Developing and Assessing Course Student Learning Outcomes

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Questions to be answered

- What is assessment and why does it matter to me/my students?

- What are student learning outcomes?

- What type of assessment can be used to verify that these outcomes have been achieved?

- How does this fit into the larger picture of student learning at IUP?

Teaching and Learning

- We all aspire to be good TEACHERS.

- Tenure and Promotion processes typically require we prove this through classroom observations, teaching portfolios, quality syllbi, teaching evals, etc.

- BUT…..

LEARNING is the purpose of teaching

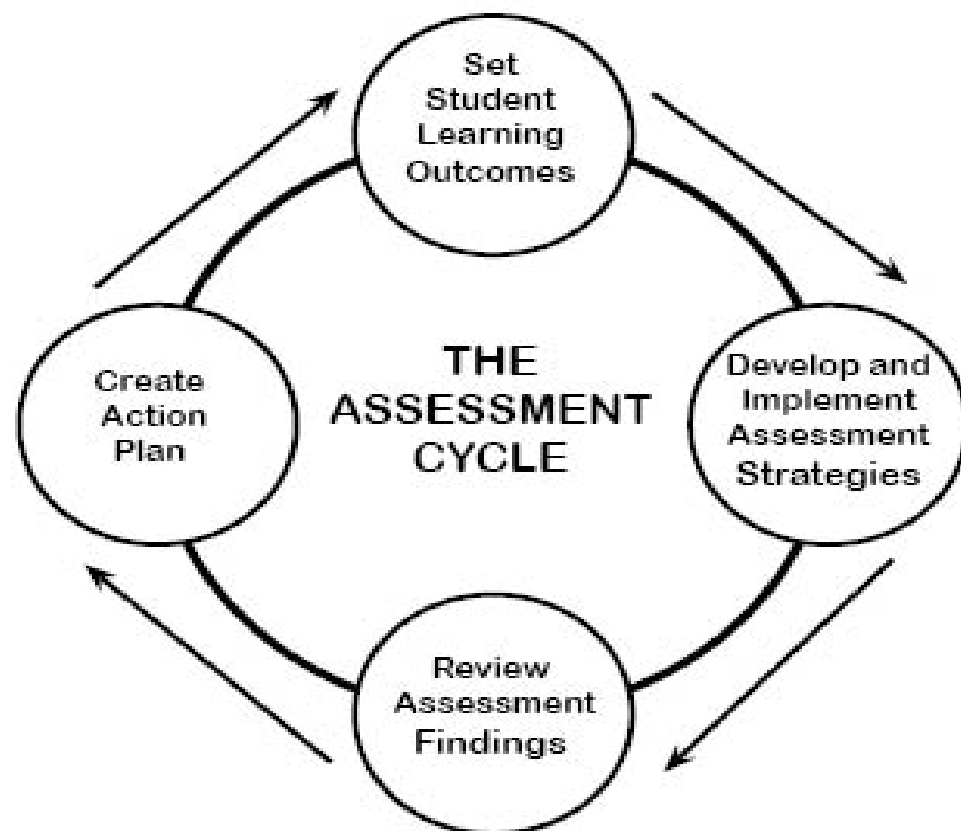- A new paradigm is emerging that requires us to prove that students are LEARNING from our teaching.

Assessing Student Learning Outcomes

ASSESSMENT

ASSESSMENT CYCLE FOR STUDENT LEARNING

Purpose of Assessment

- **Assessment is paradigm for answering important questions related to student learning:**
  - What should my students be learning?
  - How will I determine that they are learning it?
  - What types of changes can I make (to assignments, activities, materials) to increase actual student learning?

    (Closing the loop)

- Assessment is often tied to institutional accreditation, but it is larger than that.

We disadvantage our students and our institutions when we are not assessing student learning

- Recruitment & Retention
- Quality Curriculum
- Faculty Research Arena
- Reaccreditation and Funding
- Risk that it will be imposed upon us

Advantages of Assessing Student Learning Effectively

- Students know what they will be expected to learn
- Faculty will know if students are learning what they say they will learn
- Departments can use course level outcome data to support program level learning assessment
- University can use course level outcome data to support university-wide learning assessment
- University can use data to improve retention, recruitment, graduation rates, job benefits, standings, accreditation, etc

TO ASSESS STUDENT LEARNING, WE FIRST NEED TO KNOW WHAT WE EXPECT THEM TO LEARN!

"If you don't know where you are going, how do you know when you get there?"

Student Learning Outcomes (SLOs)

- SLOs identify what skills, abilities, behaviors, or knowledge we expect students to acquire as a result of our teaching.

- There are 3 main categories of Student Learning Outcomes

3 types of SLOs

- Program Level Outcomes– Identify what we expect students to learn when they complete an organized program of study (degree, certificate, track, minor, etc) (PLSOs)

- General Education/Liberal Studies Outcomes– what we expect all students to learn as a result of obtaining a degree from the university (EUSLOs -Expected Undergraduate Students Learning Outcomes)

- ***Course Level Outcomes – what we expect students to learn as a result of taking a particular course.

Course Level
Student Learning Outcomes (SLO)

- Every course needs to have SLOs that identify what skills, knowledge, and/or abilities STUDENTS will have acquired by the end of the course.

- The SLOs should represent skills, knowledge, or abilities that are relevant to what is expected outside the content of the course (e.g., "the real world)

SLOs (cont)

- SLOs are written in terms of what the student will be able to do (not the instructor)

- SLOs must be **measurable** (you have to be able to prove learning has occurred)

- SLOs should be **specific**, **focused**, and **clear** (general outcomes are not measurable)

How do you do that?

- Start by thinking about what you want students to learn.

- See Worksheet A

START WITH MEASURABLE ACTION VERBS

See Handouts of
Action Verbs

- Action verbs result in explicit behavior that **can be observed and measured.**
  - analyze, apply, argue, arrange, calculate, categorize, classify, compare,, compute, create, critique, defend, define, demonstrate, describe, design, develop, discuss, distinguish, estimate, examine, explain, formulate, identify, illustrate, indicate, interpret, label, list, locate, manage, memorize, order, operate, organize, plan, practice, predict, prepare, propose, question, rate, recognize, repeat, report, reproduce, review, revise, select, solve, state, translate, use, utilize, write…

- Certain verbs are unclear and call for implicit, internal behavior which **cannot be observed or measured.**

- These types of verbs should be avoided:
  - appreciate, become aware of, become familiar with, know, learn, understand

Specific and relatively EASY to measure.

1. ...will be able to **explain** how exercise affects stress.
2. ...will be able to **identify** the most appropriate resource that is pertinent to their college concern.
3. ...will be able to **assist** classmates in resolving conflicts by **helping** them negotiate agreements.
4. ...will **demonstrate** the ability to analyze and respond to arguments about racial discrimination.

TOO general and VERY HARD to measure.

1. … will appreciate the benefits of…

2. … will be able to access resources at the …

3. … will develop problem-solving skills.

4. … will be able to have more confidence in their abilities.

Still general and HARD to measure.

1. will value exercise as a stress reduction tool.

2. will be able to develop and apply effective problem solving skills that would enable one to adequately navigate through the proper resources within the college.

3. will demonstrate ability to resolve personal conflicts and assist others in resolving conflicts.

4. will demonstrate critical thinking skills, such as problem solving as it relates to social issues.

Developing your Outcomes Worksheet B

- Using the list of skills you developed on Worksheet A, try to develop an SLO for each.

- Assume each SLO begins with: *The student will be able to… (use Action Verbs resource if you wish)*

- Remember that you must be able to prove the student has learned what you say they will have learned – so it must be specific and measurable!

Step 3

- Use the checklist to determine if your SLO needs to be refined.

SLO Practice

- *Create five lesson plans that could be used in a classroom and teach them to classmates.*

- *Organize readings into a portfolio for instructor evaluation*

- *Appreciate music theory as it relates to discipline.*

Assessing Student Learning Outcomes

ASSESSMENT REVISITED

Assessing Student Learning

- Now that you have established specific, measurable SLO, you must determine how you will gather information to determine if this learning has occurred.

- This does not have to be IN ADDITION to what you would do in a course. Typically, you can use existing assignments and course requirements/activities.

Types of Assessments

- Selecting Assessment Measures
  - Existing Assignments
  - Tests
  - Rubrics
  - Tally of strengths and weaknesses

Rubrics:
Explicit criteria for assessing student work

- Identify the components and of work that will be evaluated during grading

- Describe the criteria for good work

- Provides valuable information on assessing SLO

Rubric for Class Participation

Criteria & Points Assigned	Missing or Serious Problems	Below Expectations	Meets Expectations	Displays Leadership Behavior
Active participation	Absent Does not contribute	Few contributions; Seldom volunteers but responds to direct queries	Voluntarily contributes to discussion without prompting	Actively and regularly contributes to discussion; Initiates discussion on issues related to class topic
Relevance of participation to topic under discussion	Contributions are off-topic or distract class from discussion	Contributions are sometimes off-topic or distracting	Contributions are always relevant to discussion	Contributions are relevant and promote in-depth analysis of material
Evidence of level of preparation	Not adequately prepared; Does not appear to have read the material in advance of class	Appears to have read the material, but not closely or did not read all material	Clearly read and thought about the material in advance of class	Consistently well-prepared; Investigates and shares relevant material not explicitly assigned
Listening/Cooperation	Inattentive or makes inappropriate or disruptive comments	Participates occasionally; Does not respond to contributions of others	Participates regularly without monopolizing; Listens and responds to contributions of others	Models good classroom citizenship. Listens without interrupting. Responses to others are appropriate. Promotes active participation by others
		✓ -	✓	✓ +
Tentative Score Values	0	1.5	2	2.5

Courses here at IUP: HIST 196

	Student Learning Outcome	Assessment tool to be used to measure the outcome
1	Demonstrate knowledge of the cultural, economic, social, and political elements that make up the history of the nation's past, including contradictory historical interpretations.	Tests – Student performance in tests that include both objective and open-ended questions will provide evidence for demonstrating knowledge of the cultural, economic, social, and political elements that make up the history of the nation's past.
2	Analyze primary sources and historical documents to illustrate the thinking of men and women of different eras.	Primary Source Analysis Assignment – Student performance on a primary source analysis assignment (graded using a common rubric) will provide evidence for their ability to analyze primary sources and historical documents.
3	Develop skills in chronological thinking and historical analysis using the methods of inquiry and vocabulary commonly used in the discipline.	Tests or Primary Source Analysis Assignment – Student performance on tests that include both objective and open-ended questions and/or on a primary source analysis assignment (graded using a common rubric) will provide evidence for developing skills in chronological thinking and historical analysis.

GEOS 156

	Student Learning Outcome	Assessment tool to be used to measure the outcome
1	Learn how the tectonic motion of the Earth's lithosphere leads to geologic disasters such as volcanoes, earthquakes, landslides, and tsunamis.	Online quizzes and in-class participation questions (using mobile devices) will measure basic understanding of tectonic processes and geologic disasters.
2	Understand how global atmospheric circulation and the Earth's hydrologic cycle create weather-related disasters such as hurricanes, floods and droughts.	Online quizzes and in-class participation questions (using mobile devices) will measure basic understanding of weather cycles and river processes.
3	Identify specific geologic risk factors that can be used to determine the probability of natural disaster occurring in a specific region.	Written risk assessments based on internet research and graded using a rubric will assess students' ability to analyze risk factors and communicate the dangers faced by assigned locations.

GEOS 156 cont'd

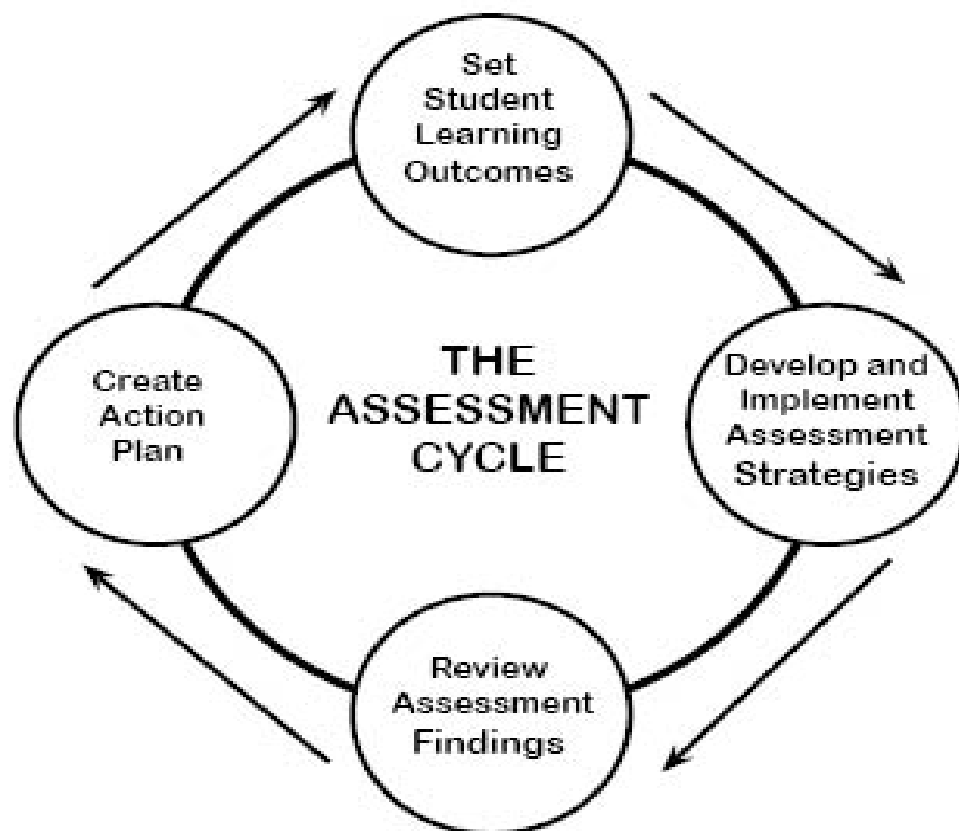|	Student Learning Outcome	Assessment tool to be used to measure the outcome
4	Appreciate how geologic hazards impact our everyday lives and understand the science behind geologic events that are frequently reported in the media.	Short in-class writing assignments in a 'disaster diary' will measure student's ability to critique the scientific accuracy of written and visual media, including social media.
5	Understand the long-term impacts of natural disasters in order to make informed decisions about where to live and ethical decisions about how to respond to future disasters around the world.	A final class project, created as a web page and graded via rubric, will determine how well students can relate what they have learned about the causes and impacts of natural disasters to their own specific major and/or interests outside of science.

NURS 202

1. Describe the components and functions of selected body systems.
   - The students will be required to review a PowerPoint with note pages on each body system.

2. Explain the changes in selected systems during growth and development.
   - The students will participate in a D2L assignment to evaluate their learning.

3. Identify characteristics of common childhood illnesses.
   - The students will be required to participate in a D2L assignment along with conversing through the D2L discussion board.

4. Discuss appropriate management of sick children in day care.
   - The students will take a 25 point quiz to evaluate their learning.

5. Identify current health promotion activities for each age group.
   - The students will research one topic from a list provided by the instructor. They will be required to complete a PowerPoint presentation and post it on D2L.

ASSESSMENT CYCLE FOR STUDENT LEARNING

Closing the Loop…

Steps in Student Learning Outcomes Assessment

- Identify student learning outcomes
- Administer assessments/Gather evidence
- Close the loop
  - Review and interpret results
  - Recommend actions
  - Make changes to teaching/course if outcomes are not being met
  - Repeat assessments in subsequent cycles to track improvements, change, trends, relevancy

- Data collected for Course Level SLOs is used to support Assessment of Program Level SLOs and University Wide SLOs

SLO versus PLSLO and EUSLO

- **Student Learning Outcomes**
  - Pertains to a particular course

- **Program Level Student Learning Outcomes**
  - Pertain to an organized program of learning (degree, track, concentration, etc.)

- **Expected Undergraduate Student Learning Outcomes**
  - At IUP these pertain to the Liberal Studies portion of a student's major

CURRICULUM MAP

PROGRAM LEVEL STUDENT LEARNING OUTCOMES Students will be able to:	SPLP 122	SPLP 220	SPLP 254	SPLP 254	SPLP 333	SPLP 412	SPLP 440
distinguish between normal versus disordered development in human communication	X			X	X		
identify communication disorders			X			X	X
develop an appropriate treatment plan based on current research base	X					X	X
demonstrate knowledge of human anatomy as it relates to communication		X	X	X			
use research to guide clinical practice		X			X	X	

Indiana University of Pennsylvania

Columns in the Curriculum Map list **Required Courses** (do not list electives)	3 SH	3 SH	Course Cluster 1 (3 SH) (Students Select One Course)			3 SH	2 SH	Course Cluster 2 (3 SH) (Students Select One Course)		Course Cluster 3 (3 SH) (Students Select One Course)			4 SH
Enter one program-level SLO in each row of this column	XXX2234 Introductory Course	XXX3234 Research Methods	XXX3235 Cluster 1 Course A	XXX3246 Cluster 1 Course B	XXX3247 Cluster 1 Course C	XXX3348 Laboratory / Practicum Course	XXX4437 Laboratory / Practicum Course	XXX3398 Cluster 2 Course A	XXX4798 Cluster 2 Course B	XXX4234 Cluster 3 Course A	XXX4235 Cluster 3 Course B	XXX4236 Cluster 3 Course C	XXX4698 Capstone Course
Content	*Content of Cells Describes –*			*How Course Supports Learning for this SLO (option 1):*			OR	*Embedded Assignment used to Assess the SLO (option 2):*					
Full program-level SLOs is appears on the ALC or ALP document (do not abbreviate or truncate). Examples below represents SLOs from a hypothetical program.	Cell describes how course supports learning on this SLO	Leave Blank if Course has no SLO or assessed work		Introduced (example)	Reinforced / Practice (example)	Mastery / Assessed (example)		Exam Questions	Class Project	Term Paper	Lab Paper	Project Client Feedback	
Identify and describe key concepts, principles and themes of Discipline X.								Reflection Essay	Annotated Bibliography	Class Presentation	Poster Presentation	Supervisor Evaluation	
Describe the research methods used to investigate scholarly problems within the discipline.								IRB/ACUC Proposal	Peer Review of Team Skills	Capstone Project / Porfolio	Other Graded Work in Course (Describe)		
Describe the application of disciplinary research and theory for real-world problems.													
Critical Thinking													
Use scientific reasoning to interpret phenomena investigated in the discipline.													
Design, conduct, and interpret basic disciplinary research.													
Communication													
Produce clear, readable prose for a targeted audience that is free of problems with grammar, punctuation, or spelling.													
Spoken communication is professional and uses appropriate language for the targeted audience.													
Integrity / Values													
Articulate and adhere to ethical standards of the discipline.													
Articulate and adhere to ethical academic standards of the University of West Florida.													

Department Name
Department URL

Program Name: B.A. in XXXXX
Date Created: November 2016

Curriculum Map Example Based on Template
Center for University Teaching, Learning, and Assessment

http://uwf.edu/offices/cutla/

IUP Graduates

...are informed, empowered, and responsible.

Key Descriptors

+ Informed

understand nature and society through forms of inquiry fundamental to the sciences, the humanities, and the arts

use knowledge and ways of knowing that extend beyond core concepts enabling them to link theory and practice.

+ Empowered

demonstrate intellectual agility and creativity

ability to manage or create change

ability to derive meaning from experience and observation.

communicate well in diverse settings and employ various strategies to solve problems.

mastery of intellectual and practical skills.

+ Responsible

engaged citizens of a diverse democratic society

have a deep sense of social responsibility and ethical judgment.

responsible for their personal actions and civic values.

+ Informed

Informed learners demonstrate understanding of...

- ways of modeling the natural, social, & technical worlds
- the aesthetic facets of human experience
- the past and present from historical, philosophical, & social perspectives
- interrelationships within and across cultures and global communities
- human imagination, expression, & traditions of many cultures
- interrelationships within and across disciplines

+ Empowered

Empowered learners demonstrate:...

- effective oral & written communication abilities
- ease with textual, visual & electronically-mediated literacies
- problem solving skills using a variety of methods & tools
- information literacy skills
- ability to transform information into knowledge & knowledge into judgment and action
- ability to work within complex systems & with diverse groups
- critical thinking skills including analysis, application, & evaluation
- reflective thinking & ability to synthesize information & ideas

+ Responsible

Traits of a responsible learner:

- intellectual honesty
- concern for social justice
- civic engagement
- respect for the identities, histories, and cultures of others
- awareness of ethical & behavioral consequences of decisions and actions on themselves, on society, and the physical world

Questions?

- Some additional suggested web-based resources are included in the handouts for those who want to learn more.