

ETLS

Concepts and Course Design
Series



Assessing Student Learning

Part 1: Purposes of assessment

Presenter:

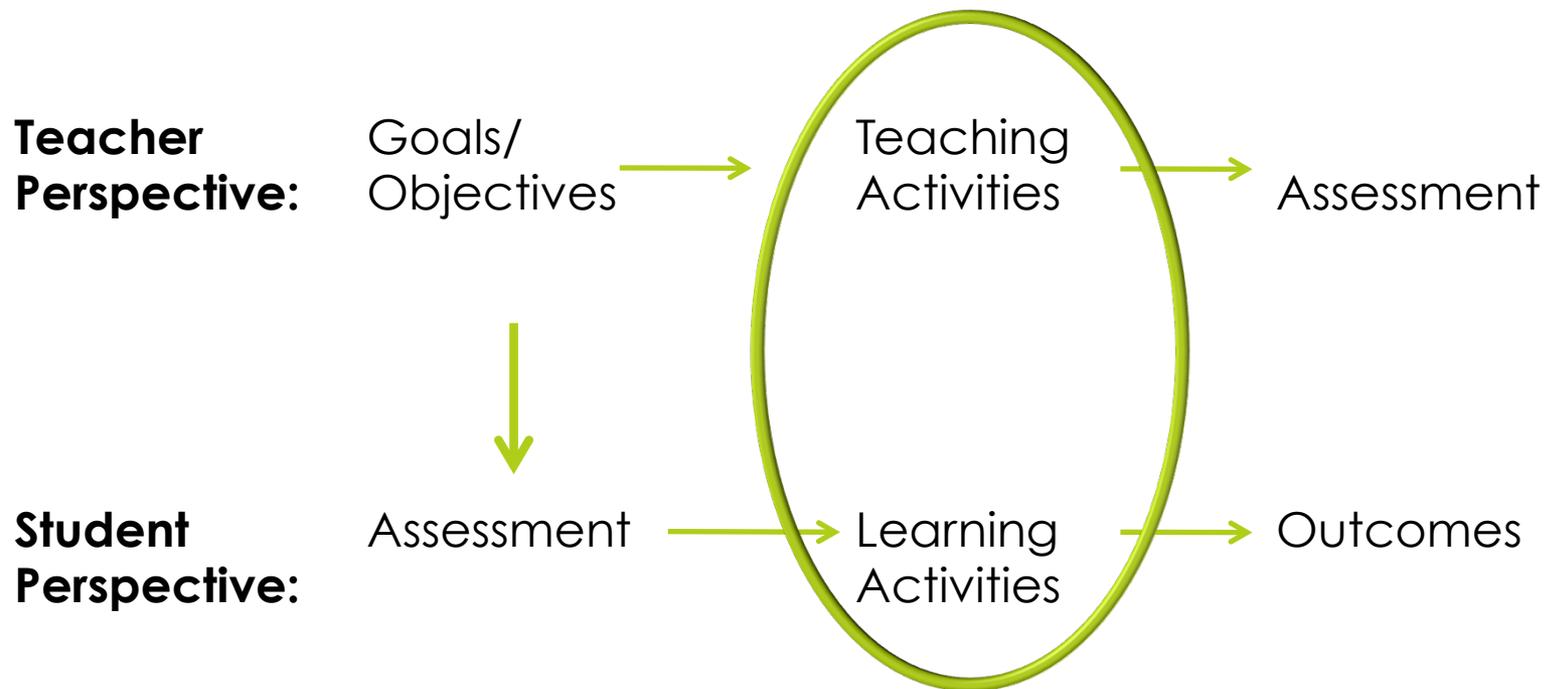
Natasja Saranchuk
Educational Developer
Centre for Teaching and Learning

Session outcomes

Outcomes:

- 1:** You will recognize how assessment should align with student learning outcomes and instructional strategies.
- 2:** You will be able to identify assessment purposes.
- 3:** You will begin to evaluate assessment choices for your course.

Perspectives on assessment



Some specific assessment purposes

1. Measuring prior knowledge/existing beliefs
2. Assisting the learning process
3. Improving teaching
4. Measuring student learning/grading

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**“I forgot to make a back-up copy of my brain,
so everything I learned last semester was lost.”**

1. Measuring prior knowledge

Why?

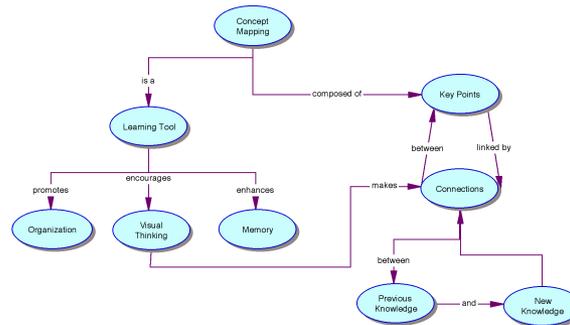
- ▣ target specific knowledge gaps
- ▣ bridge students' previous knowledge with new material
- ▣ check for misconceptions

What?

- ▣ What do you assume students already know?
- ▣ What are some common misconceptions in your subject?
- ▣ How are you going to respond to the data you gather?

Prior knowledge strategies

- Common sense inventory (true/false statements)
- Student perceived self-assessment
- Minute paper
- Surveys/polling
- Concept maps
- Know/**W**ant to know/**L**earned (KWL)



Prior knowledge considerations

- Let students know assessment is not graded.
- Assessments should be anonymous.
- Have a colleague confirm questions.
- Communicate results of the assessment with students.
 - Use technology to aid in displaying results.
- Indicate to students how you will use the results.

The Learning Process: “Epic Fails”

“A student in my course had not been succeeding throughout the term. This student completed the final assignment, but computer problems had been preventing him from getting the assignment handed in. So I said to him, ‘I won’t be marking this assignment because you won’t pass the course even if you get 100% on it.’”

Jeremy Sit, Associate Professor, Engineering

2. Assisting the Learning Process

Assessment *for* learning (formative)

- ▣ Providing feedback and opportunity for improvement
- ▣ Increases motivation
- ▣ Self-assessment
- ▣ Provide guidance
- ▣ Use explicit criteria



Improving Teaching: “Epic Fails”

“A student went past my desk at the end of the exam and said, ‘Was that an exam for the course that **we’re** taking?’”

Charles Lucy, Professor, Chemistry
3M Teaching Award Recipient

3. Improving teaching

- Assessments provide instructors an opportunity to use the information/results to inform:
 - If your students are learning what you intend
 - Where you need to spend more time/focus in class
 - If you have 'good' test questions
 - If your learning outcomes are appropriate

Measuring Student Learning: “Epic Fails”

“I realized that the assignment I had given the students was too long, too complex, and required too much detail. I allowed my own passion for the subject to get in the way of what I expected from the students.”

Olenka Bilash, Professor, Secondary Education
3M Teaching Award Recipient

4. Measuring student learning

Assessment *of* learning (summative grading)

- How do we know if our students have achieved the learning outcomes?
- How can we 'test' higher order skills?
- What assessment techniques can we use to measure different types of learning outcomes?



Three questions for your assessment plan

1. What outcomes (in terms of level of understanding) are assessed?

Bloom's Taxonomy of the Cognitive Process Dimension					
Lower level		Mid level		Higher level	
Remember	Understand	Apply	Analyze	Evaluate	Create

2. How authentic is the task?
3. What kind of learning is promoted?

Application, memorization, procedural, critical thinking, attitude, team-work...

Multi-faceted assessments

“Where possible, **assessment should be multifaceted** (varied) and timely.” [\(Assessment principles from the UofA Assessment and Grading Policy\)](#)

Written	Oral	Visual	Digital
essay, report, journal, letter of advice, article review, lab report, observation notes, portfolio, annot. bibliography, applied problem, case analysis, short answer Q's	presentation, debate, role play, exam, demonstration think-aloud	photoessay, diagram, sketch, design, model, poster, video, photographs, artwork	website, blog, PowerPoint, database, participation in online forum, Wiki, E-portfolio

Activity: Analyzing assessments

- Choose one method of assessment from the “Assessment Methods Examples” and think about your answers to the three questions:
 1. What outcomes (in terms of level of understanding) are assessed?
 2. How authentic is the task?
 3. What kind of learning is promoted?

Types: Objective tests, Case Studies, Essay Questions, Projects, Reflective Journals/Critical Incidents, Seminar Presentation, Portfolio