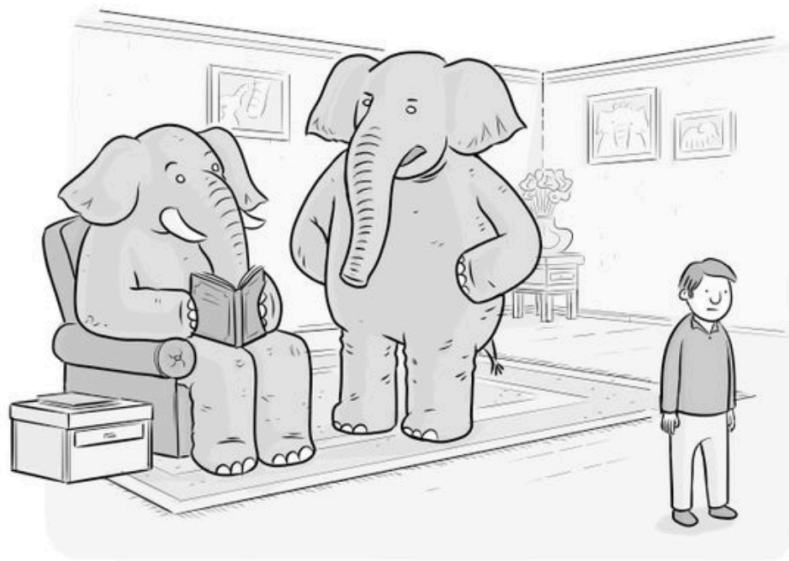# Assessment Basics for Student Learning Outcomes & Performance Outcomes

Office of Assessment and Institutional Effectiveness

09.23.21

"It's time we talked about the Carl in the room."

Source: Huffpost https://www.huffpost.com/entry/cartoonist-ellis-rosen_n_5979e678e4b0da64e8770071
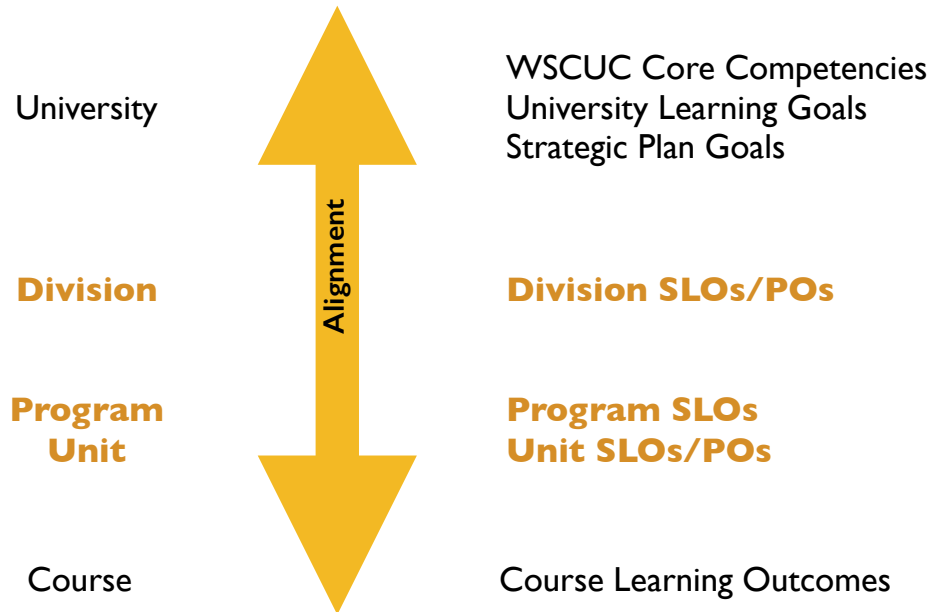
What is not assessment

- Assessment ≠ Accreditation

  - Accreditation requires assessment, but is not the primary purpose for assessment

- Assessment ≠ Evaluation

  - Assessment is faculty/staff-controlled, reflective, and aimed to <u>increase (not judge)</u> quality of teaching and learning or quality of operations

- Assessment ≠ Lots of extra work

  - Assessment can be done with existing, embedded measures that do not require a new set-up
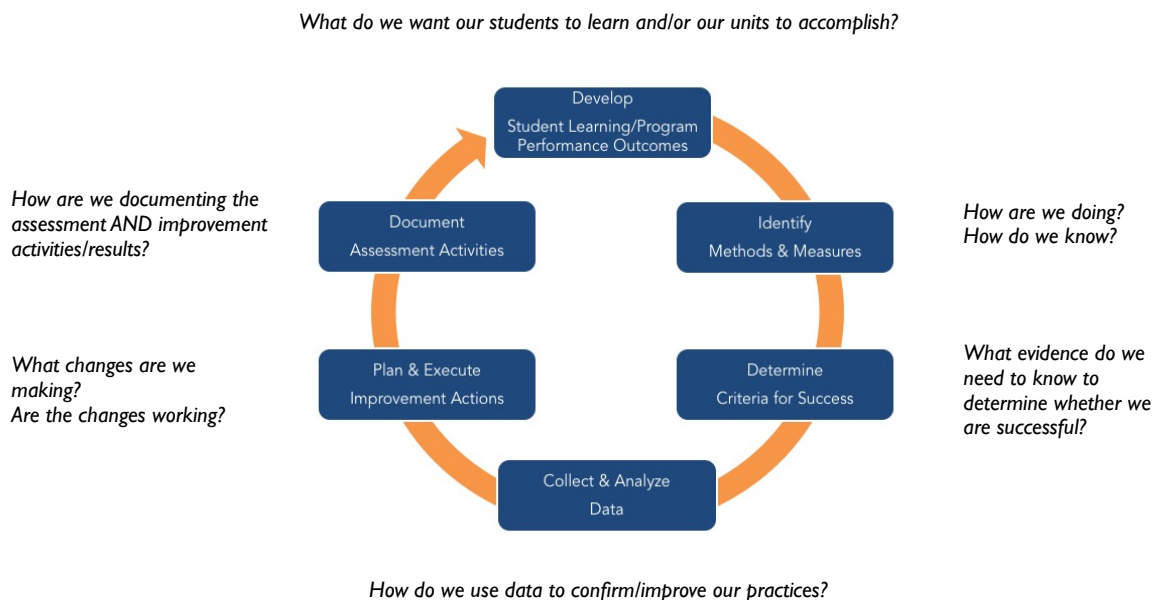
Assessment for improvement

- Assessment = Getting evidence-based answers to the questions that matter to us

  - *"Without data, you are just another person with an opinion." (W. Edwards Deming)*

- Assessment = Improving teaching and learning or operation efficiency/effectiveness

  - Assessment helps identify areas for improvement in student learning, and ways to improve them

- Assessment = Demonstrating effectiveness

  - Assessment showcases the positive impact of our hard work on student and institutional success

Levels of assessment

University — WSCUC Core Competencies
University Learning Goals
Strategic Plan Goals

Alignment

Division — **Division SLOs/POs**

Program — **Program SLOs**
Unit — **Unit SLOs/POs**

Course — Course Learning Outcomes

Six-step assessment process*

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

Develop
Student Learning/Program
Performance Outcomes

Document
Assessment Activities

Identify
Methods & Measures

Plan & Execute
Improvement Actions

Determine
Criteria for Success

Collect & Analyze
Data

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

*How are we doing?
How do we know?*

*What changes are we making?
Are the changes working?*

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

Annual assessment reporting and review

Unit Planning Summary

Outcomes (Step 1)	Methods and Measures (Step 2)	Data Collection and Analysis (Step 4)	Improvement Actions (Step 5)
✔ PO-01: Sustainable university-wide assessment process	1	1	1
✔ PO-02: Assessment training and professional development	1	1	1
✔ PO-03: External compliance support	1	1	1
✔ PO-04: Analytical Studies support	1	1	1
✔ PO-05: Institutional Research	1	1	1
✔ PO-06: Quality Assurance	1	1	1
✔ PO-07: Data Governance	1	0	0
✔ PO-08: Assessment and QA dissemination	1	1	1

- Assessment management system (AMS) available year-round for documentation

- Annual report collection (July 15 for operational units; Nov.15 for academic programs)

- Assessment liaisons review to provide feedback

Step 1: Develop SLOs/POs

SLO:

- A statement about the 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

PO:

- A statement about measurable end results or consequences of activities, services, or program

- Variety of results
  - Timeline
  - Completion
  - Process efficiency
  - Process impact
  - Perception and satisfaction
  - Culture
    …

Start with a good SLO/PO

Knowledge	Skill	Attitude	Service
Facts	Critical thinking	Civic engagement	Appropriate
Concepts	Communication	Cultural competency	Efficient/Effective
Theories	Teamwork	Professionalism	Satisfactory
Principles	Quantitative reasoning	Life-long learning	Equitable

- Learner centered, not instructor centered (SLO)

- Beneficiary centered, not division/unit centered (PO)

- Simple language

- Specific, clear and concise

- Demonstrable and measurable

- Discrete (no "double-barrel" statements)

- Manageable (more is not better)

Common issues with SLOs

Criteria for good SLOs	Example SLO needing improvement
Learner-centered, not instructor-centered	Students will be provided with at least 2 internships to apply the skills in the field.
Simple language	Students demonstrate thorough and competent understanding of original texts, which is reflected in sound arguments to support assertions that are supported by careful presentation of evidence and include thoughtfully constructed refutations of the opposing view.
Specific, clear and concise	Students acquire the accumulated essential knowledge so that they can apply the knowledge to clinical issues in graduate school or in their work settings.
Demonstrable and measurable	Students demonstrate leadership skills by organizing and implementing projects in the community.
Discrete (no "double-barrel" statements)	Students understand and apply critical race theory and research methods demonstrated through independent research using standard English grammar and coherent written organization.
Manageable (more is not better)	5-7 SLOs (recommended)

Common issues with POs

Criteria for good POs	Example PO needing improvement
Beneficiary-centered, not division/unit-centered	The division provides excellent support to the campus.
Simple language	University processes are transformed with innovative technologies by advancing digital transformation to expand digital capabilities throughout the University.
Specific, clear and concise	Upon successful completion of a technology training, participants will demonstrate an increase in utilization compared to prior to their training. Further elaboration on this outcome, in response to feedback on the prior year's assessment report: 1) Upon successful completion of training, new staff will be able to: a) run a report b) post a system comment.
Demonstrable and measurable	Students will receive advising that optimizes their educational and personal success.
Discrete (no "double-barrel" statements)	Residents and clients will experience quality housing, residential engagement, and excellent food service.
Manageable (more is not better)	5-7 POs (recommended)

Case Study: Step 1

Step 2: Identify methods & measures

- We are *already* and *always* assessing

- The evidence/measures already in place is NOT always the best place to start

  - Does the measure address the SLO/PO?

Direct vs. Indirect

Use as **supplemental** evidence

	Direct	Indirect
SLO	Student behaviors or products that demonstrate their mastery of SLO • Exam/Quiz • Paper/Presentation • Project/Portfolio • Recital/Exhibition • Peer evaluation	Reported perceptions about student mastery of SLO • Self-reflection essay • Self-report survey* • Interview • Focus group • Report by alumni, employer, etc.
PO	Actual impact of operations that speak directly to the PO • Quality/Quantity of service • Completion/Usage/Error rate • Processing time • Needs analysis/Gap analysis • Customer/Supervisor evaluation	Reported perceptions about the impact of operations • Customer survey* • Comparison to best practices • Interview • Focus group • Impression or report by 3rd party

Direct evidence helps tell us "what", and indirect evidence helps tell us "why".

Embedded & Value-added

Embedded	Value-added
- Measures integrated into the regular curriculum or operations - Prioritize embedded measures	- Measures designed to capture the change, improvement, or growth over time - More indicative of the contribution a program/unit/division makes - Advanced practice (not required)

Choosing the right measure

- **Valid:** Are you measuring the outcome?
- **Reliable:** Are the results consistent?
- **Actionable:** Do the results clearly tell you what is or is not working?
- **Triangulation:** Are there multiple lines of evidence for the same outcome?
- **Meaningful and engaging:** Are faculty/staff engaged? Do students or other relevant stakeholders care?
- **Sustainable:** Can the process be managed effectively within the program/unit/division context?

Common issues with SLO measures

Critieria for good measures	Example measures needing improvement
Valid	To measure students' "global competency that allows students to conduct business with people in different global regions", students are asked to answer a final exam question in an elective not required for majors.
Reliable	To measure students' professional skills in the clinical settings, the internship site supervisors are asked to provide a brief holistic evaluation of students' professional skills.
Actionable	To measure students' understanding of major theoretical development milestones in the discipline, the faculty use a rubric to score student assignment. The rubric rates students' knowledge using a 5-point scale from "poor" to "excellent" without detailed descriptions.
Triangulation	To measure students' critical thinking ability, multiple measures are used including a short-answer assignment, project customer evaluation, and student project self-reflection. They yield different results, but no connections are drawn.
Meaningful and engaging	To measure students' problem solving ability, students are invited to take a 2hr standardized test that is not part of the course or program. Students receive $50 for participation.
Sustainable	The program coordinator asks every course that is aligned with a program SLO to submit assessment data every semester to capture all relevant data. The coordinator will then go through all the data to determine whether the SLO is met.

Common issues with PO measures

Critieria for good measures	Example measures needing improvement
Valid	To capture how administrative processes are being transformed with innovative technologies, the unit tracked the implementation timeline of new technologies.
Reliable	To measure employee satisfaction using a home-grown survey while the survey is about to go through major revision.
Actionable	The student success center measures its operational effectiveness by using the graduation rates of participating students.
Triangulation	To measure the impact of the communications campaign, multiple measures are used including email open rate, website page views, and website content updates. They yield different results, but no connections are drawn between the data points.
Meaningful and engaging	To measure employee satisfaction of a unit's services, employees are asked to take a 75-question survey to rate all services the unit provides. Employees receive $20 for their participation.
Sustainable	A program holds 25 focus groups every semester. The transcripts are reviewed by an intra-divisional committee.

Case Study: Step 2

Step 3: Determine criteria for success (CFS)

- A performance standard

    - What level of performance is good enough?
    - Pre-determined!
    - Supported by historical data, reasonable expectations, theoretical frameworks, professional standards…

- Can assume multiple formats

    - Average
    - Distribution pattern
    - Change from previous year/cycle
    - Difference from peers or other comparison groups
    - Can be qualitative depending on the corresponding measure

Common issues with CFS

- Some measures lack CFS

    - Every measure needs a corresponding CFS

- Focus on average and ignore score distribution

    - Average can be easily skewed
    - Distribution is often more telling, and helps pinpoint areas for improvement

- Inappropriate CFS

    - Too high
    - Too low
    - Ceiling effect
    - Use average or "rate" when sample size is small

Step 4: Collect and analyze data

- Same as what we do in a research study

    - Why collect the data
    - What data to collect
    - Where to collect data (prioritize "embedded")
    - Who to include and how many
    - How the data are analyzed

- Sampling!

    - Relevant, Representative, and Reasonably sized
    - Determined by the outcome and program context

- **Disaggregation!**

Common issues with data collection and analysis

- No data
  - Expectation: I outcome per year
  - Special report needed if no data

- Misalignment between steps
  - Data collected do not match measures
  - Data analysis does not reference or match CFS

- Insufficient description of data collection or analysis

  - Where did the data come from
  - Who and how many students/participants were included
  - How were the data collected and analyzed
  - How did the data compare with CFS
  - How did the data compare to prior years

- No reflection on how data relate to practice

- No connection between data from multiple sources
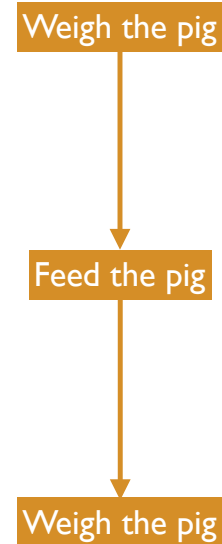

Case Study: Step 3 & 4

Step 5: Plan and execute improvement actions

- Review the assessment findings

- Types of changes:

SLO	PO
• Curriculum • Pedagogy • Faculty support • Student support • Resources • Assessment plan	• Infrastructure • Program design • Service delivery • Resource needs • Personnel • Assessment plan

Small changes matter

Weigh the pig

Feed the pig

Weigh the pig

NILOA (2014)

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

Common issues with improvement actions

- Improvement actions have no connection to the data

- Improvement actions are vague

  - *"The leadership team will review the results and determine the next steps."*
  - *"We will continue to monitor student performance and make changes to the curriculum."*

- Improvement actions do not have any follow-ups

  - Are the improvement actions from the previous year implemented?
  - What is the impact of the improvement actions from the previous year?

- Overemphasis on methodology (e.g. always focus on the measures)

Step 6: Document assessment activities

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PO-06: Quality Assurance	1	1	1
PO-07: Data Governance	1	0	0
PO-08: Assessment and QA dissemination	1	1	1

Document any time

Tell a coherent story

Weigh the pig AGAIN

Case Study: Step 5 & 6

Don't do assessment only to meet administrative requirements

Blurry McBronzeFace
@apollodorus9

"At the end of this course, students will be able to..."

SOCRATES: "...know that they know nothing."

EDUCATION ADMINISTRATOR: I'm sorry, but that is not a measurable learning outcome.

8/22/18, 2:36 PM

Do assessment to improve student success

"Wisdom is needed throughout the entire process of assessment for all levels of students - from the articulation of outcomes statements to the selection and application of assessment measures to the ever-difficult loop-closing activities for improving student learning."

-Timothy Reese Cain

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