



# Defining and Refining Learning Outcomes

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# Review of Assessment Basics

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- University Assessment
  - Campus-wide assessment of student learning at the program level (e.g., General Education)
  - University assessment is the primary charge of the Office of Assessment
- University assessment is separate and distinct from evaluation of teaching effectiveness
  - Evaluation of teaching effectiveness is the responsibility of departments/colleges
- Assessment data are analyzed and reported only in the aggregate



# Six Fundamental Questions

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- How are your stated student learning outcomes appropriate to your mission, programs, degrees, and students?
- What evidence do you have that students achieve your stated learning outcomes?
- In what ways do you analyze and use evidence of student learning?
- How do you ensure shared responsibility for student learning and for assessment of student learning?
- How do you evaluate and improve the effectiveness of your efforts to assess and improve student learning?
- In what ways do you inform the public and other stakeholders about what and how well your students are learning?



# Review of Assessment Basics

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- Three levels of assessment
  - Course
  - Program
    - Undergraduate majors/programs
    - General education program
    - Graduate majors/programs
  - Institutional
- Course, Program, and Institutional outcomes should be aligned, but are not identical



# Review: Course Level Assessment

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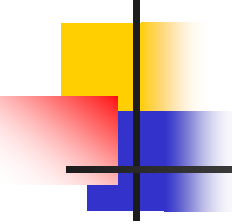
- Focused on pedagogical improvement
- Formative, direct assessment
- Course-embedded assessment
- Course mapping (i.e., mapping specific assignments to specific learning outcomes)



# Review: Program Level Assessment

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- Focused on curricular, environmental improvement
- Formative and Summative, Direct and Indirect methods
- Curriculum mapping, program improvement



# General Characteristics of Learning Outcomes

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- Student-focused
- Articulates a single measureable skill/competency/construct
- Describes an observable behavior(s)
- Specifies performance of learning
  - Ask "what do students know that they didn't know before," **and** "what can they do that they couldn't do before?"



# Program Outcomes

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- Focus on broad skills developed over time
  - Not restricted to a single course or learning experience
- Demonstrate acquisition of specific disciplinary/professional knowledge and skills necessary *after* graduation
  - Ask: “What makes a graduate of the program able to function and learn in a specific discipline/profession after the degree?”
- Measurable
  - Confirmable through evidence



# Describing Observable Behaviors

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- Use 'action verbs' to indicate the observable behaviors learners must perform
- Covert vs overt performances
  - Covert: Invisible/mental/cognitive/internal performance that cannot be directly observed
  - Overt: Visible/audible performance that can be observed directly



# Covert Verbs

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Avoid terms/phrases that describe covert behaviors, such as:

- know
- familiarize
- gain knowledge of
- comprehend
- study
- cover
- understand
- be aware
- learn
- appreciate
- become acquainted with
- realize
- develop the capacity to



# Measuring Learning Outcomes

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- Measures must be appropriate to outcomes
  - Avoid cumbersome data-gathering
  - Use both direct and indirect methods
    - Indirect methods measure a proxy for student learning
    - Direct methods measure actual student learning
  - “Learning” = *what students know* (content knowledge) + *what they can do with what they know*
- Cannot use grades for assessment
  - “Takes a step back” from the interaction between student and teacher



# Examples of Direct Methods

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- Papers and/or Projects
- Presentations, Exhibitions, Performances
- Tests that include open-ended problems
- Portfolios
  - Artifacts such as written course assignments, performance recordings, and other work products of student learning collected over time

# Action Verbs / Bloom's Taxonomy

<b>Knowledge</b>	<b>Comprehension</b>	<b>Application</b>	<b>Analysis</b>	<b>Synthesis</b>	<b>Evaluation</b>
define	translate	interpret	distinguish	compose	judge
repeat	restate	apply	analyze	plan	appraise
record	discuss	use	differentiate	propose	evaluate
list	recognize	demonstrate	appraise	design	rate
recall	explain	practice	calculate	formulate	compare
name	identify	illustrate	categorize	arrange	value
relate	locate	operate	experiment	assemble	revise
tell	report	schedule	test	collect	score
quote	review	calculate	compare	construct	select
label	express	complete	contract	organize	choose
name	summarize	show	diagram	manage	assess
	describe	solve	relate	prepare	estimate
	interpret	examine	solve	combine	measure
	predict	modify	examine	modify	decide
	distinguish	change	separate	substitute	rank
	differentiate	relate	classify		recommend
			arrange		convince
			divide		conclude
			select		



# Mapping Outcomes for Program-Level Assessment

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- Create a visual map:
  - Lay out program courses and learning outcomes (competencies) on a grid
    - Refer to examples
  - Identify the courses at which each competency is:
    - Introduced
    - Reinforced
    - Emphasized

## Program Map Template

Outcomes	Course #1; Baseline Assessment	Course #2	Course #3; Mid-Program Assessment	Course #4	Course #5; Capstone Assessment
Outcome 1	I	R	R	E	R
Outcome 2	R	R	E		
Outcome 3	I		E	R	E
Outcome 4		E	R		R

- I = Outcome is introduced; baseline, formative assessment
- R = Outcome is reinforced; formative assessment
- E = Outcome is emphasized; summative assessment



# Activity:

## Defining/Refining Outcomes

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- Activity Worksheet #1: Define new program learning outcomes
- Activity Worksheet #2: Refine/revise current program learning outcomes