

## Outcomes-Based Teaching & Learning

Outcome-based teaching and learning (OBTL) is an approach to curriculum design that explicitly describes **what students should be able to do, accomplish or produce** at the end of a course or program **to directly demonstrate their learning**, and incorporates teaching and learning activities that help students reach those outcomes.

### How are you developing your courses?

---

#### *course planning*

What **topics** should I cover?

- content-driven
- often dictated by the textbook
- course design considered from the instructor's perspective



What do I want students to be able to **do**?

- focused on students' cognitive, affective & behavioural skills
- course design considered from students' perspective
- based on learning outcomes

#### *teaching & learning activities*

What is the best way to deliver the **content**?

- lecture
- slides
- multimedia



What activities can I use to help students develop the relevant **cognitive, affective & behavioral skills**?

- lectures, slides, multimedia and...
- problem-solving
- experiential learning

#### *assessments*

How can I assess whether students can **remember** the content?

- expository assignments
- recall-based exams (multiple-choice, true/false)



What **evidence** can I use to evaluate whether students have **achieved the learning outcomes**?

- assessments align with the learning outcomes as well as with the teaching & learning activities

## How are you aligning your assessments?

### ex. *Fine Arts*

**LO** Compare & contrast various artistic painting styles.

#### Misaligned Assessment

Multiple Choice Exam  
Question: Select the correct painting style for the image depicted.  
**X** (Identification does not require students to compare & contrast)

#### Aligned Assessments

Mind maps: Create a mind map that illustrates the similarities and differences between two painting styles.

Multimedia assignment: Create a gallery of painting images, arranged by style similarity. Explain and justify your gallery organization.

Written Exam Question: Identify which painting style each image represents and support your choice by comparing and contrasting the styles.

### ex. *Biology*

**LO** Apply lab safety procedures.

#### Misaligned Assessment

Put the following lab safety procedures in order.  
**X** (Knowing the order of procedure doesn't demonstrate application)

#### Aligned Assessments

Lab Assignment: Construct a decision chart that illustrates correct procedures follow in the event of an accident or emergency.

Demo: In groups of 3-4, prepare a short video demonstrating a chemistry experiment using proper safety procedures.

Written Exam Question: Based on the scenario below describing a student in a lab, critique the student's lab safety procedures, explaining what he did correctly and any errors he made.

### ex. *Psychology*

**LO** Evaluate how accurately research findings are represented in the media.

#### Misaligned Assessment

Presentation: Summarize the purpose, methods, and results of a research study recently reported in the news.  
**X** (Summary is not analysis)

#### Aligned Assessments

Research project: Summarize a media article reporting original research and evaluate how accurately it represents the original study as well as the area of research as a whole.

Presentation: Analyze how a recently reported research study was either overstated or understated in the media.

Written Exam Question: Describe a scenario in which a media article's failure to distinguish statistical significance and effect size could substantially change how the public interpret the research.

## How are you aligning your teaching & learning activities?



Once you identify appropriate learning outcomes, it is important to design teaching & learning activities that align with those outcomes. This involves providing students with opportunities to practice the skills they are expected to demonstrate on assessments. For the examples on the previous page, this means providing repeated opportunities to practice comparing & contrasting various artistic painting styles, applying lab safety procedures, or **evaluating how accurately research findings are represented in the media** (see below).

### Example of aligned teaching & learning activities

#### Learning Outcome:

Evaluate how accurately research findings are represented in the media.

1

Students read news article in class, instructor summarizes original study & the class discusses accuracies & inaccuracies in reporting.

2

Students find news article and original study and write blog posts describing differences. Students must read and comment on peers' posts.

3

Instructor lectures on how media reports of a single study often distorts the area of research. Instructor summarizes area of research, in small groups students analyze how new report misrepresents area of research.

#### Assessment:

Summarize a media article reporting original research and evaluate how accurately it represents the original study, as well as the area of research as a whole.

## Resources from other institutions using an OBTL approach

---

Carnegie Mellon University, Eberly Center for Teaching Excellence & Educational Innovation  
[bit.ly/CarnegieOBTL](http://bit.ly/CarnegieOBTL)

McMaster University, Centre for Leadership & Learning, [bit.ly/McMasterOBTL](http://bit.ly/McMasterOBTL)

Massachusetts Institute of Technology, Teaching & Learning Lab, [bit.ly/mitOBTL](http://bit.ly/mitOBTL)

University of Toronto, Centre for Teaching Support & Innovation, [bit.ly/UTorontoOBTL](http://bit.ly/UTorontoOBTL)

## References

---

Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher education*, 32(3), 347-364.

## Image Attributes

---

*Man thinking, Classroom and Exam* icons made by by [Freepik](https://www.freepik.com) from [www.flaticon.com](http://www.flaticon.com).