Six-Step Assessment Process: Student Learning Outcomes

Assessment: Basics

09.18.18

Get ready for WSCUC

<u>2012</u>
Reaccredited
(7 yrs)

→

<u>2015</u>
Interim
Report

→

<u>2016</u>
Mid-Cycle
Report

→

Areas of Concern:

- Integrated strategic plan
- Assessment
- Student success
- Funding

<u>Fall 2018</u>
Self-Study
Due

→

<u>Spring 2019</u>
Off-Site
Review

→

<u>Fall 2019</u>
On-Site
Visit

Where do we carry out assessment

WSCUC

Core Competencies

Required by WSCUC

University

University Learning Goals
Strategic Plan Goals

Required by WSCUC

Alignment

Program

Program SLOs

- Required by WSCUC
- Near or at graduation

Course

Course Learning Outcomes

SLOs at different levels

WSCUC	Quantitative Reasoning
University	Graduates are able to apply quantitative reasoning to real-world problems.
Program	Students are able to use statistical tools to interpret data from research studies.
Course	Students are able to calculate and interpret a variety of descriptive and inferential statistics.

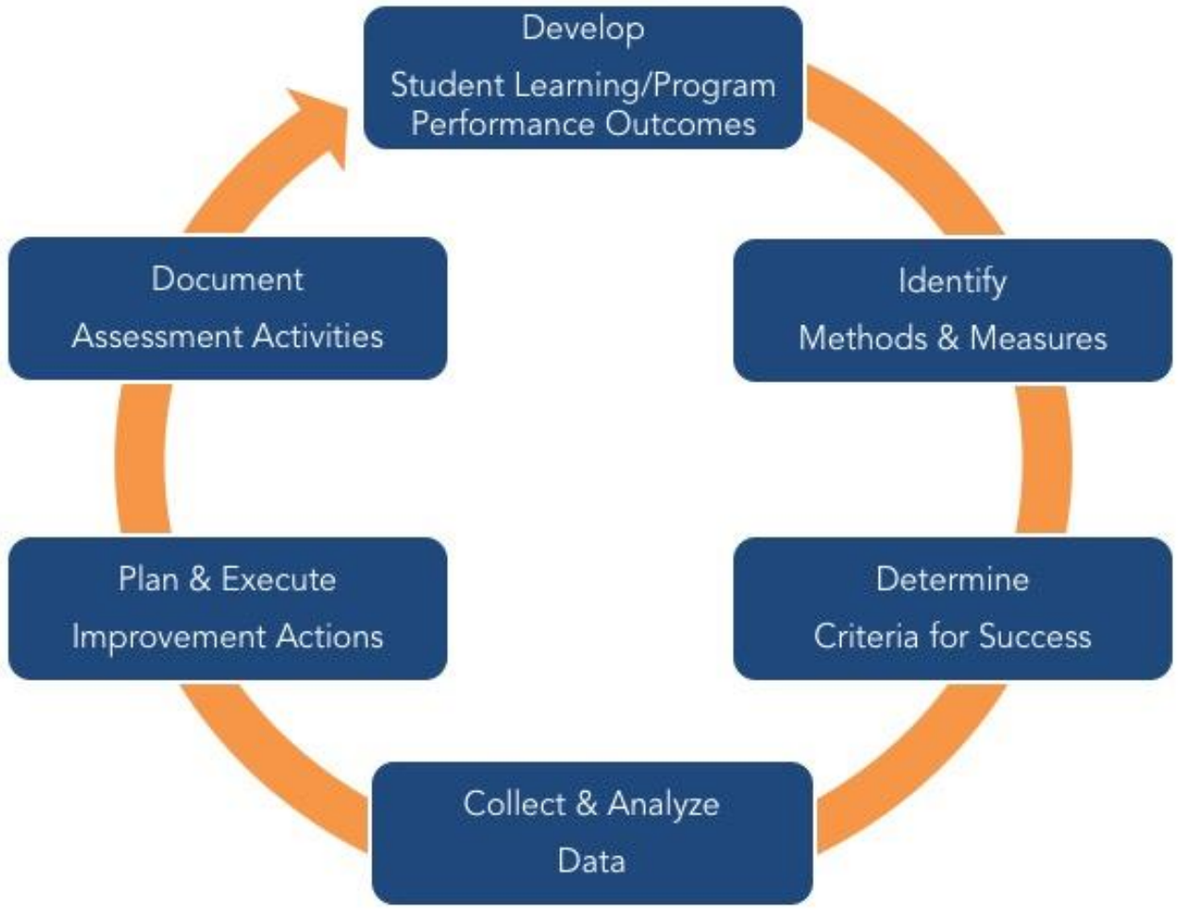
**Adapted from Mary Allen workshop (2006)*

Six-step assessment process*

What do we want our students to learn and/or our units to accomplish?

How are we documenting the assessment AND improvement activities/results?

What changes are we making?
Are the changes working?

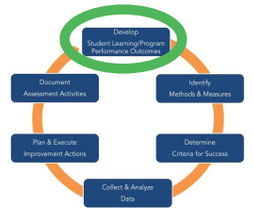


How are we doing? How do we know?

What evidence do we need to know to determine whether we are successful?

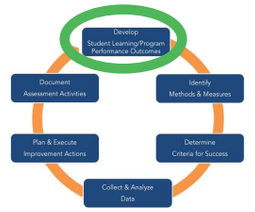
How do we use data to confirm/improve our practices?

*AEEC Spring 2014



Step 1: Develop student learning outcomes

- A statement
- Significant and essential learning that students achieve at the end of a program
- What students should be able to accomplish at the end of a course, curriculum, or any educational experience
    - *Example: “At the end of the Assessment Basics workshop, participants will be able to differentiate ‘indirect’ evidence from ‘direct’ evidence of learning.”*



What is a SLO

Knowledge

Facts
Concepts
Theories
Principles
…

Skill

Critical thinking
Communication
Teamwork
Quantitative reasoning
…

Attitude

Civic engagement
Cultural competency
Professionalism
Life-long learning
…

Where do SLOs come from

WSCUC

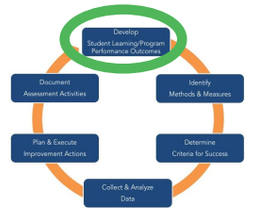
University

Program

Course

Alignment

- General vs. Discipline-specific
- “Top-down” vs. “Bottom-up”
- Adapt from existing “best practices”
- Engage faculty
- Involve important but often forgotten stakeholders (students, alumni, employers, etc.)



Mission…Goals…Outcomes…Objectives…

Mission

Holistic vision of the values and philosophy of an institution/department/program

Goals

Broad, general statements about knowledge, skills, attitudes, etc. expected in students

Outcomes

Clear, specific “operational definitions” of goals

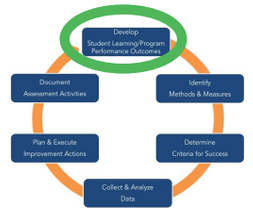
Learner-centered

Objectives

Intended instructional strategies or learning opportunities

Instructor-centered

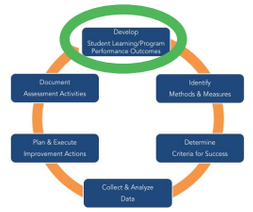
**Adapted from Mary Allen workshop (2006) & ALA (2016)*



What are good SLOs

- Learner-centered, not instructor-centered
- Aligned with the mission and goals of WSCUC, university, college, program, etc.
- Focus on “high-priority learning”
- Real (not aspirational)
- Simple language
- Specific, clear and concise
- Demonstrable and measurable
- Discrete (no “double-barrel” statements)
- Manageable (more is not better)

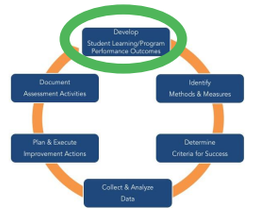
**Adapted from Mary Allen workshop (2006) & ALA (2016)*



Sound SLOs are Active

Increasing level of complexity

LEVELS of SLOs (Bloom et al., 1956)	**BLOOM'S TAXONOMY** EXAMPLE ACTION VERBS
Evaluation	Assess, Conclude, Criticize, Justify, Value
Synthesis	Assemble, Create, Design, Produce, Reconstruct
Analysis	Analyze, Compare, Differentiate, Experiment, Solve
Application	Apply, Demonstrate, Modify, Practice, Use
Comprehension	Convert, Explain, Interpret, Paraphrase, Report
Knowledge	Define, Describe, List, Name, Outline



SLO examples

ULG	SLO	Program
Intellectual literacy (ULG 1)	Students can describe and/or explain relevant theories, concepts and related research findings.	Child and Adolescent Studies, B.S.
Critical thinking (ULG 2)	Apply mathematics, chemistry, biology and/or physics to help clarify the mechanism behind major geological systems.	Geology, B.A.
Communication (ULG 3)	Communicate interpretations and conceptualizations of theatrical material orally, in writing, and through performance or other means of artistic expression.	Theatre Arts, B.A.
Teamwork (ULG 4)	Recognize and apply appropriate concepts and theories of motivation to achieve group and organizational goals.	Business Administration, B.A.
Community perspective (ULG 5)	Students will use sociological knowledge and skills to engage with local and global communities for the purpose of social justice.	Sociology, B.A.
Global community (ULG 6)	Students can describe and explain causes and consequences of change over time in and across different global regions.	History B.A.

Curriculum mapping

Course	SLO1	SLO2	SLO3	SLO4	SLO5
100	Introduced		Introduced		
101		Introduced			Introduced
200	Practiced			Introduced	
230			Practiced		
300	Practiced	Practiced			Practiced
350		Mastered			Mastered
401	Mastered		Practiced; Mastered		

Curriculum mapping example 1

Curriculum Map: Student Learning Goals, CAS Core Courses, and Year of Assessment

Year	SLG	101	201	215	394	300	301	305	310	325A	325B	321	322	323	AdvPr	490	491
1	1a. Describe and explain relevant theories, concepts, and related research findings.	I	I	*	*	*	*	*	*	D/M	D/M	D/M	D/M	D/M	*	M	M
	1b. Identify and describe normative development.	I	*	*	*	*	*	*	*	D/M	D/M	D/M	D/M	D/M	*	*	*
5	1c. Describe individual, cultural, and environmental differences.	I	I	*	*	*	*	D	*	D	D	D	D	D	*	M	M
	4c. Identify funding, services, and advocacy strategies at the local, state, federal, and international levels that support children, adolescents, families and communities	*	I	*	D	*	*	*	*	*	*	*	*	*	M	*	M
3	2a. Identify, access, analyze and synthesize relevant sources	*	*	*	*	I	I	I/D	D	D	D	D	D	D	D	M	M
	2b. Critically analyze research studies.	*	*	*	*	I	I	I/D	*	D	D	D	D	D	*	M	M
4	3a. Write effectively in APA style, taking purpose and audience into account	*	*	I	*	I/D	I/D	I/D	*	D	D	D	D	D	*	M	M
	3b. Make effective oral presentations, taking purpose and audience into account	*	*	*	*	I	I	I	*	*	*	*	*	*	D	M	M
2	4a. Apply theories, concepts and research findings to promote child well-being	I	I	*	I	*	*	*	*	D	D	D	D	D	M	M	M
	4b. Identify relevant ethical and legal issues and the impact of possible actions in real-world situations	*	I	I	D/M	*	I	I/D	*	*	*	*	*	*	M	*	M

I: Introduced D: Developed M: Mastered

Curriculum mapping example 2

Course/Learning Experiences	Obj 1 (Identification of 80s Components)	Obj 2 (Research Methodology)	Obj 3 (Writing Critically)	Obj 4 (Oral Comm)
PCUL201(Introduction to the 80s)	3	0	1	0
PCUL301 (80s Music)	3	0	1	2
PCUL302 (80s Fads)	3	0	1	0
PCUL303 (80s TV and Movies)	3	0	0	2
PCUL304 (80s Technology)	3	1	1	0
PCUL361 (Methods and Analysis)	0	3	1	0
PCUL401 (80s Politics and Culture)	1	1	3	0
PCUL402 (Profiles of 80s Icons)	1	0	1	3
PCUL403 (The Music Video)	2	0	0	0
PCUL404 (The 80s and Today)	0	2	3	0
PCUL480 (Capstone)	0	2	2	2

Table 2. Curriculum Map of Pop Culture Program (Oral Communication is Objective 4).

Coverage of objective: 0 = No Coverage, 1 = Slight Coverage, 2 = Moderate Coverage, 3 = Major Coverage

Source: James Madison University

Case Study: Step 1

Step 2: Identify methods and measures learning

- We are *already* and *always* assessing student learning
- The evidence/measures already in place is NOT always the best place to start
  - Do the measures address the SLO?
  - What are the active verbs in the SLO?

Direct vs. Indirect

Direct

Student behaviors or products that demonstrate their mastery of SLO

Exam/Quiz
Paper/Presentation
Project/Portfolio
Recital/Exhibition
Peer evaluation
…

Indirect

Reported perceptions about student mastery of SLO

Use as **supplemental** evidence

Self-reflection essay
Self-report survey
Interview
Focus group
Report by alumni, employer, etc.
…

Direct evidence helps tell us “what”, and indirect evidence helps tell us “why”.

A bit more vocabulary…

Embedded	- Measures integrated into the regular curricular process - Can be used to judge individual student performance in a course, AND can be aggregated to demonstrate mastery of SLOs for a program
Authentic	- Assessment measures that ask students to apply their learning to solve real-world problems, or meaningful tasks that replicate “real world” scenarios
Value-added	- Measures designed to capture the increase in students’ learning during a course or program - More indicative of the contribution an institution/program/course make to student learning

Choosing the right measure

- Valid: Are you measuring the outcome?
- Reliable: Are the results consistent?
- Actionable: Do the results clearly tell you what students can or cannot do?
- Triangulation: Are there multiple lines of evidence for the same SLO?
- Meaningful and engaging: Are faculty engaged? Do students care?
- Sustainable: Can the process be managed effectively within the program context?

Triangulating direct and indirect measures

Chemistry - B.S. program:

SLO: Student can explain the fundamental chemistry principles.

DIRECT

- Final exam questions (Multiple-choice/Short-answer)
- Senior project (paper/presentation)
- ACS exam
- Concept inventory
- …

INDIRECT

- Graduation survey
- Alumni survey
- Employer focus groups
- …

Triangulating direct and indirect measures

Nursing - D.N.P. program:

SLO: Student are able to work effectively in a team.

DIRECT

- Scenario-based exam questions
- Team project score
- Team member peer evaluation
- Instructor observation
- …

INDIRECT

- Self-reflection journal
- Self-assessment survey
- Student interviews
- …

Triangulating direct and indirect measures

GE program:

SLO: Student will analyze, interpret, and utilize verbal or numerical information.

DIRECT

- Signature assignment
- Capstone project
- Common exam (CLA+ or local)
- ePortfolio
- …

INDIRECT

- Student survey
- Student reflection essays
- Faculty focus group
- …

Collect meaningful evidence in a feasible way

- We are *already* and *always* assessing student learning
- Grading is not assessment, but assessment could contribute to grading
- Prioritize embedded measures
- Look for capstone courses, culmination experiences, etc.
- Look for measures that yield multiple lines of evidence

What are rubrics

- Scoring guides that explicitly classify learning products/behaviors into categories that vary along a continuum.
- No one format - Flexible!

Basic elements:

Criteria

Performance Levels

Detailed performance description

	Capstone 4	Milestones 3	Milestones 2	Benchmark 1
Explanation of issues	Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.	Issue/problem to be considered critically is stated without clarification or description.
Evidence *Selecting and using information to investigate a point of view or conclusion*	Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. q	Information is taken from source(s) with some interpretation/evaluation, but not enough to develop a coherent analysis or	Information is taken from source(s) without any interpretation/evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	b s p	a).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/hypothesis).	S thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis).	thesis/hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

A rubric example: Critical Thinking

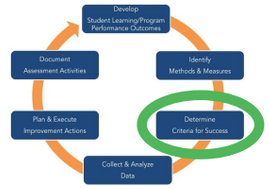
CRITERIA		1 Below Basic	2 Basic	3 Proficient	4 Advanced	N/A
A	**INFORMATION ORGANIZATION** **Appropriately present and organize supporting information**	No communication of information from sources. The use of information is inconsistent or inappropriate so the intended purpose is not achieved.	Communicates and organizes information from sources. The information is not well synthesized.	Communicates, organizes and synthesizes information from sources. Intended purpose is achieved, but would benefit from improved clarity .	Communicates, organizes and synthesizes information from sources to fully achieve a specific purpose with exceptional clarity.	N/A
B	**SOURCE SELECTION** **Choose information from reliable, relevant and valid sources**	Information taken from questionable and/or irrelevant sources.	Information taken from somewhat adequate and reasonable sources.	Information taken from adequate and reasonable sources.	Information taken from high quality and relevant sources.	
C	**ARTICULATION PROCESS** **Analyze, evaluate or interpret information critically for accuracy, appropriateness or sufficiency to pursue specific conclusion(s), argument(s) or solution(s)**	Poor evaluation or interpretation of the information.	Limited evaluation or interpretation of the information.	Proficient evaluation or interpretation of the information.	Sophisticated evaluation or interpretation of the information.	N/A
D	**VALIDITY AND RELEVANCE OF ARGUMENT/CONCLUSION** **Clearly articulate the value, validity and relevance of argument(s) and conclusion(s),** **and *if applicable,* acknowledge relevant personal perspective(s)**	Arguments are unsupported or irrelevant (to the assignment). Conclusions are unsupported, non-existent, or unrelated to the information presented.	Arguments are weakly supported. Conclusions are somewhat logical, but incomplete, flawed or irrelevant.	Arguments are relevant (to the assignment) and supported for relevant patterns to emerge. Conclusions adequately follow from the information presented.	Arguments are relevant (to the assignment) and highly supported in a sophisticated manner allowing for important patterns to emerge. Innovative conclusions follow from the information presented.	N/A
E	**CREATIVE APPLICATION OF KNOWLEDGE** **Apply prior academic knowledge to a new context**	No application of prior learning or existing knowledge to a new context	Limited or simplistic application of prior learning or existing knowledge to a new context	Appropriate application of prior learning or existing knowledge to a new context	Thoughtful or innovative application of prior learning or existing knowledge to a new context that reflects integration and synthesis of information, and complexity of the issue.	N/A

Developed by the GE Faculty Learning Community (16-17)

Case Study: Step 2

Step 3: Determine criteria for success

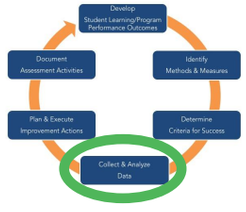
- **A performance standard:**
  - What level of performance is good enough?
  - Pre-determined!
  - Supported by historical data, reasonable expectations, theoretical frameworks...



Criteria for success examples

Program	Method/Measure	Criteria for Success
Dance, B.A.	Annual Dance Major assessment of students' demonstration of technical skills, application of performance concepts, and understanding of movement vocabulary	70% of students will receive a "meets expectations" or "exceeds expectations" using the grading rubric
Liberal Studies, B.A.	Exit survey on interdisciplinary connections	At least 80% of the students respond to the relevant exit exam question with options "high" or "very high"
Educational Leadership, Ed.D.	Student survey on self-perceived knowledge and competence	A minimum of 75% of candidates have an average rating of 3 or higher

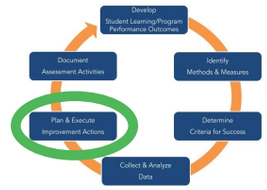
Step 4: Collect and analyze data



- Sampling!
  - Relevant, Representative, and Reasonably sized
  - Determined by the outcome and program context
  - Moderate sample size is sufficient (e.g. “50-80” rule; 20-30%).
    - Very large sample size is rarely needed.
    - If homogenous student population, small samples are sufficient.

- Coordinate with other campus initiatives that can measure student learning

Case Study: Step 3 & 4



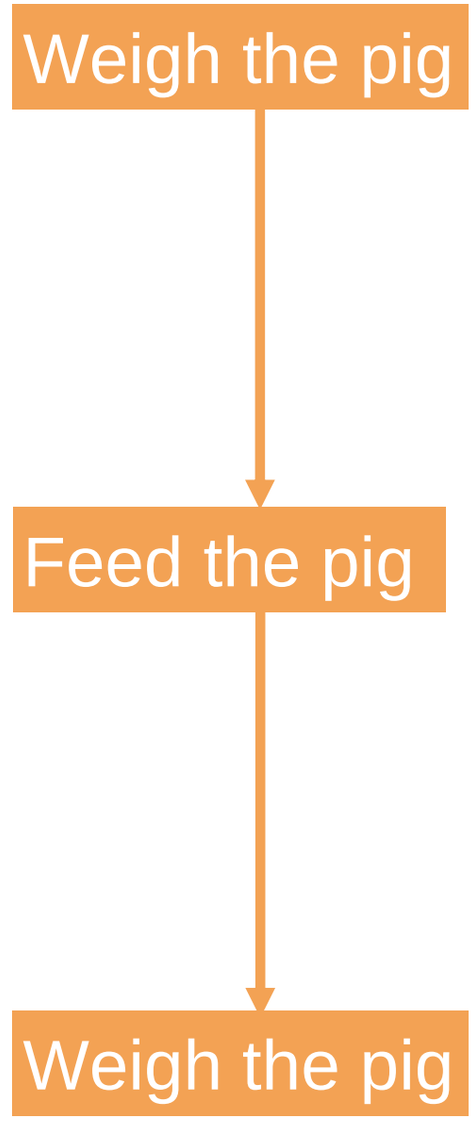
Step 5: Plan and execute improvement actions

- Review the assessment findings

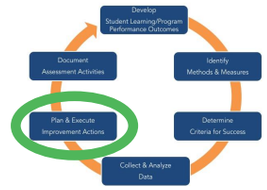
- Types of changes:
  - Curriculum
  - Pedagogy
  - Faculty support
  - Student support
  - Resources
  - Assessment plan
  - More data collection?

Small changes matter

- Don’t forget to re-assess the improvement actions!

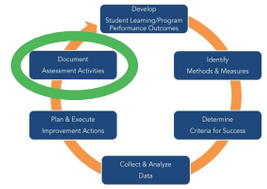


NILOA (2014)



Improvement actions example

- Business Communication
  - Student writings of a case analysis were graded using the CLASS rubric, and found that students had the greatest deficiencies in “Strategy”.
  - *Program 1) collected additional demographic data to narrow down weakness population; 2) offered faculty development workshop on case analysis; 3) emphasized use of topic sentences and supporting evidence; 4) provided sample professional documents for use in classroom and homework exercises.*
  - *Writing communication scores improved 17% between 2009 and 2012*



Step 6: Document assessment activities

campuslabs Planning

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Ca Compliance Assist

Organize planning and accreditation

Institution - Planning Items

Assessments | Strategic Plans | Master Items

Table Filtered By: Fiscal Year: FY 2015 Outcomes

Edit Filter

- University
  - Academic Affairs
    - Academic Operations and Finance
    - Academic Programs
      - Academic Advisement Center
      - Assessment and Educational Effectiveness
      - Freshman Programs
      - Graduate Programs
      - Health Professions Advising
      - Online Programs
      - Undergraduate Programs and General Educ
      - University Honors Program
    - College of Communications
    - College of Education
    - College of Engineering and Computer Sciences
    - College of Health and Human Development

New Item

Fiscal Year: FY 2015

Number	Name	Start	End	Progress
102-002-PO-01	Implement 6-step process assessment framework	7/1/2014	6/30/2018	
102-002-PO-02	Implement Compliance Assist	7/1/2014	6/30/2018	
102-002-PO-03	Enhance assessment expertise	7/1/2014	6/30/2018	
102-002-PO-04	Implement Annual Report process	7/1/2014	6/30/2018	
102-002-PO-05	Implement Program Performance Review (PPR) process	7/1/2014	6/30/2018	
102-002-PO-06	Ensure compliance-related assessment of accreditation	7/1/2014	6/30/2018	

Tell a coherent story

Weigh the pig AGAIN

Case Study: Step 5 & 6

A multi-year assessment plan

- **What to plan for:**
    - Timeline
    - Process
    - Participants
    - Steps to turn assessment results into improvement actions
    - Self-evaluation/Reflection of the assessment process

A multi-year assessment plan (cont.)

- **Guidelines:**

Outcome is not for only 1 year

  - Limit to 5-7 SLOs
  - Determine a realistic assessment plan cycle, i.e. how long (e.g. 7 years) to complete meaningful assessment of all SLOs
  - Create a multi-year assessment plan that assesses 1-2 SLOs a year
  - Consider overlapping assessment (of new SLO) and improvement (of assessed SLO) activities
  - Make sure assessment involves the entire program/department

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