## Learning Objectives To Foster Student Learning

Summer Institute 2022 Your hosts: Ainsley Camps and Judy Chan



## AGENDA

- What are learning objectives (LOs and why do we use them)?
- How to write LOs
- Practice & Sharing
- Introduction to Bloom's taxonomy
- Revise & Sharing
- Q&A

## LEARNING OBJECTIVES

By the end of the session, you should be able to:

- Describe the benefits of using learning objectives
- Write effective learning objectives
- Practice using Bloom's Revised Taxonomy to write learning objectives
- Consider a spiritual domain of learning

## What are Learning Objectives (and why use them)?

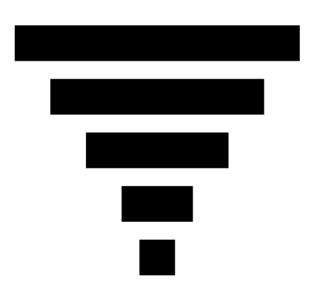
## Definition: Learning Objectives what a learner kr

what a learner knows or can do as a result of learning (Otter, 1992, p. i)



## Levels of learning objectives

- Program-level learning outcomes (what does a graduate know/do/value?)
- Course-level learning outcomes (know/do/value after your course)
- Module-level(know/do/value after the module)
- Lesson-level learning outcomes (know/do/value after the lesson)



Created by Rohith M S from Noun Project



Your target

# How to write Learning Objectives that foster student learning

## Learnercentred



Learner-centred

By the end of this lesson, **learners** will be able to....

By the end of this laboratory activity, **students** will be able to....

## Specific



## Specific

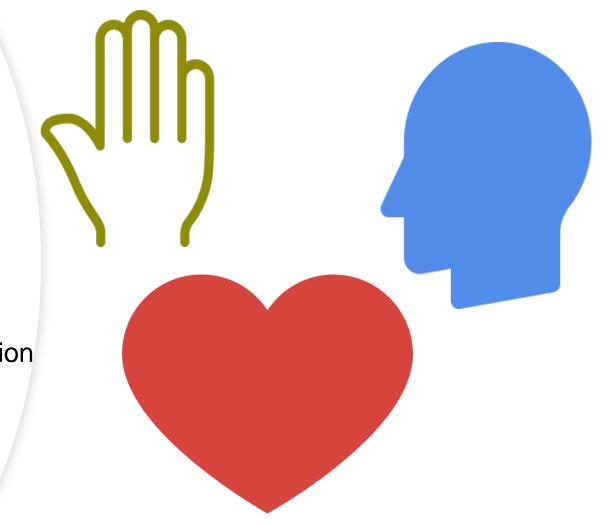
Effective learning outcomes contain

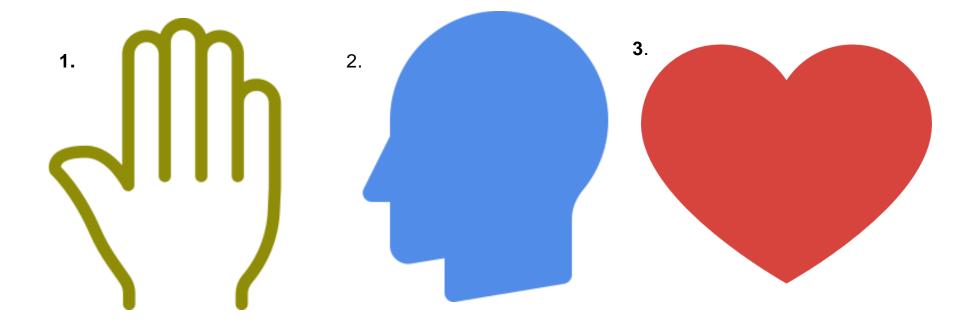
- 1. verb(s)
- 2. Subject (the what)
- 3. Context or criteria

By the end of this lesson, learners will be able to create a social media plan for a non-profit organization.

Bloom's Learning Domains

a set of three hierarchical models used for classification of educational learning objectives into levels of complexity and specificity.





Bloom's Domains of Learning

- 1. Psychomotor
- 2. Cognitive
- 3. Affective

By the end of this module, learners will **be** able to perform a backward dive.

## Psychomotor

By the end of this lessons, students will be able to position the scale to zero before measurement with an ammeter.

By the end of this module, learners will be able to identify 7 trees that are native to British Columbia.

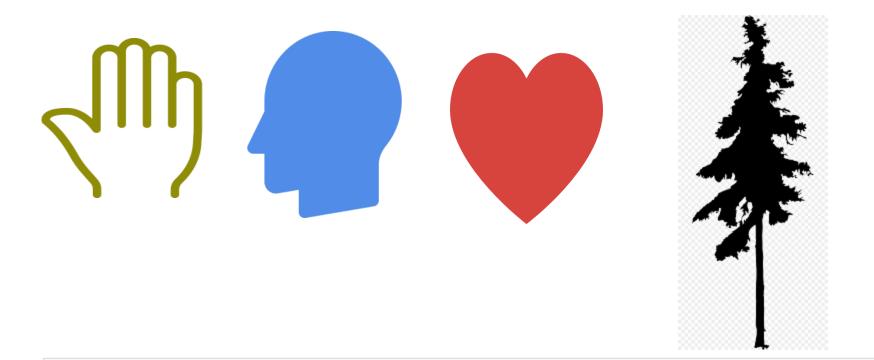
## Cognitive

By the end of this lesson, students will be able to list the sub fields of anthropology.

### Affective

By the end of this module, learners will value the ethical issues involved in...

By the end of this lessons, students will commit to a personal program of lifelong learning...



Introducing a 4th domain: The SPRIRITUAL domain

## Spiritual

The spiritual domain involves learning outcomes that "(connect).. fields of study and collegial relationships to a long-term view of how university knowledge and activities impact the self, families, communities and the world in a holistic way."

Marcella LaFever (2016) Switching from Bloom to the Medicine Wheel: creating learning outcomes that support Indigenous ways of knowing in post-secondary education, Intercultural Education, 27:5, 409-424

# Practice using Bloom's Domains of Learning to write learning objectives

## Dos and don'ts when writing Learning Objectives

#### Dos

- Use clear, simple and unambiguous language
- Be specific
- Create achievable and challenging objectives
- Use action verbs from Bloom's taxonomy to create measurable objectives
- Be Learner-centred

#### Don'ts

- Do not use ambiguous, non-measurable terms such as "understand, know"
- Avoid jargon

## Practice and Sharing

Think about 1 of your classes (or potential classes) and an aspect of that topic that you want your students to learn about.

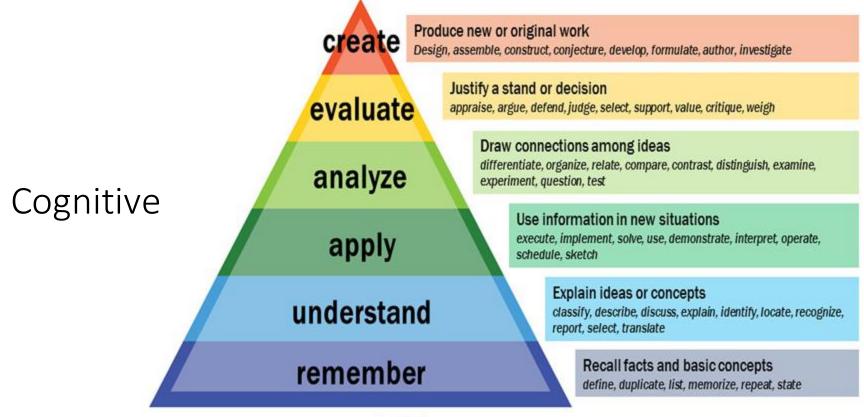
By the end of this 50-minute lesson, students will be able to...

Please contribute your learning objectives on a slide (link in the chat)

Learning
Domains and
Taxonomies



## **Bloom's Taxonomy**



## **COGNITIVE DOMAIN**

### thinking | knowledge

BCIT Handout, p. 5

#### Comprehension

meaning of material

(lowest level of

understanding).

Sample Verbs

- paraphrase

translate

- give example

- describe

discuss

explain
 locate

Definition

Grasps the

#### Knowledge

#### Definition

Remembers previously learned material.

#### Sample Verbs

- define
- identify
- label
- list
- name
- recall
- state

#### 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

#### Set Perception Definition Is mentally, emotion-Definition ally, and physically ready to act. Senses cues that quide motor activity. Sample Verbs - achieve a posture assume a body

stance

position

etc.

stand

station

- sit

establish a body

- place hands, arms,

- position the body

#### Sample Verbs

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

#### Guided Response

#### Definition

Imitates and practices skills, often in discrete steps.

#### Sample Verbs

- copy
- duplicate
- imitate
- manipulate with quidance
- 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

#### Adaption

#### 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

#### Definition

Adapts skill sets to meet a problem situation.

#### Sample Verbs

- adapt
- reorganize
- alter - revise
- change

#### Organization

#### Definition

Creates new patterns for specific situations.

#### Sample Verbs

- design
- originate - combine
- compose
- construct

### AFFECTIVE DOMAIN

### feeling | attitudes

## Affective

#### Responding

Selectively attends to stimuli.

Receiving

#### Sample Verbs

accept

Definition

- acknowledge
- be aware
- listen
- notice
- pay attention
- tolerate

#### 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

#### Internalizing

#### Definition

Organization

Conceptualizes the

value and resolves

conflict between it

and other values.

Sample Verbs

adapt

adjust

- arrange

balance

classify

- group

rank

organize

- theorize

 conceptualize - formulate

Definition

Integrates the value into a value system that controls behaviour.

#### Sample Verbs

- act upon
- advocate
- defend
- exemplify
- influence
- justify behaviour
- maintain
- serve
- support

## **Spiritual Domain** (transcend self-interest)

#### Value/d Definition Building relationships Honouring that honour the importance, worth, or Definition usefulness of qualities Conscious or aware of related to the human learning that is not spirit. based in material or physical things, and Sample verbs transcends narrow selfinterest. Empathize Sample verbs Honour Acknowledge Consider Meditate on Balance Be aware Exemplify Seek Serve Open Recognize

Respect

#### Provide and feel Connect/ed supported by an environment that encourages strength and confidence, especially in Link, build, and sustain controlling one's life and positive relationships claiming one's rights. Sample verbs community, culture, etcl.

Definition

with someone or

Sample verbs

something (ie.

Consult

Bond

Support

Relate to

Respond

Care for

Cooperate

Participate

Provide

Develop

Build

Work with

Express Gain Speak out about Advocate Act upon Defend Influence Engage in Re-imagine Prepare Maintain

Empower/ed

Definition

#### Definition Ability to honour and be

honoured as a unique individual within a group, in order for each member to become what each is meant to be.

Self-Actualize/d

#### Sample verbs

Become

Envision

Guide

Self-define Use resources Create Progress Reinforce Remain Possess Sustain Dream

#### Spiritual

Marcella LaFever (2016) Switching from Bloom to the Medicine Wheel:

creating learning outcomes that support Indigenous ways of knowing in post-secondary education, Intercultural Education, 27:5, 409-424, DOI: 10.1080/14675986.2016.1240496

Allow

Listen Observe Example 1: History course

By the end of the lesson you will be able to understand the events surrounding the war of 1812. Example 2: Medicine course

By the end of the lesson you will know how to use a needle and puncture a vein without causing bruising. Example 3: Education course

By the end of the lesson you will learn that your peers are a valuable source of information for your projects.

# Practice and Sharing

#### Revisit your earlier Learning Objective

- Identify the **domain** of learning.
- Identify the level of learning within that domain.
- Choose an action verb that specifies your intended learning.
- Revise as needed. Update the google doc

Take 5 mins.

# Practice and Sharing

An opportunity to receive feedback on your learning objective! (3 mins)

- Review your partner's learning objective
- Breakout Rooms
  - Mostly pairs
  - Please move yourself to a room according to your slide number
  - If you can't find the 'button', just ask us (chat or unmute)
- Seek clarifications and revise (or at least ponder)

#### References

- Anderson, L.W., Krathwohl, D.R., & Bloom, B.S. (2001). A Taxonomy for Learning, Teaching, and Assessing: a Revision of Bloom's Taxonomy of Educational Objectives. (Eds.) L.W. Anderson, D.Krathwohl; P.W. Airasian, et al. New York: Longman.
- Alonso, F., López, G., Manrique, D., & Viñes, J. M. (2008). Learning objects, learning objectives and learning design. *Innovations in education and teaching international*, 45(4), 389-400.
- Hoque, M. E. (2016). Three domains of learning: cognitive, affective and psychomotor. The Journal of EFL Education and Research, 2(2), 45-52.
- LaFever, M. (2016) Switching from Bloom to the Medicine Wheel: creating learning outcomes that support Indigenous ways of knowing in postsecondary education, Intercultural Education, 27:5, 409-424
- Otter, S. (1992). Learning Outcomes in Higher Education. A Development Project Report for the Development of Adult Continuing Education. London, UK.
- Webb, E. M., Naeger, D. M., Fulton, T. B., & Straus, C. M. (2013). Learning objectives in radiology education: why you need them and how to write them. *Academic radiology*, 20(3), 358-363.
- Writing effective learning outcomes (2020). West Virginia University Teaching and Learning Commons. Retrieved from: <a href="https://tlcommons.wvu.edu/course-curriculum-design/writing-effective-learning-outcomes">https://tlcommons.wvu.edu/course-curriculum-design/writing-effective-learning-outcomes</a>

### Videos

Bloom's Taxonomy

(video): <a href="https://www.youtube.com/watch?v=7k10Xwo">https://www.youtube.com/watch?v=7k10Xwo</a> <a href="https://www.youtube.com/watch?v=7k10Xwo">1lkc</a>

#### This work is Creative Commons Licensed: Attribution-Share Alike-International







Attribute to: Centre for Teaching, Learning and Technology at the University of British Columbia