

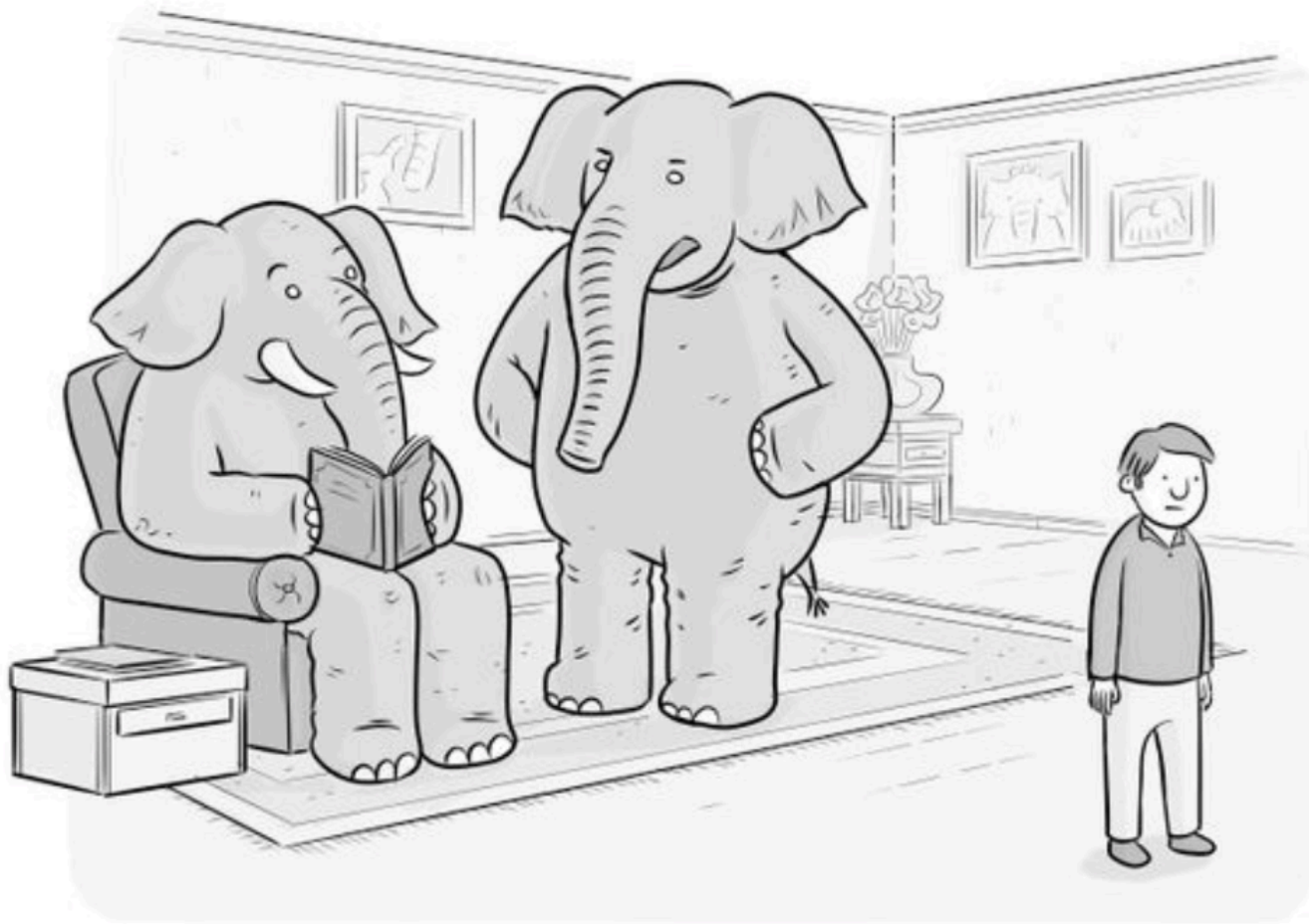


Assessment Refresher for Graduate Programs

Office of Assessment and Institutional Effectiveness

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

*“We got 10 years from WSCUC,
so why are we still talking about assessment?”*

*“What guarantee do I have that you will not use
assessment data against me?”*

*“We are in the middle of a global pandemic.
Stop adding more to our workload!”*

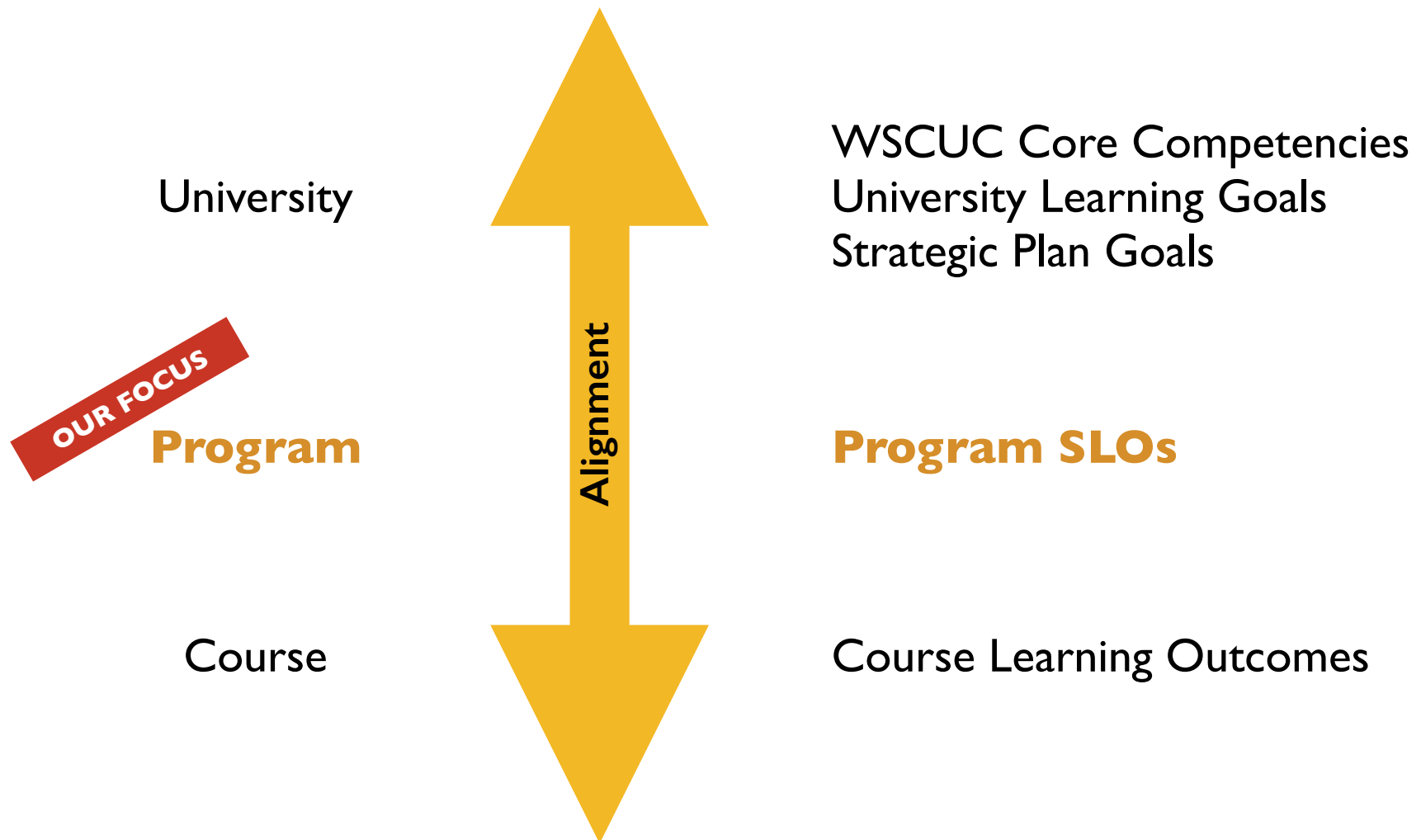
What is not assessment

- Assessment ≠ Accreditation
 - Accreditation requires assessment, but is not the primary purpose for assessment
 - *Grad program assessment is one of the recommendations in the recent WSCUC review, and an interim report is due in 2023.*
- Assessment ≠ Evaluation
 - Assessment is faculty-controlled, reflective, and aimed to increase (not judge) quality of teaching and learning
- 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
 - 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 learning and success

Three levels of assessment



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?

Distinguish graduate program assessment from undergraduate assessment

- Graduate programs often have fewer SLOs than undergraduate programs
- Graduate program assessment is often concentrated in a small number of culmination courses or projects
- Graduate assessment should highlight what is “advanced” about the graduate programs
 - SLO statements referring to advanced levels of proficiency
 - Measures requiring advanced level of proficiency
 - Scoring rubrics corresponding to advanced levels of proficiency

Annual assessment reporting and review

The screenshot displays the Nuventive Improve software interface. At the top, there is a header bar with the Nuventive Improve logo on the left, a dropdown menu set to "AA - Assessment and Institutional Effectiveness" in the center, and a user profile section on the right showing a notification bell with "0" and the text "Welcome, sswarat". Below the header is a navigation sidebar on the left with icons for Home, Admin Unit, Unit Assessment, Mapping, Reports, and Documents. The main content area is titled "Unit Planning Summary" and contains a table with four columns: "Outcomes (Step 1)", "Methods and Measures (Step 2)", "Data Collection and Analysis (Step 4)", and "Improvement Actions (Step 5)".

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 (Nov.15)
- Assessment liaisons review to provide feedback



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

SLO at different levels

WSCUC

Quantitative Reasoning

University

Graduates are able to apply quantitative reasoning to real-world problems.

OUR FOCUS

Program

Students are able to apply statistical techniques to analyze real-life public health scenarios.

Course

Students are able to explain the limitations of different types of inferential statistics (e.g. t-test, ANOVA).



Start with a good SLO

Knowledge

Facts
Concepts
Theories
Principles

Skill

Critical thinking
Communication
Teamwork
Quantitative reasoning

Attitude

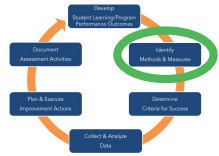
Civic engagement
Cultural competency
Professionalism
Life-long learning

- Learner-centered, not instructor-centered
- 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 successfully complete a final project in their area of concentration.
Simple language	Graduates are proficient, independent, and reflective practitioners in the field through performance, analysis, and collaboration while actively engaging in community education about the field.
Specific, clear and concise	Students acquire the essential knowledge and skills that make them competitive candidates for graduate school or business positions.
Demonstrable and measurable	Students will engage in the practice of empathy and integrate global perspectives in their careers.
Discrete (no “double-barrel” statements)	Students demonstrate knowledge in key theoretical areas, and competency in applying the knowledge to product design through independent research and client communication.
Manageable (more is not better)	3-4 SLOs



Step 2: Identify methods & measures

- We are *already* and *always* assessing student learning
- The measure already in place is NOT always the best place to start
 - Does the measure address the SLO?
 - What is the action verb in the SLO?
 - Is the verb appropriate for a graduate level SLO?
- Use curriculum map to determine where to collect evidence for program level assessment

Curriculum mapping

Course	SLO1	SLO2	SLO3	SLO4
401	Introduced		Introduced	
425		Introduced Developed		Introduced
503	Developed	Developed		Developed
510			Developed	
550	Developed Mastered		Developed	
597	Mastered	Developed Mastered		
599			Mastered	Developed Mastered

- Program assessment is focused on student competency “near or at graduation”
- Focus on courses where SLOs are “mastered”



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

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

...

Use as supplemental evidence

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



Embedded & Value-added

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
- Prioritize embedded measures

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
- 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 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?



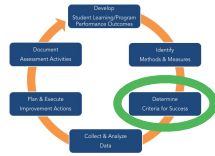
Common issues with measures (part I)

Criteria for good measures	Example measures needing improvement
Valid	1. To measure student' knowledge of key functional areas, faculty evaluate and approve the study plans of every Master's student.
	2. To measure students' ability to collaborate with others, students receive credit for completing a group project in collaboration with community partners.
	3. To measure students' writing ability, Master's students final thesis is graded using the the written communication rubric that is also used for the Bachelor's capstone project.
Reliable	1. 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.
	2. To measure students' knowledge of key biochemistry concepts, students are asked to take GRE subject test while GRE is going through major revision.
Actionable	1. To measure students' presentation skills, the faculty use a rubric to score student thesis defense. The rubric rates students' defense using a 5-point scale from "poor" to "excellent" without detailed descriptions.
	2. To measure students' writing and presentation skills, faculty examine students' final grade on the 597 class capstone project.
	3. All SLOs are measured using the final score of students' culmination projects, which are scored by a faculty committee.



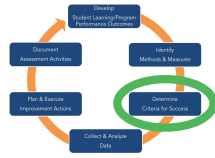
Common issues with measures (part 2)

Criteria for good measures	Example measures needing improvement
Triangulation	1. To measure students' teamwork ability, a survey is administered at the beginning, the middle and the end of the program to ask students' self-perception.
	2. To measure students' leadership skills, multiple measures are used including an exam question on leadership principles, internship site supervisor evaluation, and student project self-reflection. They yield different results, but no connections are drawn.
Meaningful and engaging	1. To measure students' commitment to diversity, equity and inclusion, students are invited to take a third-party survey that does not count towards the degree.
Sustainable	1. The program coordinator asks every 500 level course that is aligned with a program SLO to submit assessment data every semester. The coordinator will then go through all the data to determine whether the SLO is met.
	2. A program videotapes a random selection of student final performances every year specifically for assessment purposes. The samples are scored by a committee of faculty in the summer.



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...
- 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 (e.g. 100% students score in the “excellent” category on all of the rubric criteria.)
 - Too low (e.g. Students score at the national average level.)
 - Ceiling effect (e.g. Client evaluation rating improves by 10% every year.)
 - Use average or “rate” when sample size is small (e.g. 75% students receive a score of 80% or higher, when the cohort size is typically less than 10.)



Step 4: Collect and analyze data

- Same as what we do in a research study
 - Why collect the data (see step 1 - SLO)
 - What data to collect (see step 2 - measures)
 - Where to collect data (reference curriculum map)
 - Who to include and how many
 - How the data are analyzed
- Sampling!
 - Relevant, Representative, and Reasonably sized
 - Determined by the outcome and program context
 - For graduate programs with small cohorts, consider aggregating data over multiple years
 - If small sample size, don't use rates or percentages; report absolute numbers and focus on individual student experiences

Common issues with data collection and analysis



- No data
 - Expectation: 1 SLO per year
- 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 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

What would you like to see in a student research paper?



Step 5: Plan and execute improvement actions

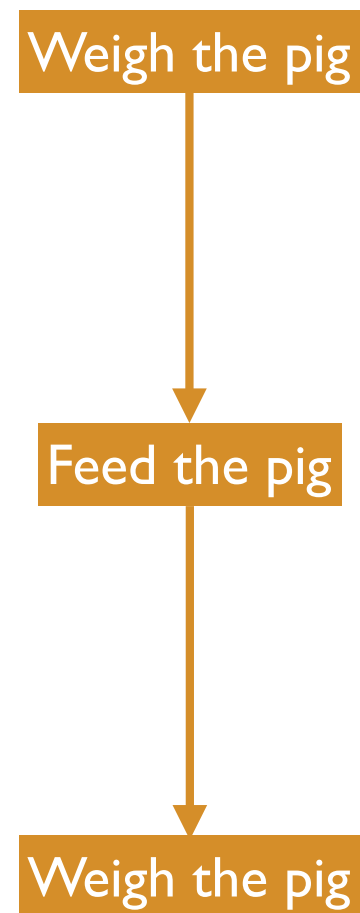
- Review the assessment findings

Small changes matter

- Types of changes:

- Curriculum
- Pedagogy
- Faculty support
- Student support
- Resources
- Assessment plan

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



NILOA (2014)



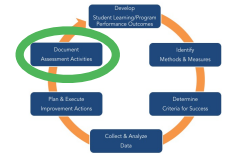
A good example for improvement actions

- For the “**Written Communication**” SLO, the *Business Communication* program scored student writings in a case analysis using an existing validated rubric, and found that students had the greatest deficiencies in the “Strategy” rubric criterion.
- For improvement, the program:
 - collected additional demographic data to narrow down the student population that needed the most help;
 - offered faculty development workshop on case analysis;
 - emphasized use of topic sentences and supporting evidence;
 - provided sample professional documents for use in classroom and homework exercises.
- The program reassessed after 3 years:
 - Writing communication scores improved 17% between 2009 and 2012



Common issues with improvement actions

- Improvement actions have no connection to the data
- Improvement actions are vague
 - *“The curriculum committee 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 previous year/cycle implemented?
 - What is the impact of the improvement actions from the previous year/cycle?
- Overemphasis on methodology (e.g. always focus on the measures)



Step 6: Document assessment activities

Nuventive Improve AA - Assessment and Institutional Effectiveness

AA - Assessment and Institutional Effectiveness > Home

Home

Admin Unit

Unit Assessment

Mapping

Reports

Documents

Unit Planning Summary

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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

Adjust assessment for virtual instruction

- Choose an SLO that is least impacted by the modality
- Measure a previously assessed SLO again to see impact of virtual instruction
- Develop a new SLO specific to the virtual instruction setting



- Prioritize embedded measures
- Indirect measures may be particularly telling
- Take advantage of technology to collect student artifacts
- Find creative use of discussion boards
- Avoid artifacts that may not represent individual students' work
- Adjust CFS to virtual settings
- Keep the same CFS to allow for comparison b/w virtual and F2F

- Document throughout the year
- If you cannot carry out assessment, tell us why and what you will do next year to continue

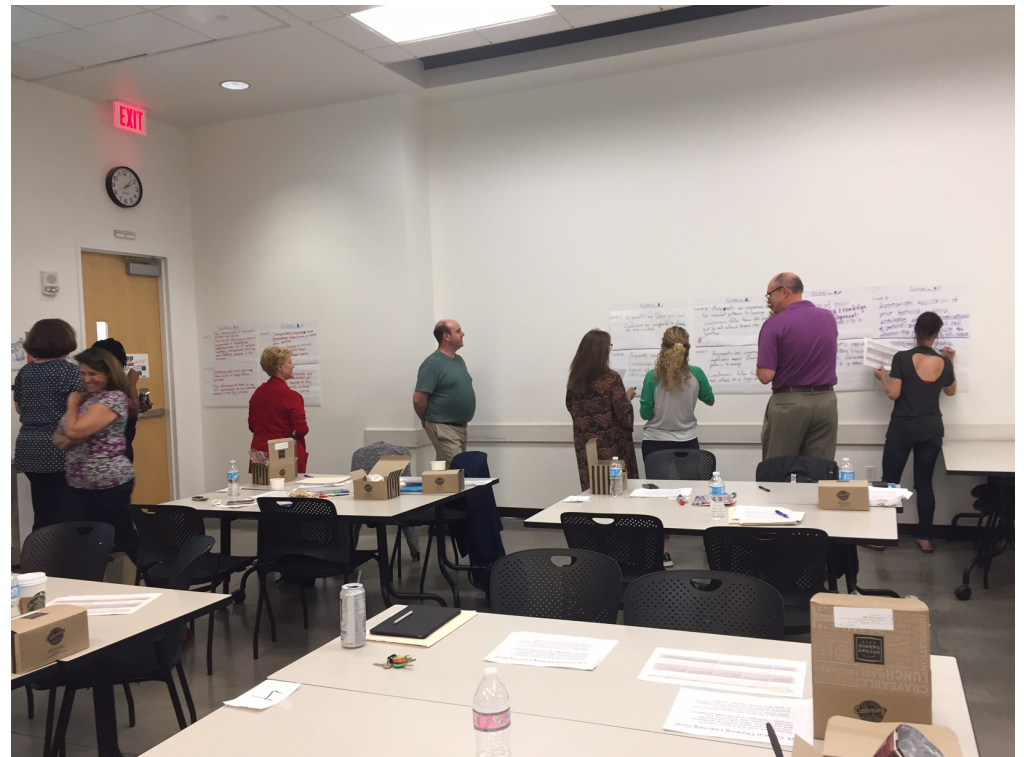
- Reflect on the implication for online teaching
- Change what you can - small changes are fine

- Sampling
- Use historical data (e.g. combine multiple years)
- Target specific student population (e.g. concentration, level, demographic groups...)

Build a faculty community through assessment

“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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