

Institutional Effectiveness      Workshop

# Assessment of Student Learning: Designing Effective Measures

November 2022

# IE Assessment for Degree & Certificate Programs

Visit IEA's  
IE Planning Resources page:

[https://www.apsu.edu/institutional-effectiveness/institutional\\_effectiveness/ie-planning.php](https://www.apsu.edu/institutional-effectiveness/institutional_effectiveness/ie-planning.php)

**Every degree and certificate program must assess program-level student learning outcomes and show evidence of seeking improvement based on results.**

**APSU has an annual IE cycle that supports the process required by SACSCOC and facilitates best practices in student learning assessment.**

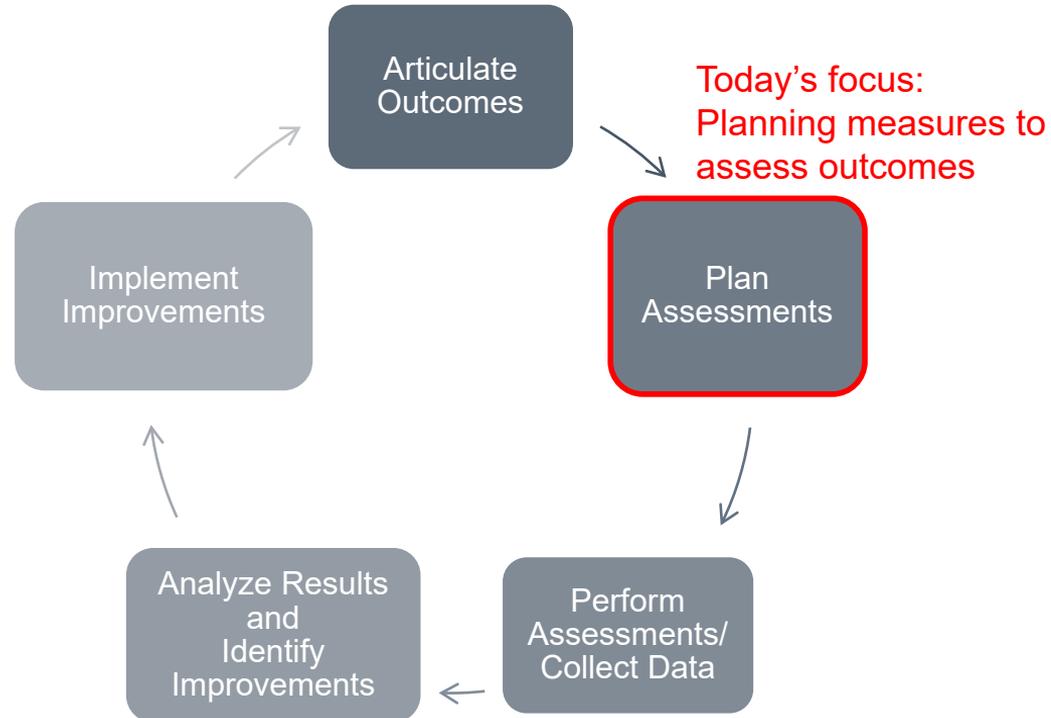
## **Plan Requirements**

- Articulate a set of program-level Student Learning Outcomes (recommended: 3-8 outcomes per program)
- Identify 2 Assessment Measures for each SLO (at least one of these must be a direct measure of student learning)
- Assess at least 2 SLOs in each academic year

## **Results Report Requirements**

- Report results for each SLO measured
- Identify actions based on results of each measure
- Implement actions based on results
- Plan to re-assess SLOs

# IE: Cycle of Continuous Improvement



## *Annual IE Cycle: Two Phases*

### IE PLAN

**Due Feb 15**

- Mission Statements
- Outcomes
- Assessment Measures
- Achievement Targets

### IE REPORT

**Due Sept 15**

- Results
- Reflective Analysis
- Action Plan  
(Closing the Loop)

# IE Planning Resources

- [IE Planning Team in Microsoft Teams](#)
  - We are currently using Microsoft Teams for the submission and storage of all IE plans, reports, and feedback.
- IE Planning Resources can be found on IEA's website
  - [https://www.apsu.edu/institutional-effectiveness/institutional\\_effectiveness/ie-planning.php](https://www.apsu.edu/institutional-effectiveness/institutional_effectiveness/ie-planning.php)

Reminder:

IE plans for the 2023-2024 academic year are due February 15, 2023

# Program - level Student Learning Outcomes (SLOs): A Quick Refresher

## Requirements

- Every degree and certificate program must have a set of program-level Student Learning Outcomes (SLOs)
- Program-level student learning outcomes are statements of the knowledge, skills, abilities and/or values demonstrated by students upon completion of a specific degree or certificate.
  - A program assesses program-level SLOs to evaluate and improve its effectiveness in designing and delivering its intended educational objectives.

## Recommendations and Best Practices

- 3-8 SLOs per program
- Align/derive outcomes with/from available sources
  - Align/derive SLOs from a department or program mission statement
  - Align/derive SLOs from standards/goals/outcomes required by specialized accreditor
  - Align/derive SLOs from standards provided by professional or disciplinary organizations
  - Search for examples from similar programs at other institutions.
- For the most part, SLOs should be accessible and understandable to students, as well as other stakeholders outside the program (employers, reviewers, etc.).
  - Do the SLOs clearly represent what graduates of your program should be able to know or do?

# Measures (a/k/a Assessment Methods)

## Definition & Requirements

### Definition

Measures/methods describe how and where a program will collect quantitative and/or qualitative data to analyze each SLO.

Direct measures utilize actual student products or performances (exams, essays, reports, projects, oral performance) to assess an SLO

Indirect measures rely on students' perceived or self-reported learning (surveys, reflections, self- assessments)

### Requirements

- Every degree or certificate program must have 2 measures for each program-level SLO.
  - At least one measure of each SLO must be a direct measure.
  - The second measure for each SLO can be direct or indirect.
- Each measure must identify a location (i.e. course, clinical experience, etc.) and a method (exam, performance, essay, portfolio, survey, etc.) for analyzing the SLO.
  - At least one measure must capture as many students as possible at the end of the program.
  - It should be clear to other audiences how a measure provides useful data to evaluate a given SLO. The program is responsible for clearly describing how a measure is a useful way to measure an SLO.
- SLOs should be analyzed using a variety of methods.

# Targets

## Definition & Requirements

### Definition

A target identifies a desired performance level for a particular measure. Targets provide a standard for determining success and provide the context for analyzing data collected through a measure.

### Requirements

- Every measure must have a specific, identified target that will be used for analysis.
  - Programs identify targets for each measure using external standards or benchmarks (if available), expectations based on historical data or experience, desired levels of performance for career-readiness or other post-graduation pursuits, or other relevant factors that will be helpful in analyzing student learning for the outcome being measured.
  - Most targets, especially for direct measures, should be quantitative
  - Targets must provide a threshold for performance that will help to identify actions based on results.

# Designing Assessment Measures

It's important to consider how an assignment or test is designed, and how it's being communicated to students.

Design and delivery of tests/assignments used for assessment should be discussed among program faculty to consider alignment and validity for measuring the SLO.

Be aware that assessment design and delivery can affect reliability of results.

# Considerations in designing measures

## Methods

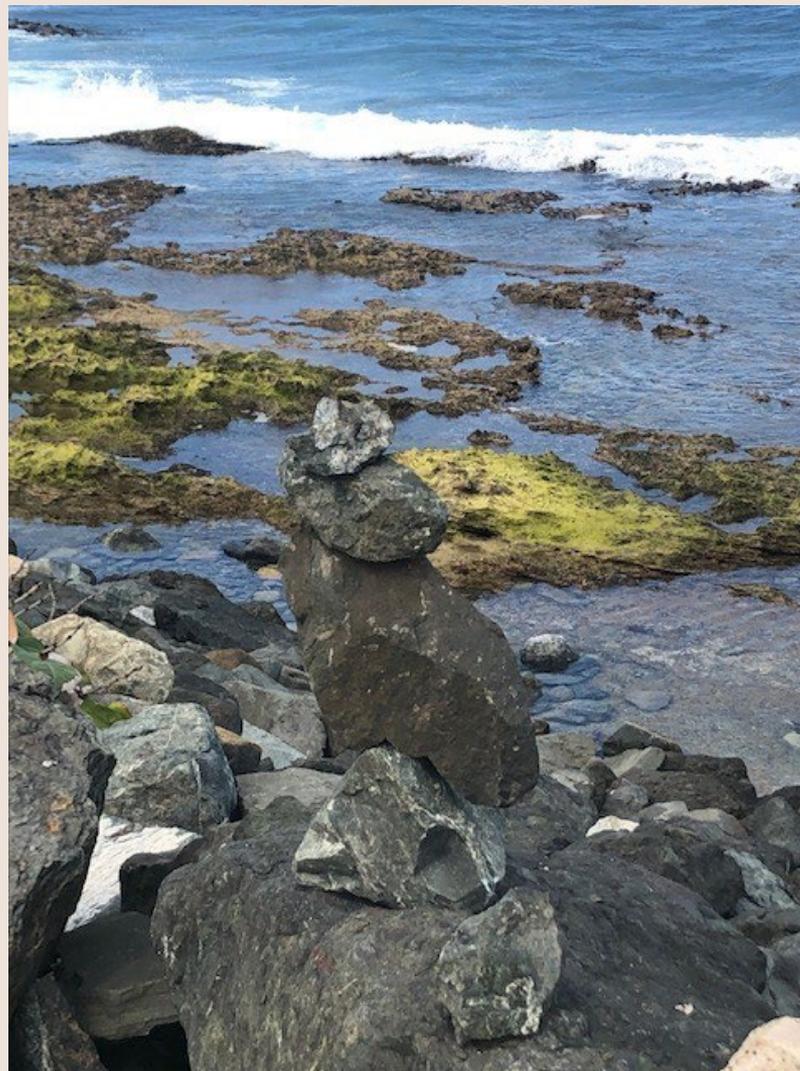
- Any assignment/test/instrument used for program-level assessment should be clearly aligned with the evaluation criteria used to measure the SLO.
- An assessment measure may or may not be part of individual grading criteria for an assignment.
  - Whether or not an assessment measure is used for individual grading, it is best practice to be transparent with students about how their work is being used and evaluated for program-level assessment. (Also note: grades alone are not program-level assessment)
- Measures should allow for item-level analysis (test items, rubric items, survey items) to help identify nuanced aspects of student learning and to help determine appropriate actions based on results
  - It is possible to use only certain items/aspects in a measure for assessment of a particular SLO
- Ideally, more than one instructor in the program collaboratively designs the measure and evaluates the student work. (i.e., it is not only an assessment in/of Professor X.)
  - At a minimum, results must be disseminated and discussed among program faculty to determine actions based on results.

# Considerations in designing measures

## Locations

- At least one measure must directly assess students at the end of the program (graduates).
- The second measure can be direct or indirect and can occur earlier in the program, if useful in assessing student learning and determining appropriate actions based on results.
- It may be necessary to have a common assessment/measurement in more than one course to capture all students/graduates.
  - Even if a common assessment measure (e.g. same assignment, same test) is not possible across multiple courses (or even sections of a course), all course-based assignments used for program-level assessment must be aligned with the evaluation criteria used to assess the SLO.
- All campus locations and modalities (online, hybrid) through which the program is offered must be represented in the measures used.

Common  
direct  
measures



# Essays/Written Work (Direct measure)

- Student work is evaluated using a common rubric aligned with SLO being measured
  - The rubric should be generated collaboratively and “normed” among program faculty
  - Student work can be generated using the same assignment or different assignments, as long as the assignments are aligned with the rubric/SLO
  - For larger assessments, a representative sample of student work can be selected using an acceptable method (IEA and DSIR can help determine this, if needed)
- Multiple faculty evaluate the student work using the rubric
  - Common methods:
    - 2 or more faculty read the same essays generating multiple rubric scores for each student paper (outside of grading)
    - 2 more more faculty use the normed rubric to grade individual student assignments but also submit aggregate rubric data for assessment
    - Other methods?

# Tests /Quizzes (Direct measure)

- Students take an exam or quiz that is aligned with the SLO being measured
  - The test/quiz may be entirely aligned with the SLO, or certain questions may be aligned with an SLO
  - All courses/sections selected as sites of assessment should be using the same test/quiz
  - Tests/quizzes should also be developed collaboratively and normed among program faculty, as much as possible
- Item analysis is important
  - Even if the entire exam is aligned with the SLO being measured, analysis of results should include analysis of each item in the test/quiz
- Be sure that test/quiz questions are actually measuring the SLO -- the types of learning in the SLO verb and the test question should match
  - For example, if the SLO uses the verb “analyze” or “apply” or “create,” the test/quiz question being using for assessment should not only test recall/identification
  - This is a common pitfall

# Performances/Presentations (Direct measure)

- Typically evaluated using a rubric or other evaluation instrument (e.g. in clinical settings)
  - Again -- these should be developed collaboratively and normed among program faculty
  - If the instrument is provided by an accreditor or other outside entity, the program faculty should still discuss collectively to norm use in the program
- Multiple faculty evaluate the same performance/presentation
  - 2 or more faculty view and evaluate the performance/presentation generating multiple rubric scores for each student performance/presentation
  - 2 more more faculty use the normed rubric/instrument to grade individual student assignments but also submit rubric data in aggregate for assessment
  - Other methods?

# Using the Major Field Test as a Measure

(Undergrad degree programs)

## What is the Major Field Test?

- THEC requirement for Quality Assurance Funding
  - All **associate** and **bachelor** level programs **must** evaluate graduates' performance using a **THEC approved-assessment or national licensure exam**.
- Programs must test at least 90% of all graduates.
- The university reports Major Field Test (MFT) information for every program once in every QAF 5-year cycle.
- Approved providers are standardized testing companies such as ETS and ACAT and allow comparison with national averages.
- Some programs may be able to develop their own Major Field Test – “locally-developed MFT” – with THEC approval.

## Considerations for using the MFT as a measure

- Does the THEC-approved assessment align with the program's SLOs?
- Can the data available from the MFT provide a basis for determining program-level improvements or other actions?
- Does the program have access to the content of the MFT and question-level or content-level reporting?
  - This tends to be very limited with some MFT providers
- If the program's MFT is locally developed, was it designed to measure the program SLOs? If not, can it be revised to align with SLOs for measurement?
- How does the program administer the MFT to graduates, and how is the MFT requirement communicated to students? In a course? In person, remotely, or both? What are the “stakes” of the MFT for students in the program?

# Using the Major Field Test as a Measure

(Undergrad degree programs)

## Pros

- Direct measure
- End of program measure
- Existing measure
- Administered every semester (lots of data)
- Usually captures most graduating students, depending on how program administers it
- Standardized tests allow for national comparison which is useful in analysis of results and/or could provide clear achievement targets
- Locally-develop tests could be designed to be well-aligned with program SLOs

## Cons

- Standardized tests may not allow programs to access specific exam content (only generalized subject areas)
- Standardized tests may not be well aligned with program-level SLOs
- Standardized tests may not offer question-level or subject-level results (or at a cost)
- Standardized tests administered using remote proctoring can create significant barriers and additional stressors for some students, impacting results
- Locally-developed MFTs may not have been designed to assess current program-level SLOs
- Depending how program administers the MFT, students may not take it as seriously as a course-embedded assessment submitted for a grade

*Bottom line: To use the MFT as a program-level assessment measure, it must be aligned with the program-level SLOs –and– the results must provide a basis for determining program-level actions related to student learning.*

# Indirect measures



# Indirect measures

Can enhance and deepen learning	Are resistant to cheating
Can be more inclusive and culturally relevant (Singer-Freeman, K. E. & Bastone, L.(2019))	Support equity
Bring student perspectives into assessment	Can help measure nebulous outcomes
Provide rich, usually qualitative, assessment data that can be a valuable complement to direct measures and quantitative data in identifying actions to improve student learning	

# Indirect measures: examples

- Reflection assignment

- Students are asked to reflect on their learning or progress in a writing project, presentation, video, or other type of project
- Reflection assignments should be aligned with the SLO and **be as specific as possible**
- A method for evaluating or extracting valuable data/information from the reflection assignment should be discussed and designed by program faculty

- Self-evaluation

- Students evaluate their own project/performance using the same/similar rubric/instrument as faculty (or others)

- Metacognitive activities

- Exam wrappers
- Course/program portfolio
- Group work reflection

- Surveys

- Students respond to survey questions that indicate their own perceptions of their learning
- Can be delivered as a pre-post survey to measure growth in students' perceived learning, confidence or development in key areas aligned with the SLO
- Surveys used for IE assessment can be delivered without approval, if they are limited to internal use for SLO assessment, only.
  - Note: Surveys administered to students that go beyond SLO assessment, are used internally or externally for other purposes, and/or the results of which will be shared externally, will need additional approval by the Survey Policy Oversight Committee and possibly the Institutional Review Board.

# Indirect assessments: Co

- Public or private
- Graded or ungraded
- Coupled or uncoupled with direct assessment
- Student preparation for/experience with reflective/metacognitive activities
- Faculty experience with indirect measures/reflective activities
- Return on investment
- Other?



“An assessment process that is not mindful of equity can risk becoming a tool that promotes inequities, whether intentional or not.”



Montenegro, E., & Jankowski, N. A. (2020, January). *A new decade for assessment: Embedding equity into assessment praxis* (Occasional Paper No. 42). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment (NILOA).

# Annual IE Cycle for All Units

## IE Planning Deadlines for All Units

	All Units
<b>IE Plan Due</b> <i>Plan is for the upcoming IE cycle. For example, in February 2023, you would submit the IE plan for the upcoming 2023-24 IE cycle. Plans include outcomes, measures and targets.</i>	February 15
<b>IE Results Reports Due</b> <i>These results will be for the plan implemented during the prior IE cycle. For example, in September 2022, you would submit results for the 2021-22 IE cycle. Results Reports include results, analysis, and actions for each outcome, measure and target outlined in the IE Plan.</i>	September 15

## IE Committee Review Process

Review of IE Plans for Upcoming Cycle	March-April
Feedback of IE Plans for Upcoming Cycle sent to units	May
Review of IE Results Reports for Previous Cycle	October-November
Feedback of IE Results Reports for Previous Cycle sent to units	December

# Thank you!

Feel free to reach out

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