

Today's webinar

Common ground: The language of learning outcomes

Explores the importance of **terminology** and the value of creating a **common language** when designing and assessing learning outcomes.



Meet today's experts



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Common Ground: the language of learning outcomes

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The language of learning outcomes

Learning outcomes are direct statements that define the knowledge, skills, and attitudes that students are expected to reliably demonstrate at the end of a course.

Learning focused, rather than teaching focused

Assessable in a variety of ways

Students will apply Tversky and Kahneman's theories of cognitive bias to predict human decision-making behaviours

Sharing expectations with students

Students' learning achievement can be significantly improved through improving their understanding of assessment criteria and processes.

(Rust, Price, & O'Donovan, 2003)

The anatomy of a learning outcome

A verb that specifies the quality of learning that's expected

The disciplinary context

A purpose for the learning

Examples of learning outcomes

- Learners will **contrast the philosophies of John Locke and Thomas Hobbes to interpret 17th Century thinking** on civic governance.
- Students will **manipulate dynamics, articulation and musical tempo to convey a variety of emotions.**
- Learners will **apply Bayesian probability to draw valid conclusions from complex data sets.**
- Learners will **analyze a Kastle-Meyer test to determine the presence of secondary substances**

Verbs are important

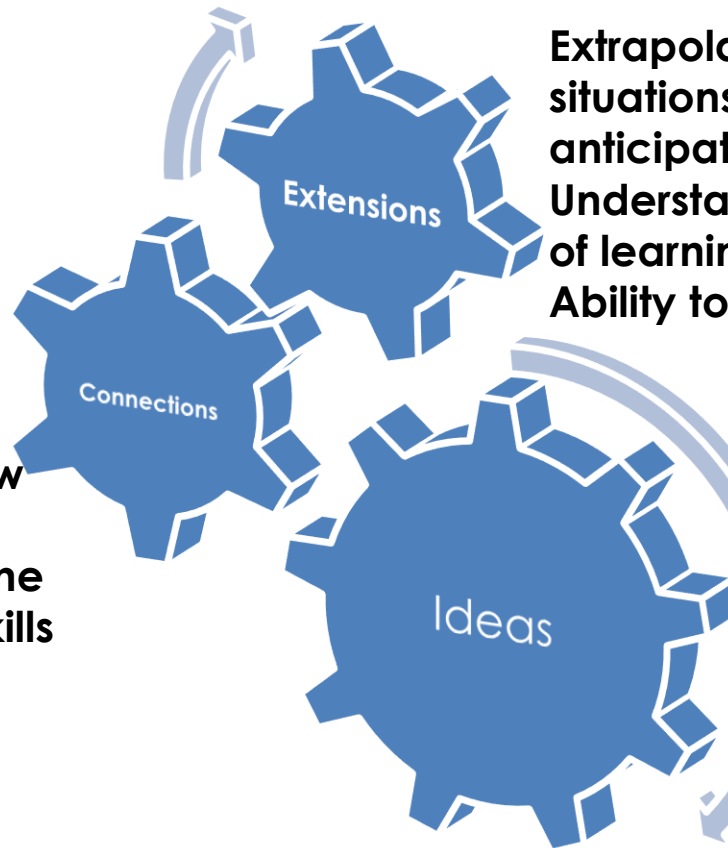
Verbs like *identify, define, imitate, follow, & list* connote memory-based learning

Verbs like *evaluate, justify, critique & create* connote more complex learning

ICE

Wilson (1996);
Fostaty Young & Wilson (2000)

Ability to articulate relationships; relate new learning to what is already known; combine two or more discrete skills

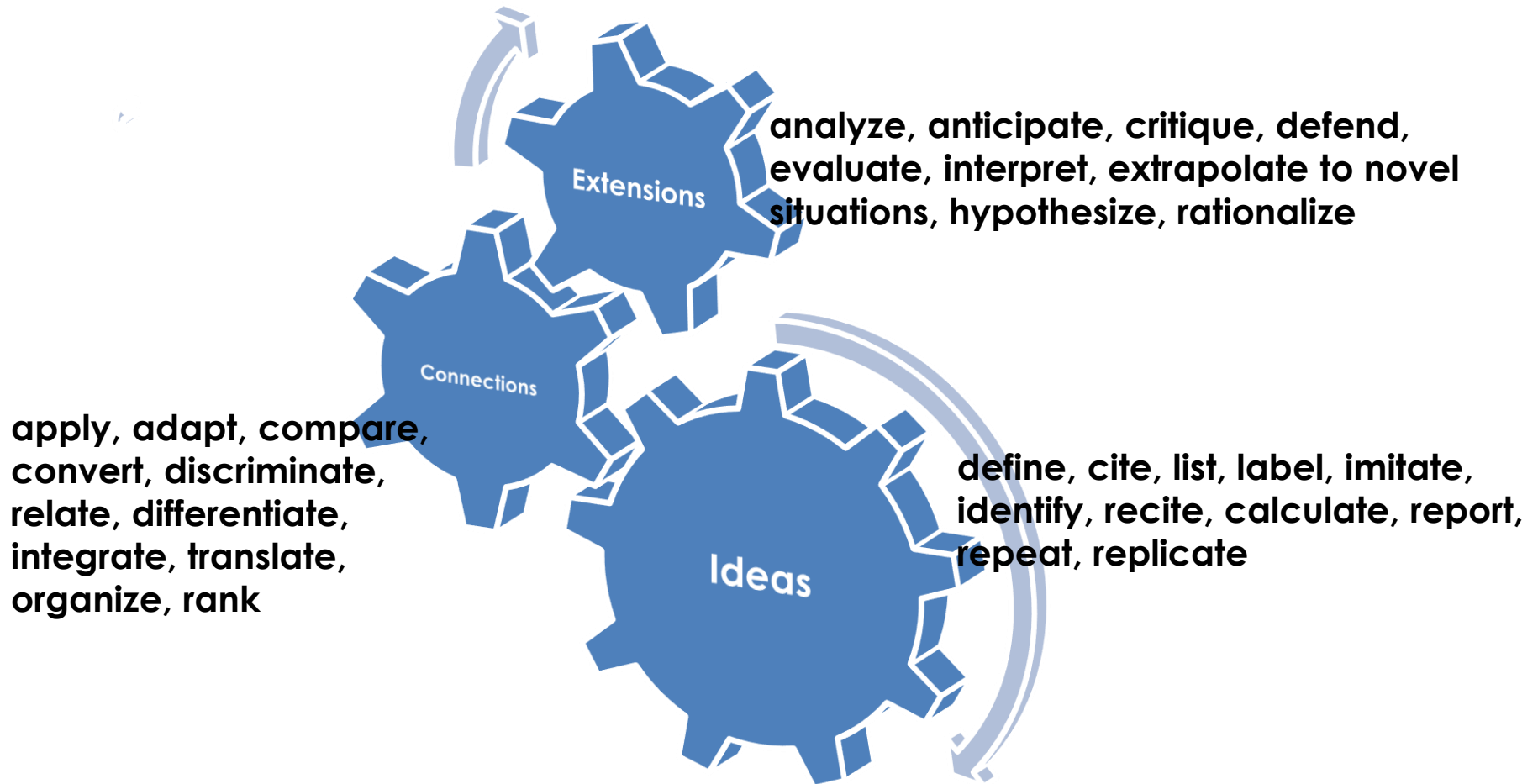


Extrapolate to novel situations; Postulate or anticipate outcomes; Understand implications of learning; Ability to hypothesize

Fundamentals; Facts; Discrete skills; Steps in a process; Vocabulary; Definitions Information; Discrete concepts

ICE

(Wilson, 1999; Fostaty Young & Wilson, 2000;
Fostaty Young, 2005)



Benefits of using a framework to express learning outcomes

Facilitates communication by providing a common vocabulary

Provides consistency in defining learning

Helps ensure coherence among course elements, especially assessment

Provides students with a way to organize their thinking about learning; provides a way of learning how to learn

References

- Fostaty Young, S. (2005). Teaching, learning and assessment in higher education: Using ICE to improve student learning. *Proceedings of the Improving Student Learning Symposium*, London, UK, 13, 105-115.
- Fostaty Young, S. & Wilson, R. J. (2000). *Assessment and Learning: the ICE approach*. Winnipeg, MB: Portage and Main Press.
- Rust, C., Price, M., & O'Donovan, B. (2003). Improving students' learning by developing their understanding of assessment criteria and processes. *Assessment and Evaluation in Higher Education*, 28(2), 148-164.
- Wilson, R.J. (1996). *Assessing students in classrooms and schools*. Scarborough, ON: Allyn & Bacon.

Susan McCahan

Vice Provost, Innovations in Undergraduate Education

Using common language
to establish shared goals



UNIVERSITY OF
TORONTO

Common Language supports Shared Goals: Example – Accreditation Goals



Engineering Accreditation

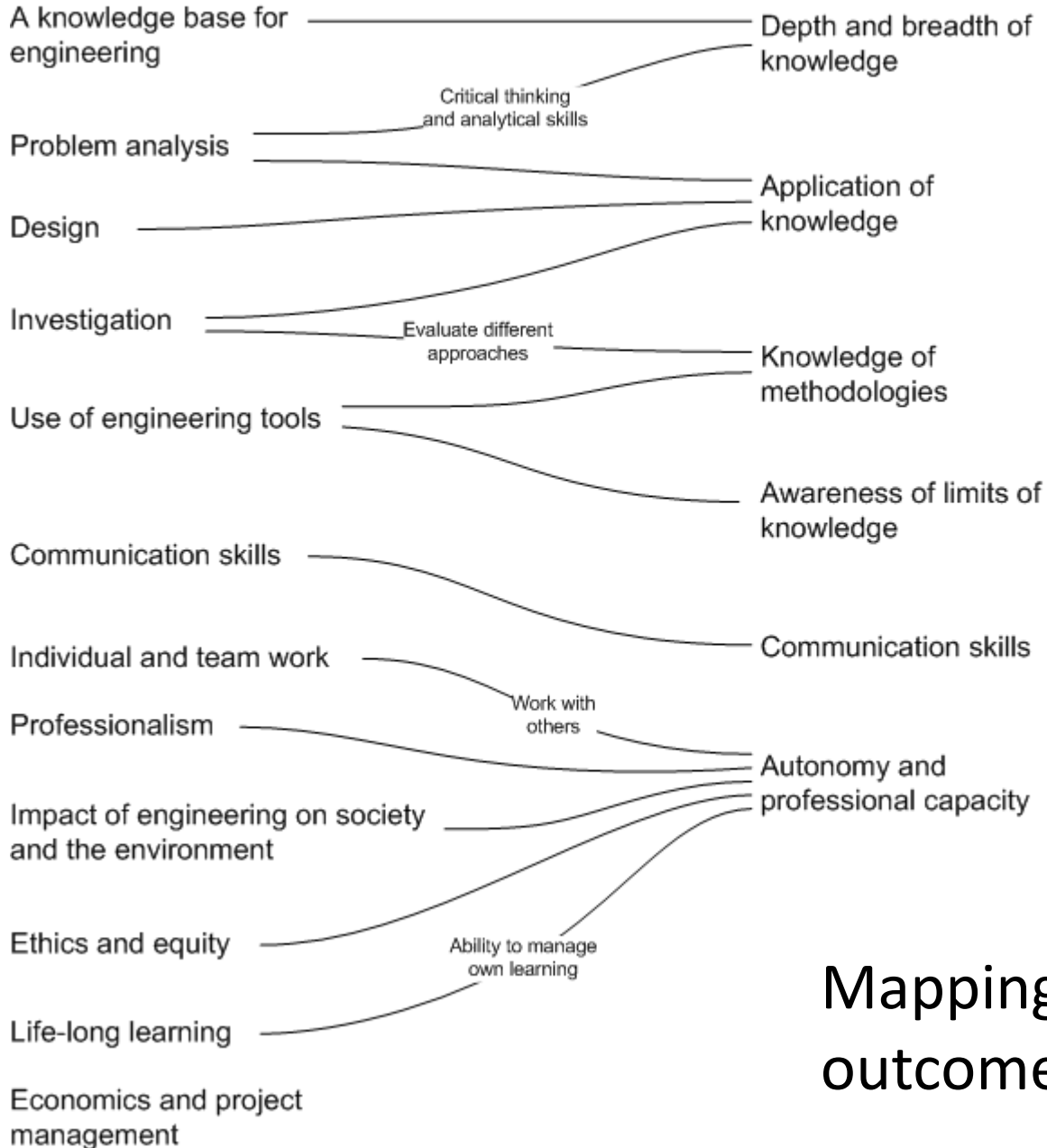
3.1: Demonstrate that graduates of a program possess 12 defined **attributes**

3.2: Continual program improvement processes in place using results of **graduate attribute** assessment

The language used by accreditation boards is often unique and does not easily map onto the literature on learning outcomes.

CEAB Graduate Attributes

OCAV Degree Level Expectations



Mapping learning
outcomes

Mapping Language

UofT Learning
Outcomes Project

Anderson & Krathwahl

Competency



Global objective

Learning Outcome



Educational Objective

Indicator

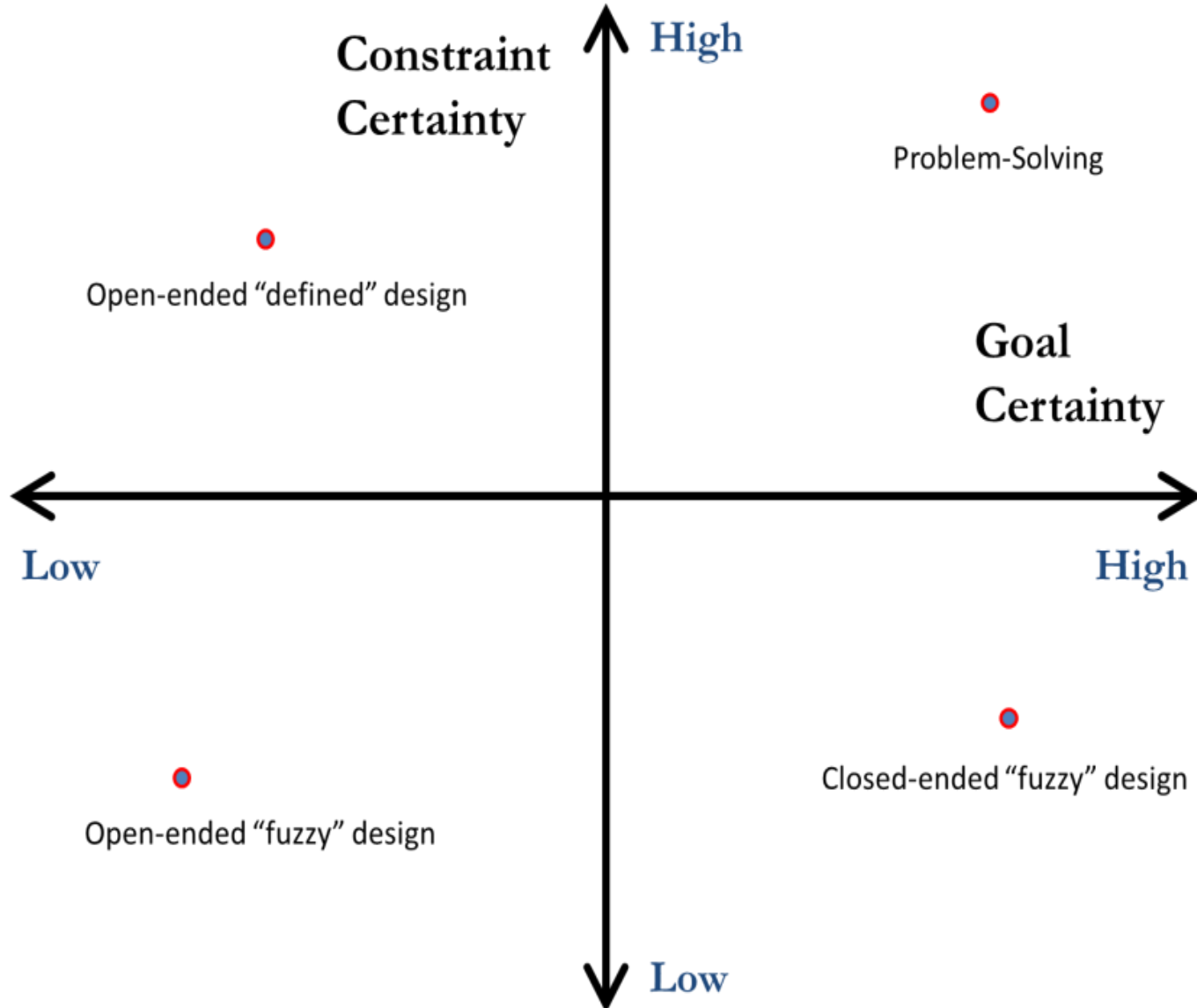


Instructional Objective

Working Definitions

- Competency: The highest level of designation or categorization; e.g., *Problem Solving, Communication, Team Work*.
- Learning Outcome: The next lower level of categorization; e.g., “*Demonstrate the ability to define and characterize a problem*”.
- Indicator: The lowest level of categorization; e.g., “*Demonstrate the ability to distinguish a problem from an example*”. These are directly measured.

Design vs Problem Solving

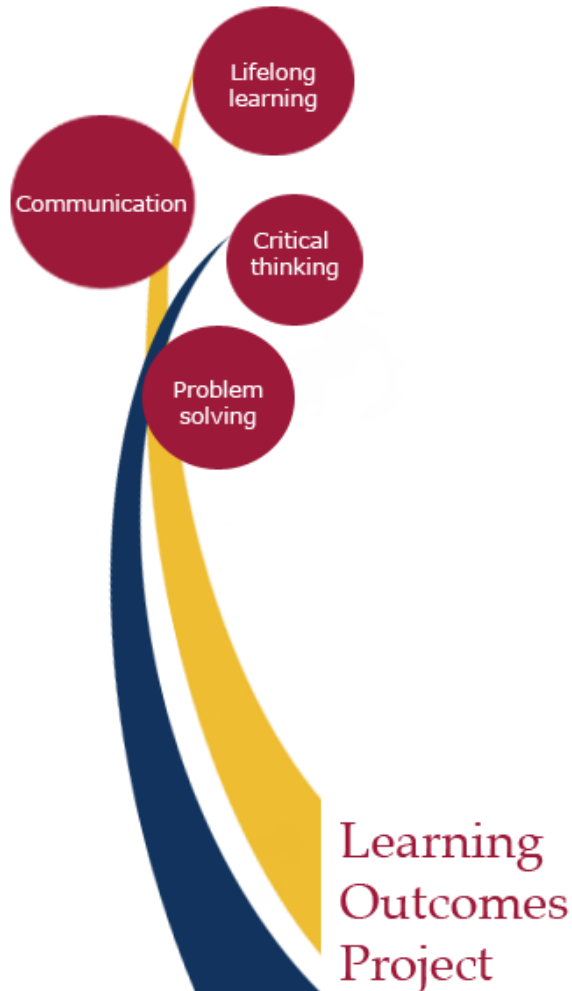


Establishing shared learning outcome goals in a program or institution:

- Allows clear conversations about program goals
- Development of shared vision
- Comparison of data across course boundaries to build information
 - For administration
 - For faculty
 - For students

UofT Learning Outcomes Project

- Building on established learning outcomes:
Development of validated rubrics to measure learning outcomes in five areas:
 - Design
 - Communication
 - Teamwork
 - Problem solving
 - Investigation
- Rubrics can be used across courses to create program level information about learning.



Learning Outcomes

Common Language
Common Understanding
Common Expectations

Jill Scott

Vice-Provost (Teaching and Learning)

Conversations about outcomes

Skills
Learning
Understanding

Course
content

A white hatchback car is parked on the left side of a road at night. The car has the words "Course content" written on its side in black text. The road curves to the right, and there are light trails from other vehicles. The sky is dark blue with many circular light trails from stars, creating a spiral effect. In the background, there are dark hills and some trees.

Arguments about outcomes?

Learning outcome!

Learning objective!

Learning goals!



Developing a Common Language

Open-minded,
self-aware, and
objective...
they ask the right
questions

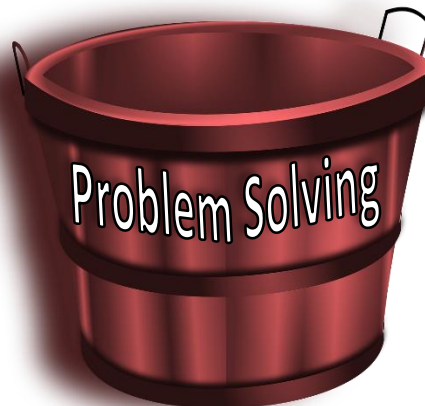
Good critical
thinkers are...

Clear, accurate,
and consistent...
they are reflective
practitioners



Defining outcomes

- Explains issue or problem
 - Selects and uses information
 - Adopts a specific position in arguments
 - Analyzes own and others' assumptions
 - Evaluates implications and consequences of conclusions
- Constructs a problem statement
 - Identifies contextual approaches
 - Proposes relevant solutions
 - Evaluates potential solutions
 - Implements solution in appropriate manner
 - Evaluates solution, addresses shortcomings
- Acquires creative competencies
 - Incorporates new or risky approaches
 - Selects from alternatives to solve problems
 - Integrates divergent perspectives
 - Creates novel idea or product
 - Transforms ideas into new forms

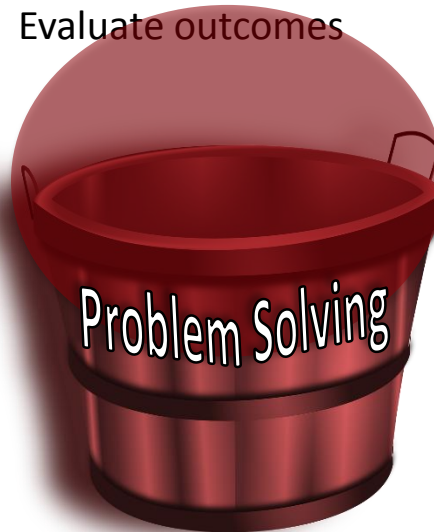


Outcome labels

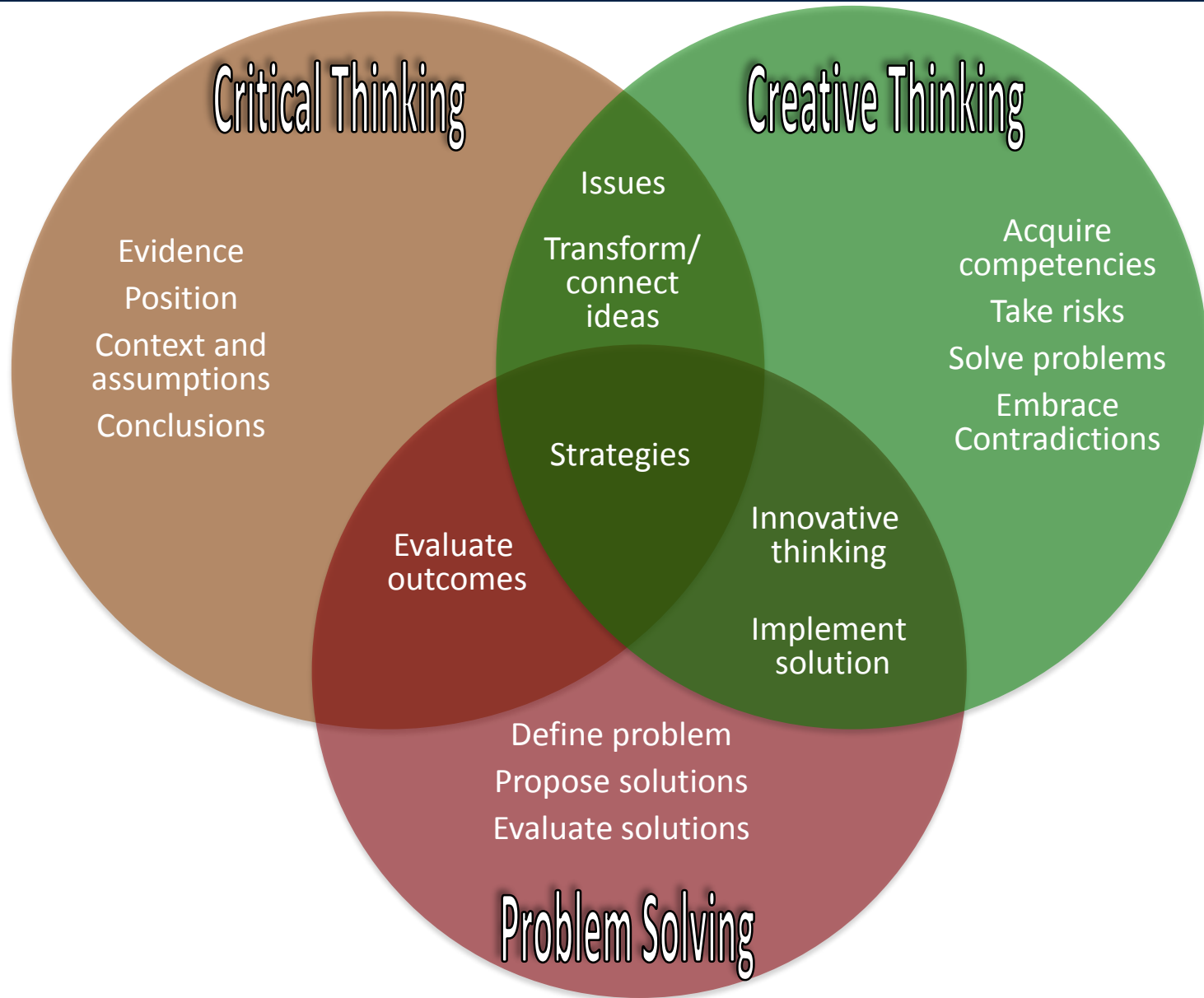
- Issues
- Evidence
- Position
- Context and assumptions
- Conclusions

- Define problem
- Strategies
- Propose solutions
- Evaluate solutions
- Implement solution
- Evaluate outcomes

- Acquire competencies
- Take risks
- Solve problems
- Embrace contradictions
- Innovative thinking
- Transform/ connect ideas



Defining outcomes



When things become messy!

**Critical
Thinking?**

**Problem
Solving?**



**Creative
Thinking?**

Learning Outcomes – engaging faculty

Goals of the project

Needs of the Instructor/
students

Assessment of learning outcomes

Specific Course Outcomes

Data collection- Task alignment

Instructional timeframes/ learning environment

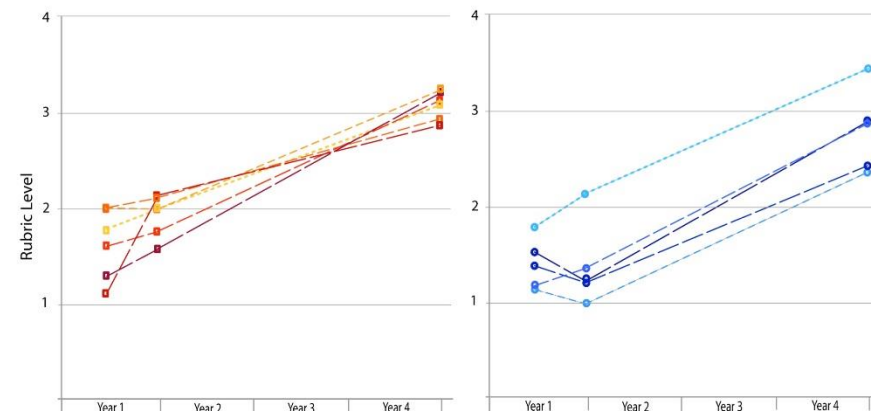
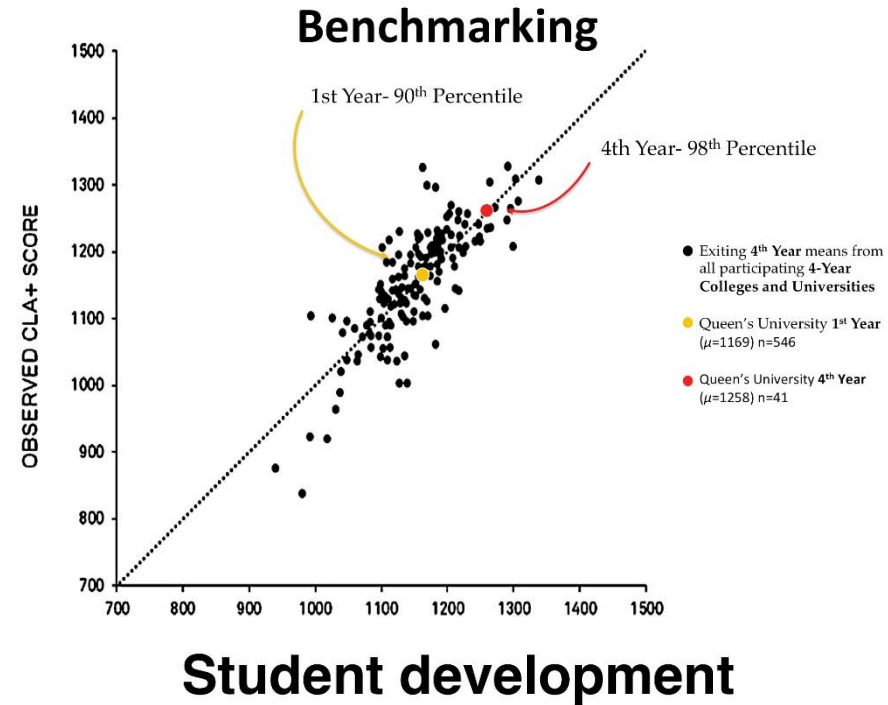
Build expertise for a wider-scale rollout

Instructional activities and assessments



Be clear what you are trying to do

- **Measure** achievement of outcomes
- **Develop** transferable learning outcomes
- **Compare** different outcomes in different groups
- **Align** outcomes to assessments
- **Test** different tools



Assessment of Intellectual Skills

Critical thinking; Problem Solving; Creative Thinking; Written Communication

- **Collegiate Learning Assessment (CLA+)** Online
- **Critical Thinking Assessment Test (CAT)** Paper based

Standardized Tests

Evaluation of Course assignments

- **Valid Assessment of Learning in Undergraduate Education (VALUE)** rubrics marked by external raters

URL References for the tools:

CLA+ <http://cae.org/participating-institutions/cla-overview/>

CAT <https://www.tntech.edu/cat>

VALUE rubrics <https://www.aacu.org/value/rubrics>

Success comes in many shapes and sizes



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Save the date for our next webinar!

May 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						



Webinar 3, May 28, 2015

Building a better toolkit

Armed with the learning outcomes big picture and a common language, you're ready to choose and develop the tools to assess students' achievement of learning outcomes. The third webinar will help you **set smart parameters** for your learning outcomes assessment project.

And learn more at heqco.ca

Learning Outcomes:
Check out our webinar series



Colleagues couldn't make it?
Our webinars will be posted on our website shortly.
Stay tuned!