Guidelines to Academic Departments for Articulating Student Learning Goals

Posing the question, “Have our students learned what we want them to learn?” implies that we have come to some agreement on what precisely it is that we want our students to learn (i.e., our learning goals). In the current exercise of revising/crafting your learning goals and assessment mechanisms, your task is to specifically identify the measurable outcomes that you will observe in your students as a function of having completed your major curriculum, and that they will have demonstrated (at least in part) on their senior thesis project.

There are several resources available to help your department better understand the task at hand. The websites below contain links to many informative sites regarding student learning assessment.

On-Line resources:
http://www.swarthmore.edu/x15989.xml
http://www.brynmawr.edu/institutionalresearch/teagle/index.html
http://www.teaglefoundation.org/learning/resources.aspx#assessment

The attached PDF in an excerpt that is circulated on the recommendation of the Institutional Research office, and it succinctly outlines effective student learning assessment practices. It originated at Norfolk State University (although this excerpt is unattributed). Note that although the terminology is not entirely consistent with our memo, the general concepts articulated are those we wish you to consider.

We also anticipate some questions relating to the current assessment inquiry:

*How do “departmental goals” relate to the Goals and Aspirations of a Haverford Education?*

During the recent self-study, the faculty developed and discussed a set of institutional “Educational Goals and Aspirations” to reflect College-wide student learning goals and objectives:

http://www.haverford.edu/academics/educational_goals_aspirations.php.

Since the Educational Goals and Aspirations statement arose in a “bottom-up” fashion—derived from Departmental responses to the self-study assessment inquiry—we expect that your Department specific learning goals will be resonant with this statement. However, the Educational Goals and Aspirations statement does not specify how these College-wide goals are implemented in each department, nor does it specify discipline-specific skills that students will acquire during their academic training at Haverford. The present exercise is intended to promote the articulation of such discipline/department specific goals and the skills that illustrate student achievement of these goals.
What is meant by “measurable outcomes?”

By “measurable outcomes” we are simply referring to the notion that while articulated goals may be vague and general, we would like Departments to go a step further and discuss the meaningful measures that will illustrate achievement of the goals. For example, “acquiring critical thinking skills” is a general goal, whereas a more specific and measurable outcome is that “students will acquire the ability to critique primary works in the field and identify existing gaps in knowledge or logical flaws.” Note that an outcome measure needn’t be numerical or quantitative; it simply has to be observable. Of course, a numerical or quantitative outcome, such as success in graduate school admissions, or rate of graduate school attendance, might be meaningful to the Department and can be included as a measurable outcome if it is consistent with your departmental goals.

Further information about assessment in general can be obtained from the Office of Institutional Research (Cathy Fennell, Director), or the Institutional Effectiveness Committee (Wendy Sternberg, Chair).

Appendix:
Excerpt, Program-based Assessment Manual, Norfolk State University
Program Goals

A program goal is an intended outcome of instruction that has been stated in general enough terms to encompass a domain of student performance (e.g., “Graduates of the program will demonstrate good problem-solving skills”). A program goal must be further defined by a set of specific (observable and measurable) learning outcomes to clarify instructional intent.

Functions of program goals:

- They make clear the variety of types of learning expected from the instruction (i.e., knowledge, comprehension, performance skills, etc.).
- They provide a focus for instruction that avoids concentrating on isolated and unrelated learning tasks.
- They are general enough to permit flexibility in choosing teaching methods and materials.
- They provide a framework for planning and preparing assessments and for interpreting assessment results.

Program goals generally are built upon the three basic categories of learning outcomes:

- **Cognitive outcomes** or what students know.
  - Knowledge outcomes are the lowest level of cognitive outcomes and are concerned with the recall or recognition of learned material
  - Comprehension is concerned with grasping the meaning of material as shown by interpretation, translation, prediction, and similar responses
  - Application is the ability to consciously use the material in new situations

- **Affective/attitudinal/value-based outcomes** or what students care about
  - Affective outcomes are concerned with feelings and emotions that are described by individual’s disposition, willingness, preferences, enjoyments, and similar terms:
    - attitudes
    - interests
    - appreciations
    - adjustments

- **Skill-based/behavioral/performance outcomes** or what students can do. For example:
  - Skilled performance: speaking, reading, singing, etc.
  - Higher level skills: lab skills, communications skills, specialized performance skills (e.g., in business, education, art)
  - Critical thinking skills: analysis and evaluation (e.g., identifying and analyzing a problem; evaluating possible solutions, etc.)
  - Creative thinking skills: production of something new (e.g., producing a plan for solving a problem).
Specific Learning Outcomes

Views about academic quality and effectiveness have shifted over the past three decades from an almost exclusive pre-occupation with inputs (student and faculty credentials and resources) and processes (offerings, requirements, teaching loads, class size, student rating of instruction, time to degree, etc.) to a more mission specific focus on teaching and learning outcomes.

What exactly will our students know? What exactly will they understand? What exactly will they be able to do with their knowledge at the end of the program? Program faculty members should answer these questions in the framework of the program goals with sentences describing competencies that program graduates should possess or, in other words, the kinds of things that students know or are able to do after instruction that they did not know or could not do before.

Specific Learning Outcome is an intended effect of the college experience that has been stated in terms of specific, observable, and measurable student performance (e.g., “Students will be able to identify details that are explicitly stated in a passage”). Specific learning outcomes transform the general program goals into specific student performances and behaviors that demonstrate student learning and skill development along these goals.

In other words, specific learning outcomes describe the types of performance that learners will be able to exhibit when the program has achieved its goals. Specific learning outcomes provide an operational definition of what we mean when we identify program goals. Unless the general goals are further operationalized in this way, they will not provide an adequate framework for teaching, learning, and assessment.

For example,

1. Program graduates will be able to demonstrate solid problem-solving skills. (Program goal)
   1.1. Students will be able to analyze a situation to identify a problem. (Outcome 1)
   1.2. Students will use multiple resources to gain additional information regarding the problem. (Outcome 2)
   1.3. Students will develop a procedure to solve the problem using a sufficient knowledge base. (Outcome 3)
   1.4. Students will propose and critique a viable solution to the problem. (Outcome 4)

Benefits of formulating intended learning outcomes are fourfold. Outcomes statements

- form the operational basis of assessment at the course, program, and institutional levels,
- provide direction for all institutional activity,
- inform students about the intentions of the faculty, and
- inform external stakeholders about the educational experience in a given program or department.
Components of Statements Specific Learning Outcomes:

- **Essential Components:**
  - **Behavior:** specify actions or behaviors that follow instruction and could serve as evidence that the goal has been achieved
e.g., communicate results
  - **Object:** identify the focus of learning – content, concept(s), skill, or attitude
e.g., public opinion polls

- **Optional Components:**
  - **Target groups:** specify subgroups when goal applies differentially
e.g., graduating journalism majors
  - **Conditions:** give information about situations in which the student will be required to demonstrate the behavior – how, when, or where
e.g., after analyzing and interpreting information
  - **Performance criteria:** state a minimum level of performance
e.g., in written, oral, and graphic forms
  - **Performance stability:** give information about how often the student behavior must be observed to be a true indicator that the behavior is a stable part of the student’s achievement repertoire
e.g., at least three different groups.

Example:
“After analyzing and interpreting information from public opinion polls, the graduating journalism major will be able to communicate the results to at least three different groups in written, oral, and graphic forms.”

**Learning outcomes:**

- **are student-focused rather than instructor-focused.** Intended outcomes are formulated to focus on student learning, i.e. they describe what students should know, understand, or be able to do with their knowledge at the end of a program.
  
  Poor: “The program will include instruction in multimedia techniques”
  Good: “Graduates of the program will be able to use multimedia to prepare presentations”

- **focus on the learning resulting from an activity rather than on the activity itself.**
  
  Poor: “Students will study at least one non-literary genre of art”
  Good: “Students will arrive at an analytical and reasoned appreciation of a specific art form”, “Students will be able to communicate the appreciation to others either in written or verbal form”

- **reflect state mandates and institutional expectations about learning.** Typically these expectations address the transferable or orthogonal competencies (e.g., writing, critical thinking, leadership skills, quantitative reasoning.) Departments and programs should reinforce these broad goals in the statements of expected learning outcomes and, subsequently, in the curricula.

- **are reflected in program curriculum and translated into course specific objectives.** A good practice is to ask instructors to state explicitly in each course syllabus the program level goals and outcomes addressed in that course.
• focus on important, non-trivial aspects of learning that are credible to the public. One pitfall to avoid in formulating intended outcomes is focusing on easy-to-measure, but relatively unimportant outcomes like, “Students will recall the stages of mitosis.” This can happen when learning outcomes are developed by carving up the content of the discipline into smaller pieces. The focus of learning outcomes is not on less content but rather is on what students can do with the content they have learned. For example, “Students will be able to reason effectively by using simplified economic models such as supply and demand, marginal analysis, benefit-cost analysis, and comparative advantage”

• are general enough to capture important learning but clear and specific enough to be measurable. For example, the outcome, “Students will be able to solve problems,” gives little guidance for assessment. In contrast, the outcome “Students will work effectively with others on complex, issue-laden problems requiring holistic problem solving approaches,” can be assessed by developing assessments that require teams of students to develop solutions to complex, issue-laden problems, as defined by the discipline. They can, then, be judged on the effectiveness of their team skills, the quality of their solution, and their ability to use holistic problem solving approaches.

• are effectively worded
  - use action verbs that describe definite, observable actions. Faculty members should select those verbs that (i) most clearly convey instructional intent and (ii) most precisely specify the student performance the program is willing to accept as evidence that the general instructional goal has been achieved (See Attachment 1, Section “Related Behaviors”) 
  - include a description under which the action takes place – “when given x, the student will be able to…”
  - indicate an appropriate level of competency that is assessable through one or more indicators.