

Innovation *insights*

OFFICE OF PLANNING AND

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Assessing for Improvement

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The mission of the Office of Planning and Institutional Assessment is to facilitate the University's planning, improvement and assessment initiatives. This issue of Innovation Insights discusses steps in the assessment process and how the results can be used to improve the living/learning community at Penn State.

How do faculty and staff work to ensure that students have successful academic experiences at Penn State? The recent report for the Middle States Commission on Higher Education (MSCHE) found that across colleges and campuses, many faculty and staff assess student learning and co-curricular outcomes. For example, Engineering Science faculty use student portfolios, the Office of Student Affairs conducts student satisfaction surveys, and the Master of Health Administration program surveys graduates of the program.

This Innovation Insights outlines one approach for implementing an assessment process. Using this approach, faculty and staff can obtain useful, valid and comprehensive information on student learning outcomes. And, more importantly, assessment results can help improve the quality of teaching, learning, and service to students.

WHAT IS ASSESSMENT?

Assessment is:

... gathering and evaluating quantitative and/or qualitative information that demonstrates congruence between the institution's mission, goals, and objectives and the actual outcomes of its educational activities. (MSCHE, 2002, p.50)

... the gathering of information concerning the functioning of students, staff, and institutions of higher education. The information may or may not be in numerical form, but the basic motive for gathering it is to improve the functioning of the institution and its people. (Astin, 1993, p.2)

... an ongoing process aimed at understanding and improving student learning. It involves making our expectations explicit and public; setting appropriate criteria and high standards for learning quality; systematically gathering, analyzing, and interpreting evidence to determine how well performance matches those expectations and standards; and using the resulting information to document, explain, and improve performance. (Angelo, 1995, p.7)

... the systematic collection, review and use of information about educational programs undertaken for the purpose of improving student learning and development. (Palomba and Banta, 1999, p.4)

As these definitions suggest, assessment and quality improvement go hand in hand. Assessment enables faculty and staff to make informed decisions to improve teaching and learning based on whether:

- ◆ students receive high-quality instruction in the classroom;
- ◆ academic programs provide students with the skills and experiences to meet their future goals;
- ◆ and, support services ensure the ability of students to succeed academically.

DIMENSIONS OF ASSESSMENT

Assessment occurs throughout the University. It is found in classrooms, programs, departments, offices and colleges, and ultimately at the University level. Assessment can occur in any timeframe: some assessments occur quickly, as when students complete a one-minute assessment of what they have learned in class, while other activities may be lengthier, such as periodic surveys of alumni or ac-

creditation reviews that take months to complete. Assessment happens both within and outside of the University. Internal assessment includes such areas as: 1) formal and informal assessments of teaching and learning in the classroom, including for example, written tests, review of portfolios, and informal feedback mechanisms; 2) review of data reports on such outcomes as grade point averages, retention rates, and graduation rates; and, 3) analysis of survey data from classroom or university-wide surveys. Examples of external data assessment include: 1) peer reviews; 2) licensure and certification testing results; and 3) external accreditation in specific disciplines.

The goal of assessment at Penn State is to improve the quality of teaching, learning and support services. Without improvement at its core, assessment activities stagnate.

Another goal is for the University to be accountable. Students, parents, alumni, accrediting agencies, and the federal government all expect the University to provide some evidence that students are learning and progressing through their educations.

As faculty, administrators and staff work to implement assessment at Penn State, both improvement and

accountability are achievable. Assessing for the sake of simply meeting university, departmental or exter-

“As educators, we have a responsibility to the publics that support or depend on us to provide information about the ways in which our students meet goals and expectations. But that responsibility goes beyond the reporting of such information; our deeper obligation -- to ourselves, our students, and society -- is to improve.”
” (AAHE, 1996)

nal mandates misses the critical linkage between appraisal of teaching and learning methods and the chance to make these outcomes better.

IMPLEMENTING ASSESSMENT

In their handbook on assessment, Palomba and Banta (1999) lay out six essential strategies for implementing an assessment process:

- 1) Agree on goals and objectives
- 2) Design and implement a thoughtful assessment process
- 3) Involve individuals from on and off campus
- 4) Select or design and implement data collection approaches
- 5) Examine, share and act on assessment findings
- 6) Regularly reexamine the assessment process

Generally, a small group of persons will carry out these six steps, based on the input and involvement of a much larger group of stakeholders.

1) Agree on Goals and Objectives

As a first step, it is essential that any group working on assessment identify goals and objectives for the teaching and learning processes or any other process. For teaching and learning, the question to be addressed is “What should students be able to do and what should they know?” In other areas, the purpose and intent of the services provided must be identified and goals and objectives set accordingly. Well-developed goals are stated clearly, are measurable, and are actionable.

Many academic programs at Penn State already have defined learning goals and objectives for students. According to a 2004 survey of academic and division heads, 68 percent of respondents reported their majors had such goals. Programs with established student learning goals and objectives can use these as the basis of assessment. For those programs without established goals, Palomba and Banta recommend that faculty apply Bloom’s (1956) taxonomy of cognitive objectives when identifying and developing goals for student learning. These are knowledge, comprehension, application, analysis, synthesis, and evaluation, all well-established foundations in the teaching/learning community.

Building on these, the Middle States Commission suggests that assessment of student learning “might incorporate such outcomes as cumulative learning, analytical and information skills, specific competencies, knowledge and cognitive abilities, student attitude development and growth, life skills, student activity involvement, and physical skills and techniques.” (MSCHE, 2002, p. 52)

These skills and competencies start in the classroom, but the interaction between individual courses and program structure also affects student outcomes. Assessment may include indicators of academic success like retention, graduation, and satisfaction. Course and departmental goals likely will be more specific than University goals.

“Where questions about educational mission and values are skipped over, assessment threatens to be an exercise in measuring what’s easy, rather than a process of improving what we really care about.” (AAHE, 1996)

The number of goals and objectives set should be manageable, especially since most of them will have multiple measures. In addition, goals should be the ones that are “most important, widely accepted by the various stakeholders, meaningful, sufficiently explicit, and interconnected among the various academic levels and curricula

within the institution.” (MSCHE, 2003, p.18)

Some steps to take in developing goals and objectives are:

- ◆ Inventory current program or department learning or other objectives
- ◆ Review current course syllabi for learning objectives
- ◆ Review Bloom’s taxonomy of cognitive objectives for learning outcomes
- ◆ Complete the Teaching Goals Inventory from the MSCHE (2003, pp. 23-26)
- ◆ Identify what the “ideal” completion of the course or program would look like and set goals and objectives based on this

2) Design and Implement a Thoughtful Approach to Assessment Planning

At a large research university like Penn State, assessment occurs at many levels and for many reasons. As a second step in the process, Palomba and Banta suggest that in planning assessment, faculty, staff and administrators must determine the approach to and nature of the assessment.

One dimension to consider is the application of the results. Some assessment activities are formative while others are summative. Formative assessment, as defined by Leskes (2002), is “the gathering of informa-

tion about student learning - during the progression of a course or program and usually repeatedly - to improve the learning of those students.” Thus, testing in a classroom throughout a semester typically provides feedback to faculty and students on an ongoing basis and facilitates immediate improvement. The diagnostic nature of formative assessment highlights specific areas that are lacking.

“Assessment is a process whose power is cumulative. Though isolated, “one-shot” assessment can be better than none, improvement is best fostered when assessment entails a linked series of activities undertaken over time.” (AAHE, 1996)

Summative assessment is “the gathering of information at the conclusion of a course, program, or undergraduate career to improve learning or to meet accountability demands.”

(Leskes, 2002) It typically provides data for monitoring program performance and to provide accountability. Although it may not impact current students, summative assessment affects individual students since the results are applicable to future cohorts of students.

Thinking about how the results will be used after they are collected may help in developing specific strategies and methods. For example, results may be used to improve instruction; to initi-

ate curriculum discussion among faculty; to implement revision as necessary; or to provide data for reporting to outside accrediting agencies.

For assessment to be successful, it should result in useful, applicable results and the methodology used to collect assessment data should provide valid and reliable measures. Valid indicators measure the dimension they intend to measure, while reliable ones ensure consistent measurement when assessing the same dimension.

This second step results in a plan for assessment that describes the overall nature of the assessment. Factors to consider are:

- ◆ Where the assessment will take place? Will it occur in the classroom? from standardized tests given outside the classroom? from surveys at the institutional level?
- ◆ When it will occur? Will the assessment occur each semester? every year? another time period?
- ◆ Who will be assessed? Will all students be included, as occurs in classroom testing, or will a sample be used, as for alumni surveys?
- ◆ Who will conduct the assessment? What specific responsibilities should be assigned?
- ◆ How will the results be used for improvement?

3) Involve Individuals from On and Off Campus

Involving numerous stakeholders improves assessment. Inclusion helps to ensure that the design of assessment represents the needs of these groups. Important stakeholders are students, faculty, staff, alumni, and employers, but depending on the type of program or service being assessed, there may be others like community members, accrediting agency representatives, etc. Identifying all parties involved in teaching and learning and other processes will help in developing a well-rounded and inclusive approach to assessment and identify areas for improvement that might otherwise be missed.

“Assessment is not a task for small groups of experts but a collaborative activity; its aim is wider, better-informed attention to student learning by all parties with a stake in its improvement” (AAHE, 1996)

4) Select or Design and Implement Data Collection Approaches

There are two basic ways to collect data. One is a direct approach in which students display their knowledge through testing or essays, while the other is an indirect approach. Direct approaches include such methods as student portfolios, capstone courses, standardized tests, and in-class tests. Indirect measures include

such items as student retention rates, alumni satisfaction levels, and graduate employment indicators.

When developing data collection methodologies for assessment, it is important to keep the process as simple as possible. However, it is also important that the assessment include multiple measures because teaching and learning are complex processes. Both short- and long-term indicators should be considered to account for the complexity of the processes and to address the needs of multiple stakeholders. Assessment may include both quantitative and qualitative indicators to address multifaceted levels.

In developing a data collection process for assessment, some steps include:

- ◆ Identify the current sources of data that are available for assessment.
- ◆ Determine whether new instruments need to be developed or whether current instruments meet assessment needs.
- ◆ Study the assessment plans and methodologies of other universities and colleges.
- ◆ Review handbooks of assessment if new methodologies are necessary. (See listing at end of this document.)

5) Examine, Share and Act on Assessment Findings

Across the University, faculty and staff use assessment findings. In a 2004 survey of academic and department heads at Penn State, 75 percent agreed that "Examination of assessment data leads to decisions about our academic program." As groups working on the assessment activities complete their work, they may want to share the results with others within and outside of the University by providing summaries of the results and recommendations for improvements.

Once assessment results are available, the measured outcomes should be compared with the expected outcomes. If they are not aligned, recommendations from the findings can address specific steps to improve the outcomes. For example, recommendations could relate to changing existing course content, modifying teaching methods, adding new courses, or sequencing courses differently.

Rather than occurring sporadically, assessment should occur on a regular basis. A systematic approach to assessment helps in refining assessment measures, results in better measures, and provides comparative data for improvement purposes.

A report that presents the results and a process to share the results are the final products of this step. Factors to consider in the development of both include:

- ◆ Identify the gaps between the measured outcomes and the expected outcomes. These gaps are the areas on which to focus.
- ◆ Present assessment results in a clear, easy to understand manner.
- ◆ Determine the stakeholders who will receive the information.
- ◆ Identify how stakeholder suggestions and recommendations will be collected, considered and incorporated into course, program or service improvements.

6) Regularly Reexamine the Assessment Process

All processes should be reviewed regularly and this is also true for the process of assessment. Regular review of the process will confirm that the results are valid and reliable, and that they are meeting the needs of the University community, including stakeholders. If assessment findings are not meeting the needs, the process may need to be revised.

As with any continuous quality improvement effort, persons closest to the process are most knowledgeable about it and should be the ones to review the process. Changes to the process and the reasons for the changes should be documented.

As Suskie (2004) points out, "All the time and effort that goes into assessment is worthwhile only if that work eventually leads to improved teaching and learning." (p. 300) Suskie recommends several areas to examine, including whether the assessment met the expectations, if the quality of the assessment results was acceptable, what the costs and benefits were, and possible modifications to the process.

A thoughtful review of the process used for assessment can lead to improvements in efficiency of the process, accuracy of the findings, and usability of the results, and ultimately result in an enhanced living/learning community for students at Penn State.

SELECTED RESOURCES FOR ASSESSMENT

Offices/Centers At Penn State

Schreyer Institute for Teaching Excellence
(<http://www.schreyer institute.psu.edu/>)

Center for Study of Higher Education
(<http://www.ed.psu.edu/cshe/>)

Teaching and Learning with Technology
(<http://tlt.its.psu.edu/>)

Office of Planning and Institutional Assessment
(<http://www.psu.edu/president/pia/>)

Internet Websites

Internet Resources for Higher Education Outcomes Assessment (<http://www2.acs.ncsu.edu/UPA/assmt/resource.htm>)

Middle States Commission on Higher Education, Best Practices in Outcomes Assessment (<http://www.msche.org/publications/BEST-OA050208135229.pdf>)

Practical Assessment, Research and Evaluation (<http://PAREonline.net>)

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For more information, contact the Office of Planning and Institutional Assessment at 814-863-8721 or psupia@psu.edu, or visit our website: <http://www.psu.edu/president/pia>.

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