

# Program Outcomes and Curriculum Mapping support for Program Reviews

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# Overview

- Situating program review in the **curriculum**
- Must haves:
  - Program Goals
  - Learning Outcomes
  - Curriculum Map
  - Student voice
  - Depth of analysis
- How CTE can help

# Curriculum development process

- Four integrated phases
  - Design and development
  - Implementation
  - Formative assessment
  - Program review and accreditation



# Shared vision

- Describe an **ideal graduate** of your program
  - What do they know?
  - What skills do they possess?
  - What do they value?
- What **distinguishes** your program from other programs?
  - Why should a potential student pick this discipline for their degree?
  - Why at Waterloo?
- What do you hope an alumnus would say they **learned from the program and still value** 20 years after graduation?

# Program goals

## What we want for our students

- Goals
- Objectives
- Aims

## Program Goal

- The overall goal of the Certificate in University Teaching program is for participants to be self-aware, critically-reflective teachers who have gained both theoretical knowledge and skills that contribute to success in an academic career

Source: CTE's Certificate in University Teaching

# Program outcomes

## What *all* students *should* be able to do by graduation

- Degree-Level Expectations
- Program Learning Outcomes
- Competencies
- Graduate Attributes

## Example Program Outcomes

- Adopt a reflective approach to teaching through collecting feedback and continually modifying instructional approaches
- Develop and implement an active-learning teaching method

Source: CTE's Certificate in University Teaching

# Shared language – program learning outcomes

- Reflect what *all* students *should* be able to do by the end of the program
  - Cognitive: knowledge and intellectual skills
  - Psychomotor
  - Affective: values, beliefs and attitude
- Incorporate the **disciplinary context** of the program
- Align to the program **vision and aspirations**
- Help to **set assessment criteria** across the curriculum

# Sample outcome

*Apply principles (concepts) of conflict analysis and transformation at community, institutional and systemic levels*

Master of Peace and Conflict Studies

- Goal is for each outcome to be:
  - Specific
  - Measurable
  - Attainable
- Resource: [Writing intended learning outcomes](#) (CTE Tip Sheet)



# Critiquing the outcomes

- Design
  - e.g., Must reflect abilities and attributes of all students
- Function
  - e.g., Sufficiently distinguish program from similar programs (e.g., B Math in CS vs B CS)
- Discipline
  - e.g., Integrate the language of the discipline
- Resource: [CTE's Critiquing program outcomes](#)

# Degree level expectations

- Developed by Ontario Council of Academic Vice-Presidents
- Same requirements for **all programs in Ontario** at that degree level
  - General
  - Honours
  - Master
  - PhD
- Resource: UDLEs (DOC) and GDLEs (DOC)

# Undergraduate DLEs

1. Depth and breadth of knowledge
2. Knowledge of methodologies
3. Application of knowledge
4. Communication skills
5. Awareness of limits of knowledge
6. Autonomy and professional capacity
  
7. Experiential learning
8. Diversity

# Graduate DLEs

1. Depth and breadth of knowledge
2. Research and scholarship
3. Level of application and knowledge
4. Professional capacity/autonomy
5. Level of communication skills
6. Awareness of limits of knowledge

# Additional sources for program outcomes

- Past program review documents
- Accreditation bodies
- Professional associations (discipline-related but also librarian, graduate studies, etc.)
- Similar programs at other institutions

# From the Quality Council

## 4.3.3 Curriculum

- a) The curriculum reflects the **current state of the discipline** or area of study.
- b) Evidence of any **significant innovation or creativity** in the content and/or delivery of the program relative to other such programs.
- c) Mode(s) of delivery to **meet the program's identified learning outcomes** are appropriate and effective.

# Key steps: outcome development

- Gather key documents (early **fall** term):
  - Previous program reviews
  - New program proposal if program is less than 10 years old
- Visioning (mid **fall** term)
  - Are you still heading in the right direction?
- Outcomes creation or critique (mid-late **fall** term)
  - Most or all undergrad programs have outcomes already
  - Some grad programs do not have outcomes yet

# QUESTIONS ABOUT OUTCOMES



# Shared process - curriculum mapping

- Visual representation of a program's curriculum
- Show **progression** toward various points in a degree
- How, when, and where students are developing attributes
- Can help to identify **gaps/redundancies**
- Undergraduate
  - Levels of student proficiency (Introductory → Developing → Proficient)
- Graduate
  - Depth and breadth (Not Addressed, Covered, Assessed)

# Parts of the map

	<b>DLEs</b>	<b>Required Courses</b>	<b>Electives</b>	<b>Co-op/ WatPD</b>	<b>Milestones</b>	<b>...</b>
Program outcome	1c, 3a(ii)					
Program outcome	4, 6a					
Program outcome	1, 8					
....	...					

## Templates:

- [Undergraduate \(XLSX\)](#)
- [Master \(XLSX\)](#)
- [PhD \(XLSX\)](#)

# Map more than just course work

- Need to capture how other work contributes to fulfilling program outcomes
  - Thesis/dissertation
  - Comprehensive exams
  - Teaching assistantships
  - Supervising/research mentoring
  - Co-op and PD courses
  - Key co-curricular experiences
  - Milestones (e.g., Academic Integrity)

# Mapping key steps

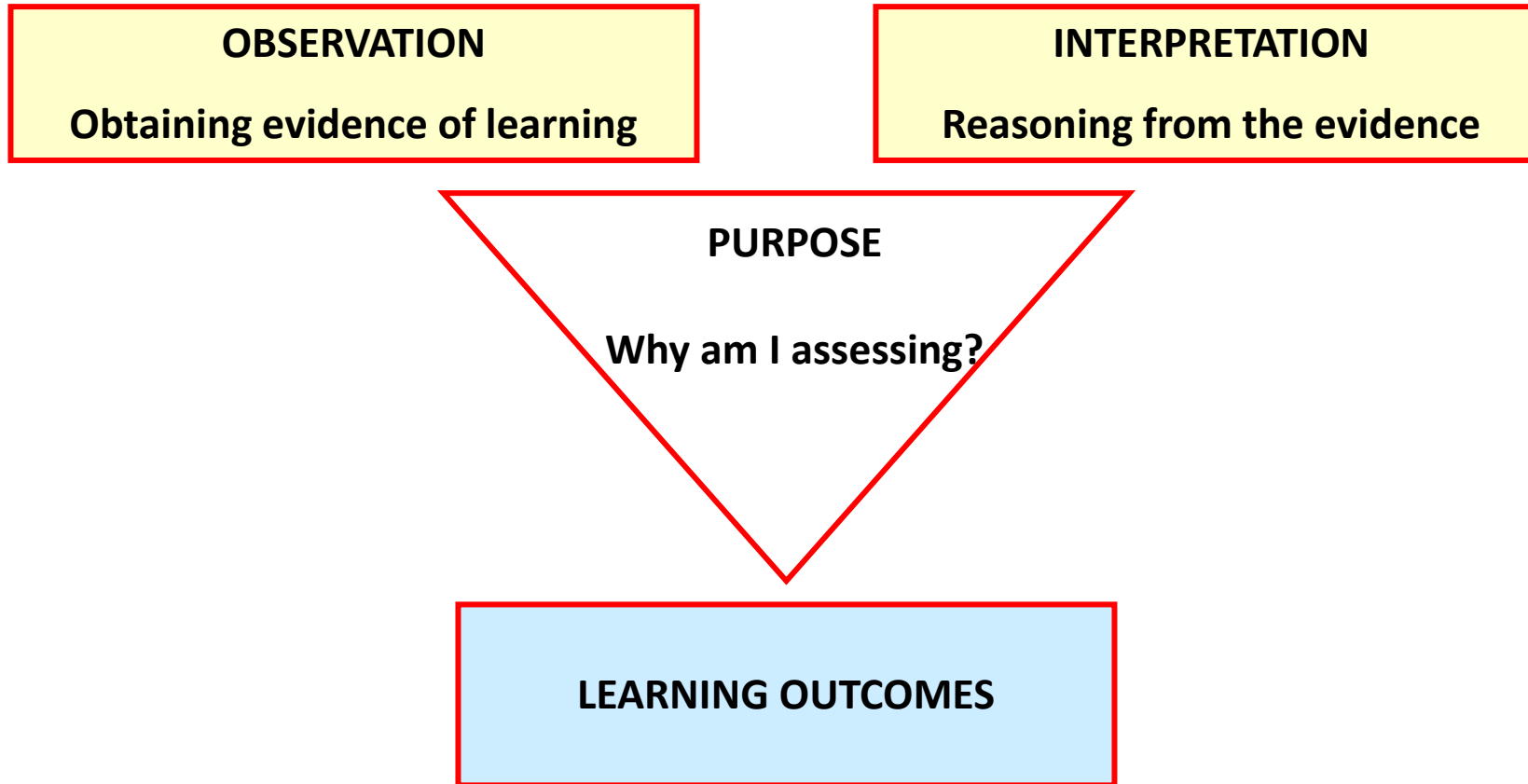
- Create/critique program learning outcomes (fall)
- Create map (late fall)
  - CTE available to help with data collection through map survey
- Critique map (late fall, early winter)
  - Best when done as a program-wide activity

# QUESTIONS ABOUT MAPPING

# Shared process - assessment

- Consider both typical and atypical assessments
  - e.g., exams, lab reports, presentations, projects, peer evaluations, case studies, etc.
- Might emphasize different assessments between undergraduate and graduate levels
- Ensure **alignment** between outcomes and type of assessment

# Framework of assessment



Adapted from National Research Council (2001). *Knowing What Students Know*. Washington, DC: National Academy Press, p. 44.

# From the Quality Council

## 4.3.4 Teaching and assessment

- a) Methods for assessing student achievement of the defined learning outcomes and degree learning expectations are **appropriate and effective**.
- b) Appropriateness and effectiveness of the **means of assessment**, especially in the students' final year of the program, in clearly demonstrating achievement of the program learning objectives and the institution's (or the program's own) statement of Degree Level Expectations.

Resource: *Quality Assurance Framework* ([Section 4.3](#))



# Shared influence - leadership and ownership

- Leadership (Diamond, 2008)
  - Support from Chair
  - Resources
- Ownership
  - Focus on a faculty-driven process (Wolf, 2007)
- Succession planning
  - Who will support this work over the next seven years?

# Stakeholder engagement in the process

- Include evidence from students, staff, faculty, alumni, community
  - Surveys
  - Focus groups
  - Discussions with student leaders
- Discuss how to **regularly** engage stakeholders, especially students, in curriculum development and review

# Make this *your* program review

- Program outcomes are central to all aspects of curriculum
- Visioning and outcomes helps us look critically at our program
- Supports integrated, aligned assessment strategy
  - Includes both formative and summative elements
- Shared process among *all* stakeholders
- On-going assessment conversations reinforce vision, encourage shared practice

# Getting started

- Start with the program outcomes (early Fall)
  - Critique existing outcomes (see last review or new program proposal)
  - Create outcomes (all undergrad program *should* have outcomes, some grad programs do not)
- Create curriculum map (Fall)
- Gather stakeholder feedback (Fall/Winter)

# CTE Program Review Support

- Program outcomes
  - Design and critique
- Curriculum mapping
  - Instructor survey
- Department discussions and retreats
  - Visioning, SWOT, critiquing map and outcomes
- Consultations

# CTE Support

- **Julia Burke** – Environment; Accounting & Finance; Political Science; Economics
- **Shayla Redlin Hume**– Mathematics
- **Richard Li** – Engineering
- **Rebecca MacAlpine** – Arts and AFIWs
- **Jason Thompson** – Science
- **Natalie Chow** – Health, Psychology, Sociology & Legal Studies, and Support Units
- **Leslie Wexler** – Indigenous Knowledges and Anti-racist Pedagogies
- **Nahannee Schuitemaker** – Anti-Racist Pedagogies
- **Veronica Stephenson** – Curriculum and Quality Enhancement
- **David Thiessen** – Curriculum and Quality Enhancement
- **Victoria Feth** – Curriculum and Inclusion

# QUESTIONS

# References

- Diamond, R. M. (2008). *Designing and assessing courses and curricula: A practical guide* (3rd ed.). San Francisco: Jossey Bass.
- Wolf, P. (2007). A Model for facilitating curriculum development in higher education: A Faculty-driven, data-informed, and educational developer–supported approach. *New Directions for Teaching and Learning*, 112, 15-20.