

## Outcomes-Based Teaching & Learning

Outcome-based teaching and learning (OBTL) is an approach to curriculum design that encourages us to explicitly map out what our students should know and be able to do at the end of a course or program of study, how they will demonstrate that knowledge and those skills, and which teaching and learning activities will best support them to achieve those goals.



Identifying intended learning outcomes first simplifies program and course design and ensures instructional strategies stay focused on what the learners need to know and be able to do at the end of the learning experience.

## Benefits of the OBTL Approach

---

### Benefits for students

Explicit, measurable learning outcomes . . .

- make expectations of learning clear and transparent to students
- offer a direction and focus for studying
- help students understand the purpose of assignments and assessments
- allow students more autonomy and control over their learning
- encourage self-regulated learning
- improve learning and increase learner motivation
- help students recognize and articulate their skills and competencies for employment

### Benefit for instructors

Explicit, measurable learning outcomes . . .

- provide clear, specific aims for a particular course or program
- help instructors develop assignments and assessments
- simplify the development of marking criteria and/or rubrics
- help instructors select or develop course materials, instructional strategies and tools
- ensure consistency of learning among section offerings of a particular course; i.e. all sections have the same learning outcomes, but each instructor chooses the most appropriate instructional strategies for his or her specific group of learners)
- enable instructors to continuously assess and enhance student learning
- improve alignment and scaffolding of courses within a particular program
- facilitate articulation agreements between institutions

## How do instructors develop courses?

### ***Content-Based Approach***

### ***Outcomes-Based Approach***

#### **course planning**

What **topics** should I cover?

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



What do students need to **know** and be able to **do**?

- learning outcomes driven
- organized around needs of learners
- considered from students' perspective

#### **assessments**

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

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



How can **students demonstrate the knowledge and skills they've learned**?

- various types of assessment aligned with the learning outcomes and teaching and learning activities

#### **teaching & learning activities**

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

- lecture
- slides
- multimedia



What **activities can students engage in** to develop the knowledge and skills needed to achieve the intended learning outcomes?

- lectures, slides, multimedia
- problem-based learning
- case-based learning
- experiential learning

## How can we align our assessments to learning outcomes?

### e.g. Fine Arts

LO

Students will be able to compare and contrast various artistic painting styles.

#### Misaligned Assessment

Multiple choice question: Select the correct painting style for the image depicted.



*(Identification doesn't require students to compare and 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.

### e.g. Biology

LO

Students will be able to apply lab safety procedures.

#### Misaligned Assessment

Ordering question: Put the following lab safety procedures in order.



*(Knowing the order of procedures doesn't demonstrate application)*



#### Aligned Assessments

Lab assignment: Conduct a biology experiment in the lab following proper lab safety procedures.

Multimedia assignment: In groups of 3-4, prepare a short video demonstrating correct procedures to follow in the event of an accident or emergency.

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

### e.g. Psychology

LO

Students will be able to 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.



*(Summarizing does not require 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 can we align our teaching and learning activities?



Once we've identified the intended learning outcomes and developed aligned assessments, it's time to map out the teaching and learning activities we'll use throughout the semester to give students opportunities to develop and practice the skills they will be expected to demonstrate on the assessments. For the examples on the previous page, this means providing opportunities for students to practice comparing and contrasting various artistic painting styles, applying biology lab safety procedures, or evaluating how accurately research findings are represented in the media (see below).

### Example of Aligned Teaching & Learning Activities

#### Learning Outcome

Students will be able to evaluate how accurately research findings are represented in the media.

1

Students read 2-3 news articles for homework. In class, the instructor summarizes the original study and asks the class to identify and discuss accuracies and inaccuracies in the reporting.

2

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

3

The instructor lectures on how media reports of a single study often distort the area of research. The instructor summarizes an area of research, then asks students to work in small groups, analyzing how particular news reports have misrepresented that 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.

## OBTL Resources at Other Institutions

---

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)

National Institute for Learning Outcomes Assessment, <http://www.learningoutcomeassessment.org/>

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.

Biggs, J. & Tang, C. (2011). *Teaching for Quality Learning at University* (4<sup>th</sup> ed.). Berkshire, England: Open University Press

Fink, L. D. (2013). *Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses* (2nd ed.). San Francisco: Jossey-Bass

Driscoll, A. & Wood, S. (2007). *Developing outcomes-based assessment for learner-centred education: A faculty introduction*. Sterling, VA: Stylus Publishing

## Image Attributes

---

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