

Using Assessment Results for Program Improvement

Office of Institutional Assessment
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*Office of the Provost
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Continuous Quality
Enhancement Series

Introduction and Rationale

University of Florida (UF) faculty have engaged in responsible academic program and course assessment for decades because it is good educational practice. Non-academic units have similarly demonstrated Institutional Effectiveness by using non-academic assessment data to show progress toward a goal. UF strives for continuous quality improvement by examining results and making decisions about how to be better next time. While this document focuses on the Academic Assessment process, the lessons about use of results also apply to documenting Institutional Effectiveness.

In any discussion of how to use assessment results most effectively, it is important to remember that assessment is part of the larger teaching and learning process and using assessment results is the final step in the cycle. It's not an extra task or assignment, it's part of teaching and learning. The primary purpose for academic assessment at a program or course level is for the faculty to determine if the students are learning the content and skills specified in the Student Learning Outcomes (SLOs) as intended.

Using assessment results for program improvement, or “closing the loop” is one of the most important stages in the assessment process. Once faculty have (a) decided what they want their students to learn, (b) gathered samples of students' work, and (c) analyzed the data, faculty members then take the time to evaluate whether students actually learned what they expected them to learn, and use that information to effectively improve teaching and learning.

Accreditors and/or governmental bodies across the nation require documentation of evidence that faculty plan for and assess student learning outcomes, including evaluating results and using those results for program improvement. Assessment is a responsibility that remains with the faculty, at the course level and at the academic program level as part of the system of shared governance at UF. Continuous improvement is the constant and unwavering goal.

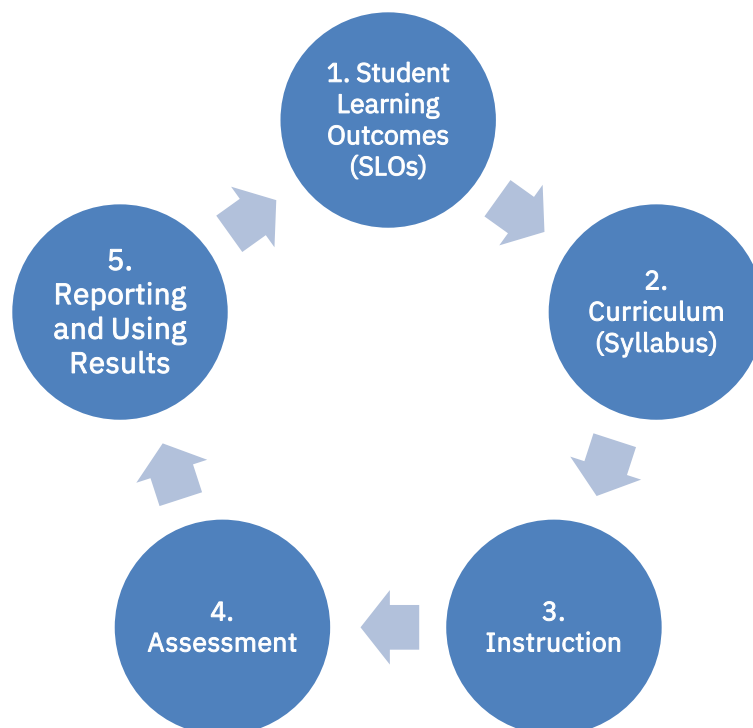
Teaching and Learning Process

Figure 1 provides a graphic representation of the teaching, learning and assessment process, which is a common pedagogical framework across all levels of education.

It demonstrates a constant cycle for continuous improvement in the delivery of teaching and learning, whether it be for the department to improve the academic program or merely for the instructor to improve the teaching and learning in the course for next time.

When SLOs, curriculum, instruction and assessment align in the system, the use of assessment results needs to be considered in the broad context of the SLOs, curriculum, instruction and assessment, and adjustments to any of these components would be a reasonable use of the assessment results. Consequently, when examining results and determining the next step, it should be a broad review of the SLOs, curriculum, instruction and assessment learning process and not just focus on the assessment. Considering how to use results could include questions about any or all of the components in Figure 1.

Figure 1: The Teaching and Learning Process



STEP 1 Student Learning Outcomes (SLOs): The circle at the top shows the SLOs. For all programs, SLOs describe the knowledge and skills that students should attain from their programs at UF.

STEP 2 Curriculum: The second circle in Figure 1 represents the curriculum which is described in the course syllabus. The curriculum specifies the learning experiences, content and skills that students will engage in to learn the SLOs. For courses that have been identified to be where program-level assessment will also take place, the results are used for annual data reporting for that academic program.

STEP 3 Instruction: The third circle in Figure 1 represents the actual instruction that occurs. The instruction is the application of the curriculum for students to learn the content and skills set forth in the SLOs. Thus, instruction is most effective when it aligns with the SLOs and the curriculum.

STEP 4 Assessment: The assessment shows *what the students have learned*. Thus, assessment results are a function of the specified outcomes, what is taught (intended and actual) and the quality of the assessment. Faculty are already assessing learning by evaluating individual student work (e.g., exam, quiz, paper, presentation, direct observation of skill, etc.). What do these overall course results tell you? Are your students mastering the intended outcomes of the course? What would you change for next time, to improve your instruction for greater mastery by students?

STEP 5 Reporting and Using Assessment Results: Faculty are expected to assess and use the results for continuous improvement of the learning in the course for each time the course is taught.

How to Review and Use Assessment Results

Below are some questions and possible next steps for each of the components.

Student Learning Outcomes

At UF, all academic programs establish SLOs and measure outcomes in specific categories as established by the faculty.

Student Learning Outcome (SLO) Categories at UF:

	SLO 1	SLO 2	SLO 3
Undergraduate	Content	Communication	Critical Thinking
Graduate and Professional	Knowledge	Skills	Professional Behavior

Any examination of assessment results should begin with a review of the SLOs to focus on *what should be taught, learned and assessed*. Always begin by asking if the specified SLOs are the correct key outcomes by answering this question: “What should students know and be able to do at the end of their program?” This step may result in little or no change to the SLOs, or it may also lead to rewording SLOs for clarity or even completely changing the SLOs, or adding or dropping SLOs. Thus, some SLO questions that might be used in the assessment process include the following:

1. Are the SLOs clear?
If not, reword the SLOs for clarity.
2. Do the SLOs align with the curriculum, instruction and assessment?
If not, make changes to the component that needs adjustment for all components to be aligned.
3. Are these the correct SLOs?
If not, add or drop SLOs to specify the appropriate outcomes. The course SLOs when changed need to be

aligned with program SLOs and objectives.

Curriculum

The curriculum is specified in the syllabus and potentially other program or class documents. The curriculum should clearly show what is *intended to be taught* and with what methods (e.g., lecture, labs, discussion). Correct specification of the curriculum and its alignment with SLOs, instruction and assessment are important to having interpretable assessment results. Thus, assessment results may lead to questions about the curriculum such as the following:

1. Does the curriculum align with the SLOs?

If not, make changes in the curriculum to align with the SLOs. This could include changes in content coverage, methods of teaching or amount of time spent on specific topics.

2. Does the curriculum lead to instruction with content and methods that are consistent with the assessment?

If not, adjust the curriculum (or the instruction) to improve alignment.

3. Does the curriculum align with the assessment in terms of content and method? If not, adjust the curriculum (or the assessment) to improve alignment.

Instruction

Instruction should show what is *actually taught*. It should be aligned with the curriculum and the assessment. Thus, assessment results may lead to questions about the instruction that include the following:

1. Is the instruction aligned with the curriculum?
 - If not, make changes to the instruction so that it is aligned with the curriculum.

2. Is the instruction aligned with the assessment?
 - If not, make the appropriate adjustments to the instruction or assessments so that they are aligned.
3. If the class has multiple sections, is the instruction consistent across sections?
 - If not, work with the multiple instructors or sections to ensure consistency in instruction. This may include adjustments to the curriculum or preparation/training of instructors.
4. Are instructors, including teaching assistants, prepared and trained to deliver the course?
 - If not, instructors may need additional training and preparation through the Center for Teaching Excellence.

Assessment

The assessment shows *what the students have learned*. Thus, assessment results are a function of the specified outcomes, what is taught (intended and actual) and the quality of the assessment. Similarly, for documenting Institutional Effectiveness, what is your goal and how does this activity align with and result in your intended outcome?

During this phase of the assessment process, faculty collaboratively:

- discuss the assessment results,
- reach conclusions about their meaning,
- decide what changes are needed, if any,
- determine the implications for those changes, and
- follow through to implement the changes.

Assessment results are also meant to inform planning and influence decision making, therefore reporting results to the various stakeholders (e.g., students, administration, accrediting agencies, alumni) is an integral part of “closing the loop”.

Use of Results

Who else might be worth sharing the results with? Is your course one of the central courses for the academic degree program, where results on a particular assignment are used to track student learning in the degree program?

Beyond individual courses, leaders of academic programs use assessment results for continuous improvement and submit results and their use in an annual Academic Assessment Data Report to the Office of Institutional Assessment. Use of results for an academic program should be reviewed and discussed by the program faculty and its leadership. The use of results should be written in a narrative form to explain how the assessment data were reviewed and used for continuous improvement.

Sharing assessment results is a powerful way for the faculty to demonstrate their own success in curriculum and instruction. Are students mastering the intended outcomes? Are the data publishable or usable for recruiting students?

Utah Tech University's Office of Institutional Effectiveness

Using and Reporting Results

<https://assessment.utahtech.edu/helpful-resources/using-and-reporting-results/>

“Here are some suggestions to consider when engaging in a collaborative review of assessment results:

- Present the results in several ways: face-to-face meeting, written report, workshop format in which the report serves as the springboard for brainstorming possible next steps.
- Use multiple sources of information when making decisions. Ideally review data from both direct and indirect measures of assessment.
- Engage the program faculty members, staff, and students in discussions about the results and how they might be used.
- Ask questions and probe the data for complete understanding. What are all the possible explanations for the findings?
- Don't let assessment results dictate decisions. Assessment results should only advise faculty as they use professional judgment to make suitable decisions.

Here are some questions to start the conversation:

- What do the data say about your students' mastery of subject matter, of research skills, or of writing and speaking?
- What do the data say about your students' preparation for taking the next step in their careers?
- Are there areas where your students are outstanding? Are they consistently weak in some respects?
- Are graduates of your program getting good jobs, accepted into reputable graduate schools, reporting satisfaction with their undergraduate education?
- Do you see indications in student performance that point to weakness

in any particular skills, such as research, writing, or critical thinking skills?

- Do you see areas where performance is okay, but not outstanding, and where you would like to see a higher level of performance?
- Do the results live up to the expectations we set?
 - Are our students meeting our standards?
 - Are our students meeting external standards?
 - How do our students compare to their peers?
 - How do our students compare to the best of their peers?
 - Are our students doing as well as they can?
- Are our expectations appropriate? Should expectations be changed?
- Does the curriculum adequately address the learning outcome? Are our teaching & curricula improving?
- What were the most effective tools to assess student learning? Do they clearly correspond to our program learning outcomes as we defined them? Do the learning outcomes need to be clarified?

If results suggest the need for change, FACULTY might consider one or more of these types of change:

- Pedagogy—e.g., changing course assignments; providing better formative feedback to students; use of more active learning strategies to motivate and engage students; assigning better readings; expanding community service learning, fieldwork, or internship opportunities
- Curriculum—e.g., adding a second required speech course; designating writing-intensive courses; changing prerequisites; substituting new courses for existing ones; resequencing courses for scaffolded learning; adding internships or service learning opportunities to deepen course-learning
- Student support—e.g., improving tutoring services; adding on-line, self-study materials; developing specialized support by library or writing center staff; improving advising (or registration software) to

ensure students take required courses in sequence; coordinating course-learning with student affairs programming; creating opportunities for students to engage with faculty or other mentors outside of class

- Faculty support—e.g., providing a writing-across-the-curriculum workshop; campus support for TAs or specialized tutors; professional development for improving pedagogy or curricular design; campus support for establishing community service learning, fieldwork, or internship sites
- Equipment/Supplies/Space—e.g., new or updated computers or software, improvements or expansions of laboratories; expanded space or equipment for student projects

DEANS and DEPARTMENT CHAIRS/DIRECTORS might consider these types of changes to support proposed improvements:

- Budgeting and planning—e.g., reallocating funds within the division to support improvement plans based on assessment findings; budgeting for new resources (software, staff, professional development training) to support assessment processes; reallocating staff; supporting an annual assessment forum to share results and best-practices.
- Management practices—e.g., establishing new procedures to ensure assessment results are tracked and used for follow-up planning and budgeting at various levels within the division/department.
- Once there is consensus on the action(s) to be taken, create an action plan that describes the actions the program will take, who will take those actions, and the timeline for implementing actions.
- Monitor changes as they are implemented to determine whether they have the desired effect(s).
- As you accumulate years of assessment results, periodically review the results for trends.
 - Have changes you've made in previous years made a difference in the quality of student learning? Do you need to

try something different?

- Sometimes results support the status quo. Celebrate! Share successes with colleagues and students so everyone can be aware of these achievements.” --From Utah Tech University, <https://assessment.utahtech.edu/helpful-resources/using-and-reporting-results/>

A Deeper Dive: Quality of The Assessment

The quality of the assessment is based on three issues: validity, reliability and fairness. Methods for examining these issues are discussed briefly below and additional resources are listed:

1. Validity is defined in terms of the strength of the interpretations and uses of the assessments and is considered the most important characteristic of the assessment. There are many types of evidence that could be used to examine the validity of an assessment for a particular use or interpretation. In achievement testing, the most frequent form of validity evidence is to use expert judgement to examine the content and skills covered in the assessment. The primary method is to have experts review the assessment to make sure it aligns with the SLOs, curriculum and instruction. Thus, it is a continuation of the evidence suggested for the other components with a focus on the assessment. Since the experts for the content and skills in higher education is often the instructors of the course, this means that the course instructors are often responsible for the validation of the assessments. They should carefully examine the assessment to see if some items or tasks should be modified or dropped. It also includes potentially needing to add items or tasks to more broadly cover the SLOs, curriculum and instruction.
2. Reliability is the consistency of the assessment. If the items/tasks are subjective, this may involve providing training and practice in scoring to make sure that instructors are consistent in their scoring. With multiple choice items, there are methods for assessing internal

consistency statistically. This could include item analyses that can be conducted through Canvas or other software.

3. Fairness is ensuring that the assessment has the same validity for each group of students. This can be assessed by expert review of the items/tasks or through statistical analyses of the assessment.
4. Finally, one may examine what is being assessed and decide that additional information would help understand the teaching and learning process. For example, the SLOs may only lead to cognitive assessments, but it may be useful to interview students about their class experience.

Summary

Assessment and the results of the assessment should not be viewed on their own. Instead, they should be part of a larger review of the teaching and learning process, which includes the specific outcomes (SLOs) being assessed, the curriculum, the instruction and the assessment. Similarly, reporting and using assessment results for improvement for institutional effectiveness should be considered a routine part of best practices in an educational setting. Resources for some of the components that have been developed through UF's Office of Institutional Assessment and are listed below.

Resources:

UF Office of Institutional Assessment documents available online at assessment.aa.ufl.edu:

- Developing Program Goals and Student Learning Outcomes
- Writing Rubrics

UF Center for Teaching Excellence available online at teach.ufl.edu:

- A Practical Guide to Assessment (short video series from Dr. Tim Brophy, the inaugural UF Director of Institutional Assessment)

Utah Tech University, Office of Institutional Effectiveness. Using and Reporting Results. <https://assessment.utahtech.edu/helpful-resources/using-and-reporting-results/>

For Further Reading:

Brophy, T.S. (2017) Case Study: The University of Florida assessment system. In T. Cushing & M.D. Miller (Eds.), *Enhancing Assessment in Higher Education: Putting Psychometrics to Work*. Pp. 184-202. Sterling, VA: Stylus.

Cox, B.E., et al. (2017). Lip service or actionable insights? Linking student experiences to institutional assessment and data-driven decision making in higher education. *Journal of Higher Education* (88,6), pp. 835-862.

Smith, K.L., et al. (2015, Winter). Communication is key: Unpacking ‘use of assessment results to improve student learning’. *Research & Practice in Assessment* (10,2).