Writing Learning Outcomes

This job aid is designed to help you to write learning outcomes for your courses.

After using this job aid, you should be able to:

- ☑ define learning outcomes

- ☑ define the categories (domains) of learning outcomes

- ☑ identify the levels within these categories

- ☑ describe the relationship between program goals and learning outcomes

- ☑ discuss the preferred number of learning outcomes for a course

- ☑ use the checklist to write better learning outcomes.

What are learning outcomes?

Learning outcomes specify what learners' new behaviours will be after a learning experience. They state the knowledge, skills, and attitudes that the students will gain through your course. Learning outcomes begin with an action verb and describe something observable or measurable.

Examples

At the end of this course you will be able to:

1. *Use change theory to develop family-centred care within the context of nursing practice.*
2. *Design improved bias circuits using negative feedback.*
3. *Demonstrate the safe use of welding equipment.*

Learning outcomes often represent discrete units of instruction in a course but each may have several sub-outcomes. Learning outcomes need not be attained by specific instruction in a lesson—they may be woven throughout the course. For example, they may include such things as *use problem solving techniques* or *work effectively in teams*.

Why are learning outcomes important?

Learning outcomes are the most important section of your course outline—the essence of your course. They are essential because they:

- define the type and depth of learning students are expected to achieve
- provide an objective benchmark for formative, summative, and prior learning assessment
- clearly communicate expectations to learners
- clearly communicate graduates' skills to prospective employers*
- define coherent units of learning that can be further subdivided or modularized for classroom or for other delivery modes.
- guide and organize the instructor and the learner.

*By reading your listed learning outcomes, an employer or professional in the field should be able to identify what knowledge, skills, and attitudes your students will be able to offer them after taking your course.

How do learning outcomes fit into program goals?

Learning outcomes for a course should fit within the overall course and program goals. This chart shows how they relate.

Program aim and goals

Course goals

Learning outcomes
(Competencies)

Sub-outcomes
(Learning Tasks)
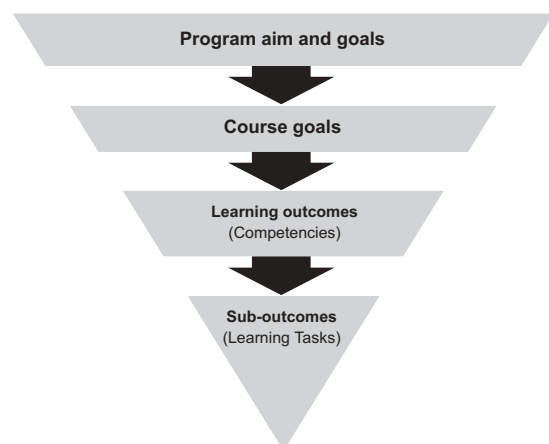
How many learning outcomes should there be?

There should be as many outcomes as needed to clearly reflect what the students will gain from your course. Follow these rough guidelines when deciding how many you need:

- Each major topic in the course should have one to three learning outcomes.
- Each 45-hour or three-credit course should have between five and 12 learning outcomes.

When you are writing the outcomes, you will use only *one* action verb per outcome. For example, you would use *two* learning outcome statements for designing and testing a circuit:

1. Design improved bias circuits using negative feedback.

2. Test bias circuits using negative feedback.

Sub-outcomes

Each learning outcome may be made more explicit by using several sub-outcomes.

For example:

Learning Outcome 1: Study productively to meet learning goals.

   Sub-outcome 1.1: Identify effective generic and personal study habits.

   Sub-outcome 1.2: Describe self-motivation strategies.

   Sub-outcome 1.3: Select appropriate study techniques to match your personal style and material.

Learning Outcome 2: Manage stress constructively.

   Sub-outcome 2.1: Identify potential sources of stress.

   Sub-outcome 2.2: Predict generic and personal stress patterns.

   Sub-outcome 2.3: Select appropriate stress management techniques to prevent or control stress.

   Sub-outcome 2.4: Create a personal stress management plan.

Learning Outcome 3: Install electrical wiring safely.

   Sub-outcome 3.1: Identify relevant sections of the Canadian Electrical Code.

   Sub-outcome 3.2: Describe electrical hazards.

   Sub-outcome 3.3: Select appropriate tools and materials.

   Sub-outcome 3.4: Identify safety rules about wiring on the job site.

   Sub-outcome 3.5: Apply safety rules as you wire a circuit.

Classifying learning outcomes

When specifying learning outcomes, think about what you want students to be able to do on the job as a result of their learning. These things fall into three possible categories (*domains)*:

- thinking, knowledge (cognitive domain)
- doing, skills (psychomotor domain)
- feeling, attitudes (affective domain)

Of course, some units of learning may occur in more than one domain at the same time.

Each of these categories has different possible *levels of learning*. These range from simple recall or observation to the complex evaluation or organization of information.

Choosing appropriate action verbs

The charts on pages 5 to 7 show samples of the action verbs you could use for learning outcomes in each of these categories and levels. Make sure that the verbs you choose match the level of learning you require. Notice that the action verbs listed represent measurable or observable behaviours.

Vague verbs such as *know* or *understand* are not easily measurable. Substitute, *identify*, *define*, *describe*, or *demonstrate.* Some subjective terms such as *appreciate* and *be aware of* may sometimes be used for outcomes in the affective domain.

As you construct your learning outcomes, use the checklist on the back of this job aid. It will remind you of all the important points about learning outcomes.

Cognitive Domain
(thinking, knowledge)

Knowledge

Definition:
Remembers previously learned material.

Sample Verbs:
- define
- identify
- label
- list
- name
- recall
- state

Comprehension

Definition:
Grasps the meaning of material
(lowest level of understanding).

Sample Verbs:
- describe
- discuss
- explain
- locate
- paraphrase
- give example
- translate

Application

Definition:
Uses learning in new and concrete situations (higher level of understanding).

Sample Verbs:
- apply
- carry out
- demonstrate
- illustrate
- prepare
- solve
- use

Analysis

Definition:
Understands both the content and structure of material.

Sample Verbs:
- analyze
- categorize
- compare
- contrast
- differentiate
- discriminate
- outline

Synthesis

Definition:
Formulates new structures from existing knowledge and skills.

Sample Verbs:
- combine
- construct
- design
- develop
- generate
- plan
- propose

Evaluation

Definition:
Judges the value of material for a given purpose.

Sample Verbs:
- assess
- conclude
- evaluate
- interpret
- justify
- select
- support

Based on "Taxonomy of Educational Objectives", B.S. Bloom Editor. 1956

Psychomotor Domain
(doing, skills)

Perception

Definition:
Senses cues that guide motor activity.

Sample Verbs:
- detect
- hear
- listen
- observe
- perceive
- recognize
- see
- sense
- smell
- taste
- view
- watch

Set

Definition:
Is mentally, emotionally, and physically ready to act.

Sample Verbs:
- achieve a posture
- assume a body stance
- establish a body position
- place hands, arms, etc.
- position the body
- sit
- stand
- station

Guided Response

Definition:
Imitates and practices skills, often in discrete steps.

Sample Verbs:
- copy
- duplicate
- imitate
- manipulate with guidance
- operate under supervision
- practice
- repeat
- try

Mechanism

Definition:
Performs acts with increasing efficiency, confidence, and proficiency.

Sample Verbs:
- complete with confidence
- conduct
- demonstrate
- execute
- improve efficiency
- increase speed
- make
- pace
- produce
- show dexterity

Complete Overt Response

Definition:
Performs automatically.

Sample Verbs:
- act habitually
- advance with assurance
- control
- direct
- excel
- guide
- maintain efficiency
- manage
- master
- organize
- perfect
- perform automatically
- proceed

Adaption

Definition:
Adapts skill sets to meet a problem situation.

Sample Verbs:
- adapts
- reorganizes
- alters
- revises
- changes

Organization

Definition:
Creates new patterns for specific situations.

Sample Verbs:
- designs
- originates
- combines
- composes
- constructs

Based on "Taxonomy of Educational Objectives", B.S. Bloom Editor. 1956

Affective Domain
(feeling, attitudes)

Receiving

Definition
Selectively attends to stimuli.

Sample Verbs:
- accept
- acknowledge
- be aware
- listen
- notice
- pay attention
- tolerate

Responding

Definition:
Responds to stimuli.

Sample Verbs:
- agree to
- answer freely
- assist
- care for
- communicate
- comply
- conform
- consent
- contribute
- cooperate
- follow
- obey
- participate willingly
- read voluntarily
- respond
- visit
- volunteer

Valuing

Definition:
Attaches value or worth to something.

Sample Verbs:
- adopt
- assume responsibility
- behave according to
- choose
- commit
- desire
- exhibit loyalty
- express
- initiate
- prefer
- seek
- show concern
- show continual desire to
- use resources to

Organization

Definition:
Conceptualizes the value and resolves conflict between it and other values.

Sample Verbs:
- adapt
- adjust
- arrange
- balance
- classify
- conceptualize
- formulate
- group
- organize
- rank
- theorize

Internalizing

Definition:
Integrates the value into a value system that controls behavior.

Sample Verbs:
- act upon
- advocate
- defend
- exemplify
- influence
- justify behavior
- maintain
- serve
- support

Based on "Taxonomy of Educational Objectives", B.S. Bloom Editor. 1956

Checklist for writing learning outcomes

Use the following checklist to help you as you write learning outcomes.

When writing learning outcomes, I need to:

1. Focus on outcomes, not processes .... ❑

2. Start each outcome with an action verb. .... ❑

3. Use only one action verb per learning outcome .... ❑

4. Avoid vague verbs such as *know* and *understand*. .... ❑

5. Check that the verbs used reflect the level of learning required. .... ❑

6. Ensure that outcomes are observable and measurable. .... ❑

7. Write the outcomes in terms of what the learner does, not
   what the instructor does. .... ❑

8. Check that the outcomes reflect knowledge, skills, or
   attitudes required in the workplace. .... ❑

9. Include outcomes that are woven into the entire course
   (such as *work effectively in teams*). .... ❑

10. Check that there are the appropriate number of outcomes
    (no more than three per major topic) .... ❑

11. List the sub-outcomes for each outcome .... ❑

12. Check that the outcomes fit within program and course goals .... ❑