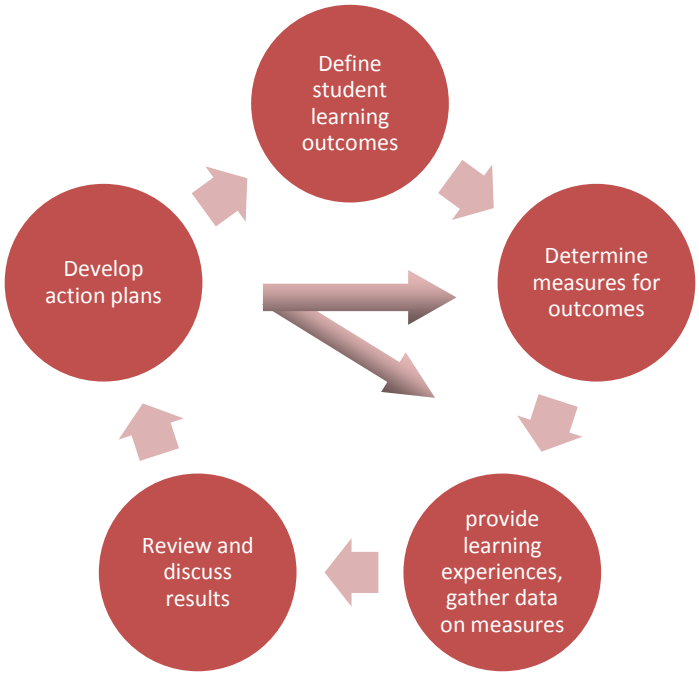
Program-Level Student Learning Assessment: Outcomes

This resource guide includes information on program-level student learning outcomes, including:

Overview

Student learning outcomes assessment is an ongoing process involving the systematic collection, examination, interpretation and use of evidence to document and improve student learning. The assessment cycle is displayed below. A fundamental component of assessment involves articulating intended learning outcomes for graduates of your program.[1]



Student learning outcomes are usually in the form:

"At the end of this program, students will _____."

or

"Graduates of this program will _____."

[1] Student learning outcomes are also referred to as student learning goals. Some institutions make a distinction between goals and outcomes, but NJCU – like many universities – uses them interchangeably.

Typically, programs have **4-6 key learning goals/outcomes**. Having too many outcomes can be overwhelming, for both faculty and students.

Characteristics of effective program-level student learning outcomes

Well-written outcomes can streamline the assessment process. Effective student learning outcomes:

1. Are student-focused, rather than program- or faculty-focused
   - Adopting the structure "At the end of the program students/graduates will be able to..." rather than "Faculty will provide…" can facilitate this.

2. Describe outcomes, such as what students will know or be able to do upon completion of the program
   - Adopting the structure "Graduates of the program will be able to..." can facilitate this focus.
   - This is in contrast to a process-level focus such as "students will be exposed to literature from a variety…."

3. Describe a competency that is observable or that can be demonstrated through an observable means (performance, product).
   - For assessment purposes, students must demonstrate their competence to themselves and others.

4. Are stated so as to be measureable through quantitative or qualitative means.
   - It is possible to measure learning goals through qualitative means.
   - Using action verbs (see below) can be helpful in crafting measurable outcomes.

5. Are rigorous and focus on higher cognitive levels.
   - Some outcomes can and should focus on lower levels, but when taken in total, the set of outcomes should emphasize the higher levels.
   - Using action verbs at different cognitive levels (see below) can facilitate appropriate goal development.

6. Describe a single competency or a set of related competencies that can be assessed at the same time.
   - Putting too much in one outcome makes it difficult to find an appropriate way to determine whether students have attained the outcome.

7. Are framed in terms of the program, not individual courses.
   - Although assessment measures can be conducted in one course, such as a capstone, the learning outcomes should be framed in terms of the program.

8. Include criteria on which the outcome will be examined.
   - This can assist with the development of assignments and other assessments.
   - For instance, rather than stating only that students will be able to evaluate scientific research, it may be useful to include detail such as "by critiquing how well a research study applies the scientific method."

Using Bloom's Taxonomy in student learning outcomes

Bloom's Taxonomy of the Cognitive Domain is often used to construct learning outcomes that are both observable and rigorous. The chart below describes the (revised) levels of the taxonomy and provides sample verbs for "students will be able to…" statements. (Note that the meaning of the verbs may be context-dependent. Thus, classifications in the chart represent typical levels.)

Level	Cognitive processing involved	Sample verbs
Remembering (lowest level)	Recalling or remembering facts or terms.	Define, Identify, List, Match, Name, Recite, Recognize, Select
Understanding	Explaining or describing information, often without relating it to anything else.	Describe, Discuss, Distinguish, Explain, Give examples, Paraphrase, Restate, Summarize
Applying	Applying knowledge to new situations or to new problems.	Apply, Compute, Construct, Demonstrate, Employ, Manipulate, Prepare, Produce, Solve, Use
Analyzing	Breaking information into component parts in order to analyze relationships between parts, or to recognize organizing principles.	Analyze, Categorize, Classify, Contrast, Deduce, Differentiate, Distinguish, Infer, Test
Evaluating	Judging the value of something based on articulated criteria or logic.	Appraise, Assess, Conclude, Criticize, Defend, Evaluate, Judge, Justify, Recommend, Support
Creating	Combining different ideas in the service of creating something original or integrating ideas into a solution.	Assemble, Combine, Compose, Create, Design, Devise, Plan, Produce, Propose, Rearrange, Reconstruct, Reorganize, Revise

Examples of program-level student learning outcomes

Writing learning outcomes can be challenging, and perfect outcomes rarely exist. The following examples illustrate attempts to craft effective learning outcomes. Two versions of each outcome are provided. The first version is broad and would likely lead to difficulty in developing assessment measures. The second version is more specific and may more readily lend itself to assessment.

Business

Too broad: At the end of the business program, students will be able to understand financial statements.

More specific: At the end of the business program, students will be able to produce a set of financial statements in accordance with generally accepted accounting principles.

Criminal Justice

Too broad: At the end of the criminal justice program, students will know about ethics in the field.

More specific: At the end of the criminal justice program, students will be able to analyze ethical dilemmas encountered in the field, and identify and defend the correct ethical choice.

Fine Arts
Too broad: At the end of the fine arts program, students will know about the history and literature of theatre.
More specific: At the end of the fine arts program, students will be able to explain the bases of a variety of theatrical genres and describe them with examples from different plays.

Philosophy
Too broad: At the end of the philosophy program, students will be able to talk philosophically.
More specific: At the end of the philosophy program, when given a philosophical question, students will be able judge the utility of an argument based on specific criteria demarcated for evaluation of the argument.

Political Science
Too broad: At the end of the political science program, students will have read about political science theory.
More specific: At the end of the political science program, given a published article in a peer-reviewed political science journal, students will be able summarize the content and the author(s) argument, and critique the argument with reference to relevant theoretical political science principles.

Psychology
Too broad: At the end of the psychology program, students will know the important systems of psychology.
More specific: At the end of the psychology program, students will be able to recognize and articulate the assumptions, main ideas, and criticisms of the Gestalt, behaviorist, humanistic, and cognitive approaches to psychology.

Teacher Education
Too broad: At the end of the teacher education program, students will be able to teach well.
More specific: At the end of the teacher education program, students will be able to design lesson plans making appropriate use of their knowledge of subject matter, students, curriculum goals, and curriculum standards.

Strategies for developing program-level student learning outcomes

Program outcomes can be informed by many factors. Some of the most common include:

- Standards from professional organizations (e.g., APA Guidelines for Psychology Programs, ABET Criteria for Accrediting Computing Programs)
- Learning outcomes from syllabi of all core courses
- Feedback from program advisory boards comprised of employers, practitioners, alumni
- Outcomes of exemplary programs at other institutions
- University, College, and Department missions/visions
- Faculty discussion, employing leading questions such as[2]:
  - What are the most important things a student gains from your field of study?
  - What qualities do you strive to foster in your students? What capabilities?
  - How does your field of study change the way students see themselves? How do professionals in your area differ from others?

[2] Middle States Commission of Higher Education (2003). *Student Learning Assessment: Options and Resources.* Philadelphia: Author.

- How does your field of study contribute to the well being of your individual students? Of society at large?

Additional information

If you have questions or require additional information, please contact the Assessment Office: 108C Hepburn Hall, x3042, sgerber@njcu.edu.