

Collecting, Analyzing, and Using Outcomes Data

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I. Definitions

- A. “Assessment is deciding what we want our students to learn and making sure they learn it” (Suskie, 2018, p. 8).
- B. “Assessment of student learning can be defined as the systematic collection of information about student learning, using the time, knowledge, expertise, and resources available, in order to inform decisions about how to improve learning” (Walvoord, 2010, p. 2).
- C. “Assessment is the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development” (Palomba & Banta, 2014, p. 4).
- D. “As a whole, assessment is a framework for focusing faculty attention on student learning and for provoking meaningful discussions of program objectives, curricular organization, pedagogy, and student development” (Allen, 2004, p. 4).

II. Articulate objectives for student learning.

A. Write a mission statement for the program.

- 1. Communicates a broad vision of the fundamental purposes and values of the program
- 2. Consistent with the campus mission statement
- 3. Written in language that can be understood by potential students and their families
- 4. Might provide a brief history of the program and philosophy of the program
- 5. Describes the types of students it serves, the type of professional training it provides, and important characteristics of program graduates

B. Write student learning outcomes for the program.

- 1. Statements concerning knowledge and skills that the faculty expects graduating students to achieve
- 2. Consistent with the program mission
- 3. Not so specific that they are trivial or so general that they are vague

4. Describe observable behaviors that allow faculty to know if students have mastered the goals
5. Use active verbs that specify definite, observable behaviors
6. Explain how students can demonstrate mastery of the field
7. For general education, see LEAP and Degree Qualifications Profile
8. Limit them to 3-5 statements

C. Define the levels and criteria for each learning outcome

1. "Levels" describe the progression of mastery of each outcome.
 - i. Basic, Intermediate, Advanced
 - ii. Foundational, Developing, Mastered
 - iii. Introduced, Practiced, Demonstrated
 - iv. Low, Medium, High
2. "Criteria" are the observable components, key indicators, or standards of performance of each level.
 - i. Stated in single sentences or phrases that describe what the student can do at that level of the outcome
 - ii. Develop 4 to 8 criteria for each level.
 - a. Highest level = implementation of the outcome; mature mastery of the outcome
 - b. Lowest level = awareness or understanding of the outcome; partial or imperfect demonstration of the outcome
 - c. Begin by defining the criteria for the highest level of attainment and work backwards to define the steps that must first be achieved in the lower two levels.
 - d. Or begin by defining the criteria for the lowest level and then work upward.

III. Design the curriculum to fulfill the outcomes.

A. Identify how students will demonstrate mastery of the outcomes.

1. Wiggins & McTighe (2005) advocate "backward design."
 - i. Start with the end in mind, then determine acceptable evidence of learning (performances) called for by the standard, and then plan learning experiences and instruction needed to equip students to perform to expectations.
 - ii. Rather than create assessments after the curriculum has been designed, begin with the question, What would we accept as evidence that students have attained the desired understandings and proficiencies?

B. Provide students sufficient opportunities to achieve the outcomes (Tagg, 2003, ch. 12).

1. Students should complete tasks that are visible and meaningful to others.
2. Student performances should be authentic.
3. Student performances should be frequent.
4. Student performances should be continual.
5. Student performances should be connected.

C. Sources for Curriculum Components (Diamond, 2008, ch. 10)

1. The mission, educational priorities, and resources of the institution and school
2. The desires and needs of society
3. The expectations of employers
4. The requirements of the appropriate field of knowledge (for example, programmatic accreditors and professional licensing)
5. The characteristics of the students (entry-level knowledge, attitudes, priorities and expectations, long-range goals)
6. Standards of accreditors (ABHE Standard 11) and higher ed organizations
 - i. Content and rigor characteristic of higher education
 - ii. A level of analytical research and communication skills needed for lifelong learning
 - iii. Supports development of a biblical worldview
 - iv. Sensitivity to the cultural context in which students serve or may serve
 - v. Progression from foundational to advanced studies

D. Check for alignment between the curriculum and the outcomes.

1. Ensure that outcomes are progressively addressed in the curriculum.
 - i. Courses should introduce skills, provide opportunities to practice and develop them, and enable students to demonstrate their mastery of them.
 - ii. Course objectives should relate to program outcomes but do not need to be identical to them.
 - iii. A Curriculum Course Grid will identify which courses identify each outcome and at what level.
2. Create a Curriculum Course Grid.
 - i. Left column = list each course in the curriculum (include only required courses, not electives)
 - ii. Right columns = list each learning outcome in a column heading

- iii. Subdivide each column into the three levels
 - iv. Instructors of the courses check the level at which each outcome is addressed.
 - v. Different sections of courses should consistently address the same levels.
 - vi. Most courses will address only some of the outcomes.
- 3. Analyze the completed Course Grid.
 - i. Identify if any level of any outcomes is neglected.
 - ii. Modify existing courses so that the neglected level is addressed.
 - iii. Add a new course to the curriculum that will address the neglected level.
- 4. Include the Course Grid in the syllabus for each course.
 - i. Put a check mark to indicate which level of each outcome is address in the course.
 - ii. This will make clear to students the role that the course plays in preparing them to achieve the outcomes.
 - iii. Each assignment or learning activity listed in the syllabus should be connected to an outcome.

IV. Develop an assessment plan.

A. Sources of Assessments

1. *Course-embedded assessments*: Utilize existing assignments in courses that are already evaluated.
2. *Commercial instruments*: Purchase published surveys or tests that have been evaluated for reliability and validity and that provide norms for comparison.
3. *Faculty-produced assessments*: Develop surveys, tests, or rating scales that will provide evidence of student learning.

B. Types of Assessment Methods

1. *Direct* measures directly evaluate student work. They require students to demonstrate their achievement.
 - i. Student performances or products are observed, analyzed, and evaluated by experts, using a set of criteria, to determine the level of achievement.
 - ii. Examples include published tests, locally developed tests, papers, projects, homework assignments, in-class presentations, musical performances, competence interviews, internship supervisor evaluations, clinical practicums, and portfolios).
2. *Indirect* measures rely on student or alumni reflection and feedback concerning their own assessment of their learning.
 - i. Examples include commercial surveys such as the National Survey of Student Engagement, locally developed surveys of students or alumni,

focus groups, interviews, reflective essays, course evaluations, and journals

- ii. Indirect methods are less useful than direct methods.
 - a. People generally cannot evaluate themselves objectively.
 - b. Students lack expert knowledge to determine how well they have achieved a learning outcome.
3. *Quantitative* = numerical scores that indicate how much students have learned
 - i. They can be gathered from on exams, papers, projects, or other evidence of student learning.
4. *Qualitative* = verbal descriptions that detail the strengths and weaknesses of a student performance or product
 - i. They may be based on recitals, oral presentations, interviews, focus groups, reflective essays, and responses to open-ended survey questions.
 - ii. They may require content analysis to identify themes or threads.
 - iii. *Content analysis* allows us to summarize a verbal communication such as interview or survey responses.
5. *Rubrics* allow us to categorize the quality of student performances or products. They can be created for examining almost any product, including portfolios.
6. *Checklists* list traits that should be present but do not assess the frequency or quality of those traits.
7. *Rating scale rubrics* add a rating scale (typically 1-5) to a checklist to show the frequency or quality of each trait that should be present in student work.
8. *Analytic rubrics* replaces the checkboxes of the rating scale with brief, clear definitions of each level of performance of each trait.
9. *Holistic scoring guides* provide short narrative descriptions of the characteristics of each performance level, enabling faculty to make an overall judgment about the quality of work.
10. *Structured observation guides* are rubrics whose rating scale is replaced with space for comments.

C. Tips for Selecting Assessment Methods

1. When possible and appropriate, multiple methods, preferably three, should be used.
2. Place emphasis on direct methods.
3. Focus on student performances or products at the end of their course of study.

4. Avoid pretest-posttest approaches, which are complicated to administer.

D. Writing the Assessment Plan

1. An Assessment Plan should be written for each program at each location and in each delivery mode.
2. The Assessment Plan should list the SLOs, methods, measures, and standards.
3. It should describe how each method will be implemented, when, and by whom.
4. Use the Assessment of a Program Assessment Plan as a checklist for what should be included in the plan.

V. Use the information to improve student learning.

A. Set meaningful standards and targets.

1. What constitutes successful outcomes?
 - i. *Standard*: a minimally acceptable student achievement or performance level = 4 out of 5 on a rating scale
 - ii. *Target*: proportion of students that should achieve at least the minimally acceptable level = 80% of students should achieve a 4 out of 5 on a rating scale
2. Choose a frame of reference (see handout)
 - i. Local standard
 - ii. External standard (benchmark)
 - iii. Peer comparisons
 - iv. Value-added
 - v. Longitudinal (historical trends)
3. How to set a local standard
 - i. What is the lowest achievement level that would not embarrass you?
 - ii. Set a relatively high bar if you want to identify what areas need to be improved.
 - iii. Set a relatively high bar if you want to ensure that students are competent when they complete a course, program, or degree.
4. How to set a target
 - i. Express targets as percentages, not averages.
 - ii. For basic, essential goals, set 100% as the target.
 - iii. For aspirational learning goals, set 50% or higher as the target.
 - iv. For exemplary performance, percentages lower than 50% may be appropriate.

B. Analyze evidence of student learning.

1. For each student learning outcome, are students performing at an acceptable level at the end of their program?
2. Analysis of results should be disaggregated by location and modality.
3. Consider what factors may be contributing to unacceptable performance.
 - i. Are student learning outcomes stated appropriately?
 - ii. Do curriculum maps show any gaps in repeated practice that supports each outcome?
 - iii. Are textbooks and learning activities in each course appropriate for the stated outcomes?
 - iv. Does the quality of instruction meet our standards of excellence?
 - v. Do courses incorporate high-impact practices and research-based teaching methods?
 - vi. Are students entering the program with a low level of preparation and prior knowledge?
 - vii. Do assessment methods need to be improved so that more accurate information is collected?

C. Make plans to improve student learning.

1. Modify the student learning outcomes for the program.
2. Modify the content of the curriculum.
 - i. Remove an irrelevant course.
 - ii. Add a new course.
 - iii. Modify the content of an ineffective course.
3. Modify the instructional methods used in a course.
4. Replace the instructor of a course.

VI. Make plans to improve the assessment process.

- A. Discontinue the collection of certain data.**
- B. Begin the collection of certain data.**
- C. Alter the way that data is collected.**
- D. Modify the structure or timeline of the assessment process.**

VII. Write an assessment report.

- A. Profile of the program (number of students enrolled, number of graduates in last three years, etc.)**

- B. Student Learning Outcomes as stated in the catalog**
- C. Assessment methods**
- D. Evaluation of the assessment data**
- E. Plans for improvement of student learning**
- F. Plans for improvement of the assessment process**
- G. Use the Assessment Report Evaluation Rubric to make sure the report is acceptable.**

VIII.Sources

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