURING UNDERSTANDINGS

Tanya has been assigned to work with an educational developer to design a new course titled “Coaching and Mentoring” with the Faculty of Extension at the University of Alberta. The course will be one out of a total of 6 courses for a new certificate program in Leadership. The course is primarily intended to focus on coaching, while providing a brief introduction to mentoring.

Tanya has been asked to submit a list of learning outcomes along with her course syllabus. The educational developer helping to design the course sent an email requesting a list of learning outcomes that Tanya would like students to meet upon completion of the course so they could review them at their first meeting.

New to writing learning outcomes, Tanya is open to all of the guidance that she can get.

Attached to the email, Tanya finds a brief set of instructions on how to write learning outcomes along with a list of suggested verbs. Tanya brainstorms a comprehensive list of skills someone hoping to become a coach or mentor would need and writes a total of 47 learning outcomes.

At their first meeting, the educational developer reviews Tanya’s learning outcomes, sets them aside and asks two questions:

Ultimately, once the course is over, what is the most essential thing you want learners to be able to know or do? What is the single most important enduring understanding?

GETTING CLEAR ON THE DESTINATION

Learning outcomes are statements that indicate “what a learner is expected to know, understand and/or be able to demonstrate after the completion of a process of learning” (Kennedy et al. 2006, p. 5). Put another way, learning outcomes specify the “knowledge, skills, attitudes, competencies and habits of mind” (Lesch, 2012) that students need to demonstrate by the end of a program, course, or unit. With each level, the learning outcomes that students are expected to meet become more and more specific.

As instructors and mentors, our goal in articulating learning outcomes is to create significant or meaningful learning experiences (Fink, 2013). Meaningful learning experiences are those in which the instructor has a clear understanding of the desired results they want students to achieve and how they can be achieved. In turn, well-written learning outcomes can help learners understand and achieve these goals. Although learning outcomes by definition must be assessed, this does not mean that we are limited to teaching only what can be assessed directly or easily. However, as (Fink, 2013) argues, if you want students to “find a lifetime of joy in continued learning, about your subject, you need to translate those dreams into explicit goals for the course you teach” (p. 81).

Meaningful learning experiences engage and impact learners long after the course or program has ended. To do so, learning outcomes need to focus on building “enduring understandings” and what is “important to know, think, or do” in a field or discipline (Wiggins & McTighe, 2005).

NOTE The terms “learning outcomes” and “learning objectives” are often used interchangeably but are not synonymous. The essential notion of learning outcomes is to provide clear statements describing what students will be expected to learn, articulated in a way that allows that learning to be assessed. To better understand the distinction between learning outcomes and learning objectives, please refer to the Glossary of Terms.

EXAMPLES - Course level learning outcomes

By the end of the course students will be able to:

- **Describe** the nature of Indigenous struggles to protect and preserve their lands, culture, and sovereignty against environmental destruction (Indigenous Studies)
- **Recognize**, and individually produce, writing appropriate to the genres and formats of professional communication (Technical writing)
- **Contrast** features and limitations of various sampling procedures and research methodologies (Statistics)
- **Act** in dramatic productions from the contemporary repertoire (Drama)
- **Use** appropriate sociolinguistic registers in written and oral modalities (Spanish)
- **Select** and **evaluate** reference materials by incorporating them appropriately into written assignments (Renewable Resources).

IDENTIFY WHAT'S MOST IMPORTANT

EXERCISE

In making decisions about what to include and how to structure your course, ask yourself:

- What are the enduring understandings I want students to remember many years from now?
- What is most important for students to know, think, and do at the end of the course?
- What is most important for students to know, think, and do at the end of the program?

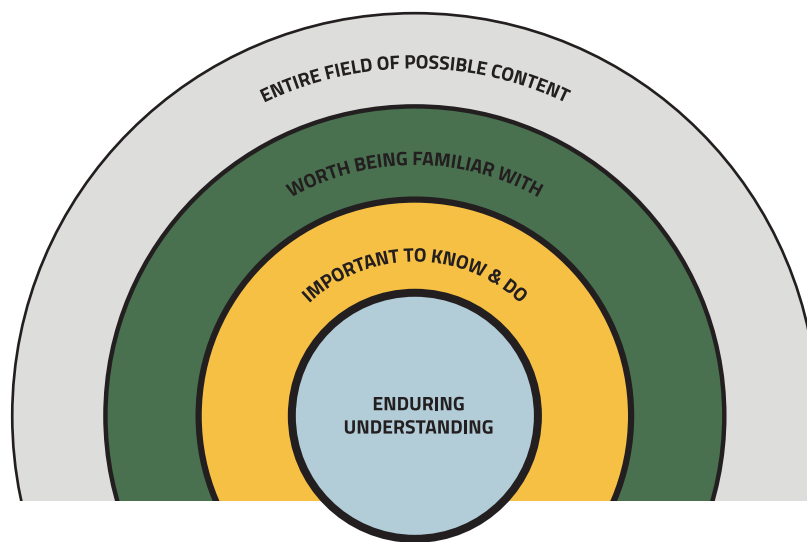


Figure 1. Focus on building “enduring understandings” (Wiggins and McTighe, 2005).

Worth being familiar with

Things we want student to “hear, read, view, encounter, research or otherwise encounter” (p. 9).

“Broad- brush knowledge” (p. 9).

Important to know and do

“important knowledge (facts, concepts and principles) and skills (processes, strategies and methods)” (p.9).

“student learning is incomplete if the unit or course completed without the mastery of these essentials” (p. 9).

Enduring understandings

“understandings that will anchor the unit or course” (p. 10).

“refers to big ideas , the important understandings, that we want students to ‘get inside of’ and retain after they’ve forgotten many of the details” (p. 10).

Adapted from Wiggins and McTighe, (2005).

It can initially be tempting for instructors to want students to learn, or at least be exposed to, too much, especially when designing a new course. We may try to fit 20 years worth of knowledge and experience into a single course. This can be overwhelming for learners and instructors, alike. Learning outcomes, therefore can:

- Provide a way for instructors to clarify their destination by identifying the "enduring understandings" and what is critical for students to know, think, or do given the level of the course and the goals of the program, and
- Form a map that instructors and students can follow to ultimately achieve their desired results.

SCENARIO - Coaching and Mentoring continued

Think back to Tanya and her course on Coaching and Mentoring (p. 5). In her first meeting with the educational developer, Tanya admitted that she had difficulty narrowing down the focus of her course given the depth and breadth of her experience. She had therefore included almost every skill someone hoping to become a coach or mentor would need, resulting in 47 learning outcomes! There was also the added uncertainty of how to write learning outcomes.

When she was asked what the single most important "thing" students needed to be able to do as a result of taking her course, Tanya reflected and said "I just really want students to be able to coach someone through a conversation".

When rephrased, this learning outcome became:

By the end of this course, students will be able to engage in a coaching conversation; including establishing a relationship, eliciting coachee needs, creating an action plan and following-up.

This became the single most important learning outcome that guided all Tanya's other decisions including her unit-level learning outcomes, selection of classroom activities, content and learning resources, and assessment strategies.

Tanya provided a comprehensive list of learning outcomes to her students at the start of the course. The learning outcomes formed a "map" for Tanya and her students to follow throughout the course.

QUESTIONS & ANSWERS

Q1 WHY ARE LEARNING OUTCOMES IMPORTANT AND WHEN DO YOU USE THEM?

A Mapping your Destination

Similar to using a map when traveling to a new destination, learning outcomes can form a road map for the learner and instructor to follow. Imagine you are trying to get a learner from point A to point B. Point B represents the course level learning outcomes. There may be multiple paths students can follow to get from A to B. However, along the way there are milestones that a learner will likely need to meet in order to make it to the next stop on their journey. These milestones are module or unit level objectives and lead ultimately to the destination.

NOTE Similar thinking can be applied when designing an entire program of studies; where Point B represents program level learning outcomes and individual courses represent the major stops on the journey. See Chapter 8 of this document for a discussion of curriculum mapping.

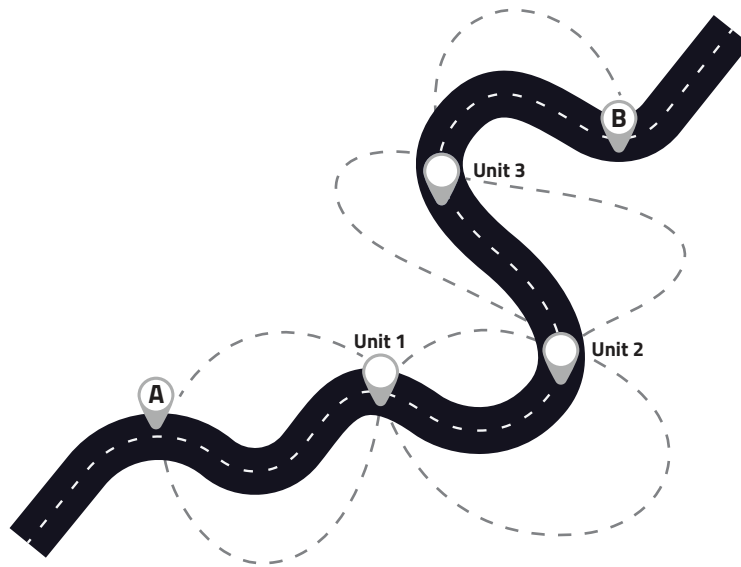


Figure 2. Learning outcomes form a road map to the final learning destination, with milestones along the way.

Similar to a road map, learning outcomes are used:

- **Before the learning** to plan in order for instructors and learners know where they are going and how to get there;
- **During the learning** to ensure that instructors and learners are on the right track; and
- **At the end of the learning experience** so learners can recall, demonstrate, and assess their learning and instructors can review and assess students' learning.

For Instructors

Articulating learning outcomes requires instructors to define what the course *is* and what it is *not*. Through the process of writing learning outcomes, and considering how to help students achieve them, instructors clarify:

- What they want student to be able to do by the end of a period of instruction;
- The content that needs to be covered;
- The learning resources that need to be provided;
- The order and purpose of specific activities;
- The most effective methods to assess student learning.

For Students

For the students, learning outcomes indicate:

- What they are required to know or do by the end of period of instruction;
- What they will be assessed on and how; and
- How to gauge, reflect upon, and self-direct their own learning.

While we may not like to admit it, grades matter and knowing what they will be assessed on becomes a driving motivator for many students.

For Administrators

For the administrator, learning outcomes can provide a curricular map for an entire program of studies. Articulating learning outcomes for each major and discussing them at faculty meetings, creates structure for important discussions about what and how students should learn and helps ensure that individual courses in a program are organized to construct meaningful learning experiences for students. Administrators can use a comprehensive map of learning outcomes to:

- Better align their courses with their overall program goals;
- Eliminate redundancies or plan for purposeful duplication to emphasize critical knowledge areas;
- Improve employers' and the public's understanding of the value of the program;
- Evaluate whether program meets accreditation requirements; and
- Demonstrate that students meet their program level learning outcomes.

Instructors and administrators alike can use learning outcomes to structure and organize an entire course or program of studies.

Q2

HOW DO PROGRAM LEVEL OUTCOMES DIFFER FROM COURSE, UNIT, AND LESSON LEVEL OUTCOMES?

A

Put simply:

NOTE A unit or module of instruction focuses on a particular topic, theme, or stage in a process. A unit or module can vary in length and depends entirely on the time required by the learner to achieve the unit's learning outcomes.

Lesson level learning outcomes support unit/module level learning outcomes,

Unit/module level learning outcomes support course level outcomes,

Course level outcomes support program level outcomes, and

Program level outcomes support the university mission and align with external accreditation.

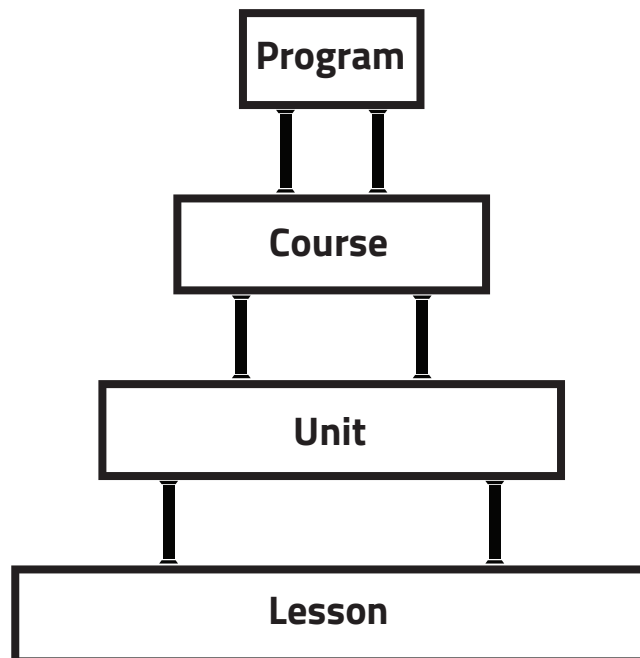


Figure 3. Lesson, unit, and course-level outcomes should all align with and support program-level outcomes.

More specifically:

BROAD



SPECIFIC

Program Level	Course Level	Unit/Module/Topic Level
<p>Purpose: Describe what the learner is expected to know, think and/or be able to demonstrate by the end of a program.</p> <p>Describe learning that will be common to all graduates of a program.</p> <p>Promote consistency across a program.</p>	<p>Purpose: Describe what the learner is expected to know, think and/or be able to demonstrate by the end of a course.</p>	<p>Purpose: Describe what the learner is expected to know, think, and/or be able to demonstrate by the end of module/unit/topic.</p>
<p>Focus: Enduring understandings.</p>	<p>Focus: Enduring understandings and what is important to know, think, and do.</p>	<p>Focus: Enduring understandings and what is important to know, think, and do.</p>
	<p>Build on knowledge, skills, and attitudes from previous courses.</p> <p>Provide learners with: The prerequisite knowledge and skills for courses that follow in their overall program;</p> <p>A learning path students will follow throughout the course.</p>	<p>Build on knowledge, skills, and attitudes from previous units or modules.</p> <p>Provide learners with: the prerequisite knowledge and skills for units or modules that follow.</p>
<p>Provide framework for determining more specific learning outcomes in courses.</p>	<p>Provide framework for determining more specific learning outcomes in specific unit of learning.</p>	<p>Provide framework for determining more specific learning outcomes in specific lessons.</p>
<p>Identify: The purpose of the program and its relevance.</p>	<p>Can help students understand: Why they are taking the course.</p> <p>The learning path they will follow for the duration of the course.</p> <p>What they will be assessed on and how.</p>	<p>Can help students understand: What they will be assessed on and how.</p>
<p>Characteristics: Reflect broad conceptual knowledge and adaptive vocational and generic skills.</p> <p>Reflect essential knowledge, skills, or attitudes.</p> <p>Represent the minimum performances that must be achieved to successfully complete a program.</p> <p>Align with institutional graduate attributes.</p>	<p>Characteristics: Reflect the culmination of knowledge, skills, and attitudes acquired through the entire course.</p> <p>Support program level outcomes.</p>	<p>Characteristics: List the specific knowledge, skills, and attitudes acquired in that particular module/unit/topic.</p> <p>Support course level outcomes.</p>

Q3

HOW ARE PROGRAM, COURSE, AND UNIT LEVEL OUTCOMES THE SAME?

A

Program, course, and unit level outcomes share the following common characteristics:

- A focus on building enduring understandings and what is important for students to be able to know, think, and do.
- They can be reliably demonstrated by students. Demonstration of learning is key – it is how students show “significant learning” (Spady, 1994).
- A focus on results of the learning experiences. They reflect the desired end of the learning experience, not the means or the process.
- They demonstrate alignment with external accreditation and university mission.

DEFINITIONS AND CONSIDERATIONS

2

Before you begin

Before writing learning outcomes for a course, it is important to give some thought to your learner and where the course fits within the overall program, in part because learning outcomes need to be:

- Attainable by students at their current level and matched to the purpose of the course;
- Relevant and realistic for students, course, program, and degree; and
- Timed appropriately.

Learner Characteristics

Learners bring their own unique temperaments and lived experiences to the classroom informed by prior learning experience, knowledge, and skills. Learners also have varying degrees of tolerance for ambiguity and complexity within the learning process itself, which you may want to address with your outcomes, course design, and teaching strategies (Svinicki 2004).

Course Level and Program Structure

It is important to consider where your course fits within the overall program and the goals of your program. If the learner is relatively new to a program of studies, learners may be encountering concepts and knowledge for the first time, or even have misconceptions that need to be addressed. If a learner is taking a course at the end of their program they may be drawing upon and making connections between concepts, prior learning, and lived experience.

External Expectations

Professional accreditation boards as well as faculty and department curricular goals need to be taken into account in determining what students should learn in a particular course.

CONSIDER THE LEARNERS, COURSE LEVEL, AND PROGRAM STRUCTURE

EXERCISE

Take a few moments to consider your learners and your course. Answer the following questions:

Who are your learners?

What are their characteristics? Are they undergraduate or graduate? What prior knowledge and experience do the learners bring to the course? How might the characteristics of your learners impact the learning outcomes you expect them to achieve?

Where does your course fit within the overall program of studies?

Is it an introductory course or does it build upon knowledge gained in previous courses? How might the position of your course relative to the entire program impact the type of learning outcomes you expect the learners to achieve? What do you expect students should already be able to do when they start your course?

What do you want learners know/think/do by the end of the course?

TYING IT ALL TOGETHER

When writing learning outcomes, it is helpful to keep the following recommendations and guidelines in mind:

Keep it simple.

While there is no magic number - we recommend limiting the number of learning outcomes. Create no more than 3–5 learning outcomes per unit of learning. Ask yourself, “What are the 3-5 most important things that learners need to come away with at the end of this course? at the end of this unit of learning?”

Keep it doable.

If you are having trouble narrowing down the number of outcomes you are requiring students to fulfill, ask yourself, “Am I trying to do too much in this unit? Am I trying to do too much in this course?”

Keep it realistic.

Ask yourself, “Are the outcomes achievable and realistic? In other words, will learners realistically be able to meet the outcomes in the time given?”

Keep it authentic.

Ask yourself, “What do I really want the students to leave with at the end of this course/ unit of learning and do the learning outcomes, as they are currently stated, accurately reflect this?”

Keep the big picture in mind.

Ask yourself, “Do the learning outcomes support the overall goals of the course and program?”

Be specific.

Learning outcomes should help make expectations transparent and explicit to students. Ask yourself, “what is the specific behaviour students should demonstrate and have I described it in a way that is clear to students?”

Be prepared.

If you are expecting students to meet the learning outcomes you have specified, be prepared to provide them with the resources, strategies and activities that will enable them to meet these outcomes. Most importantly, be prepared to assess them!

Also see:

SECTION 2. Writing Learning Outcomes

SECTION 3. Making Learning Outcomes Matter: Designing and Revising Courses Using Learning Outcomes

SECTION 4. Program Level Outcomes