TO: **Departmental Chairs and Assessment Coordinators**

FROM: **Denison Assessment Committee**

RE: **Assessment Toolkit: Updated 4/23/08**

To assist departments realize more effective assessments of their students' learning, the Assessment Committee provides the following "toolkit." The intention is to guide departments as they embark on the often difficult but potentially rewarding exercise of finding out the answer to a) what our students are learning and b) whether or not what they are learning is consistent with the departmental learning goals. This toolkit is, therefore, a guide to help departmental Assessment Coordinators prepare reports, with discussions of

❶ the *process of assessment*,
❷ the components of the *departmental report*, and
❸ the criteria the Committee uses to guide its *responses to the reports*.

THE PROCESS If assessment is to become embedded in the academic culture of the college, then the assessment process must be ongoing and regular. Therefore, departments will submit yearly assessment reports outlined in this document. Reports covering the previous academic year will be due to the Assessment Committee at the beginning of each academic year (September 15). The Committee will then review the reports and communicate back to departments during the fall. The benefits of this assessment structure are many, including the noteworthy one of departments having a reliable set of assessment data to use for their periodic departmental reviews.

THE REPORT Departments are asked to respond to six questions (1-6 listed below and discussed on pages 2-5) in their assessment reports. Below each question is a description of what an answer to that question might entail. *Answers to several of these questions will not likely change year to year to the extent that departmental curricula do not change considerably across time*. Overall, the goal is to use tools *already available* to departments as much as possible and to make sure that those tools are reliable measures of student learning. Always, the focus of assessment is student learning and how programs might change in response to potential gaps or deficiencies in learning. A diagram of the assessment process and hence the assessment report is shown on the following page.
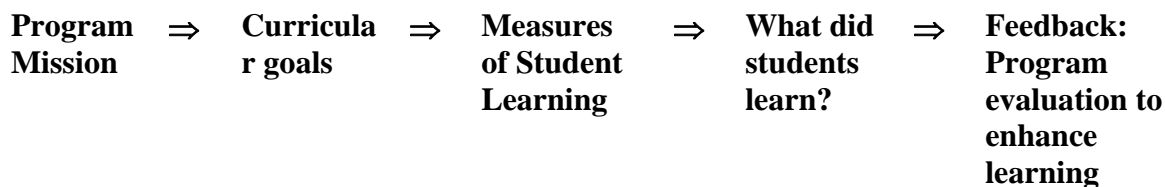
References
Astin, Alexander. 1991. *Assessment for Excellence*. New York: American Council on Education, Macmillan.

López, Cecilia L. 1997. "Opportunities for Improvement: Advice from Consultant-Evaluators on Programs to Assess Student Learning." Paper prepared for delivery at the 1996 annual meeting of the North Central Accreditation Commission on Institutions of Higher Education.

Figure 1: A Model of the Departmental Assessment and Assessment Reports

Program Mission	⇒	Curricular goals	⇒	Measures of Student Learning	⇒	What did students learn?	⇒	Feedback: Program evaluation to enhance learning

In a nutshell, departments should use their own statements of purpose and educational objectives to frame statements about the characteristics and competencies majors should acquire. It is important for departments to establish objectives for what they expect their students to learn (i.e., measurable learner outcomes). By measuring how much students actually do learn, faculty can then determine whether there is a gap – and if so, how large a gap – between their intentions and students' achievement. When faculty expectations and student performance are at odds, faculty need to determine the reasons for the discrepancy. Departments may then chart a reasonable course of action in response, including making adjustments to the program and/or requesting new resource allocations related to enhancing student learning.

Throughout the process there should be a strong interlocking narrative among the parts. In other words, each piece should connect conceptually with every other piece – goals with mission, measures with goals, and feedback mechanisms with learning outcomes.

Questions to Be Addressed in the Assessment Report

In addition to the following questions (in bold) that we ask each department to address in its annual report, we have also included, where relevant, the questions the Assessment Committee uses to evaluate reports. You will note that the Committee does not evaluate the *content* of a department's program, but instead focuses on *process*. The Committee looks to make sure that each department's program evaluation is done thoroughly, thoughtfully, and regularly.

1. What is the mission of your department or program in terms of student learning?
Most commonly, this involves reprinting the department's mission statement. The goal is to convey the broad values a department seeks to impart to students, outlining the breadth and depth of a course of study in that field. The Committee does not evaluate mission statements for content; only departmental faculty have the perspective and expertise to produce such a statement.

2. What are the student learning goals of your curriculum and other components of the major in terms of student learning?
A department's statement of its goals should flow from its mission statement, and it should articulate specifically how the broad goals are met by course work and other components of the major. It is not necessary to detail how each course fulfills the mission statement and goals; instead, there should be some attempt to show how a major's typical course of study will fulfill them. It is essential for quality program evaluation to understand in what manner broad goals are

pursued concretely. As with mission statements, the Committee does not evaluate departmental curricula.

QUESTION ASKED BY THE ASSESSMENT COMMITTEE
o   Are the department's goals clearly articulated?

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3. What measures do you use for assessing student academic outcomes in the major?
This is perhaps the most daunting task for many departments. Some of the typical questions are as follows: What measures are out there? What measures are reliable? What measures can be used to capture our particular goals? Can we use qualitative measures or is there a preference for quantitative measures? The following is an attempt to provide some background information about measurement for program evaluation, though not all questions can be addressed in this toolkit. Generally, departments should use measurement tools to which departments already have access, especially those previously built into the curriculum. It is normative to have multiple measures, to think about the validity (are they measuring what you hope they are?) and reliability (are they consistent measures?) of those measures, and *most important, to determine whether or not they measure the crucial elements of student learning identified in each department's mission statement and curriculum.*

QUESTIONS ASKED BY THE ASSESSMENT COMMITTEE
o   Are the goals operationalized in a clear fashion?
o   What measures has the department employed? Are they direct, indirect, or non-measures?
o   Are the measures of the goals (methods of assessment) clearly defined?
o   Are there procedures in place to implement the measures on a continuing basis?
o   Are the measures appropriate and reliable?
o   Are the measures sufficient?

(The following discussion draws heavily on a helpful article produced by Cecilia López [1997] for the North Central Association.)

Departmental assessments evaluate the *value added by the program*. The best methods examine results of pre- and post-testing majors. These are particularly useful benchmarks by which to gauge learning from entry to exit, and thereby to measure "value added." Not all departments will be able to perform pre- and post-tests because of resources or applicability of the method to a particular content area. Further, pre-testing is not necessary if one is highly confident that students know little or none of the content or skills they are to master through completing the program. In most content areas, however, pre-testing is useful in obtaining baseline data, and faculty should not assume that the new student enters a program knowing little or nothing. But there are ways to gain the benefits of pre- and post-testing, or at least function in the spirit of experimental design, through such methods as student portfolios.

Problems can range from minor to serious, which can undermine an effective program and lead to unreliable conclusions and programmatic confusion. Departments are encouraged to reflect on some of the more common methodological problems (a method is a program to gather data):

- Inappropriate sampling: sampling can be an appropriate technique for including students in the assessment process, since the target of the assessment is the department's effectiveness, not individual students. Simply asking for student volunteers to help assess a program is most likely inappropriate because those students who self-select to participate will be biased in one or multiple ways. Departments should designate which students will participate, whether the entire population of majors or some random subgroup.

- Failure to incorporate multiple measures; a single measure is insufficient.

- Failure to incorporate at least one direct measure.

- Selecting measures that fail to address all curricular goals.

- Selecting superficial measures of curricular goal attainment.

- Selecting measures that fail to capture the goal attainment they intend to measure, i.e., the measures fail to be "valid," they are off target.

- Selecting measures that produce inconsistent outcomes over time, i.e., the measures fail to be "reliable."

- Having non-measures parading as measures.

Measures come in a variety of types. We will describe briefly **direct**, **indirect**, and **non-measures** of student learning typically employed. It is preferable to employ multiple direct measures of student learning, though many other indirect measures are readily available and can be useful in certain contexts and under certain conditions. (López, passim.)

▶▶ **DIRECT MEASURES** of student learning, whether quantitative or qualitative, are the most appropriate measures of student learning and are understood to include but are not limited to:

- **evaluation of capstone experience**—the structure and content of the capstone experience should be clearly linked with the published statement of the purposes and educational objectives of the department or program, i.e., the articulation of what its graduates are expected to learn by completion of the program of study.

- **portfolio assessment**—departments should provide evaluation standards in departmental assessment program documents as to how the portfolios are to be reviewed (e.g., what the portfolio will include, how it will be assessed, by whom, and at what time intervals).

- **standardized tests**—though they can be useful, by their very nature, they tend to be generic and not well focused on specific skills or competencies and should be used in combination with other measures. (Tests such as the GRE, LSAT, GMAT, etc. are inappropriate standards

to use to evaluate a program; they are used most often for admissions decisions, do not measure specific department learning goals, and a biased sample of majors take them.).

- **performance on national licensure, certification, or professional exams**—evidence from these should be supplemented with substantive evidence that learning goals were achieved.

- **locally developed tests**; these tests, if designed carefully, may yield highly targeted and very useful results.

- **essay questions blind scored** by faculty across the department.

- **qualitative internal and/or external juried review** of comprehensive senior projects.

- **externally reviewed exhibitions** and performances in the arts.

- **external evaluation of performance** during internships based on stated program objectives.

▶▶ **INDIRECT MEASURES** Some indirect measures are inadequate measures of student learning by themselves. However, some of these sources, when used to supplement direct measures, provide information that may enrich or illuminate aspects of what the direct measures tell us about students' academic achievement. They include:

- alumni, employer, and student **surveys**.

- **exit interviews** of graduates and focus groups.

- **graduate follow-up studies**.

- **retention and transfer studies.**

- **length of time to degree**.

- **SAT scores**.

- **graduation rates and transfer rates.**

- **job placement data.**

▶▶ **NON-MEASURES** Some information assumed to be measures of student academic achievement do not in fact provide evidence of learning. One such non-measure is a questionnaire asking students if their personal goals for the course or major or program have been met. A second group of non-measures that are often mistakenly considered to measure student learning are the reports associated with program evaluation. Typically they collect data on the quality of curriculum and other aspects of a program. Some other non-measures of student learning include:

- **curriculum review reports**.

- **evaluation reports of individual programs** submitted by program-specific and specialized accrediting agencies, visiting committees, or committees of external peer experts.

- **faculty publications** and recognition.

- the kinds of **courses or majors** students select, including course enrollments and course profiles.

- **faculty/student ratios**.

- the percentage of students who **study abroad**.

- **enrollment trends**.

- the percentage of **students who graduate** with the baccalaureate in five years.

- the **diversity** of the student body.

- **course grades and GPAs**—experienced evaluators note that grades and GPAs "tell us little of what the student has actually learned in the course" and "very little about what a student actually knows or what that student's competencies or talents really are" (Astin 1991).

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4. **What methods did you use to analyze the data you gained? In what setting or settings did this analysis and subsequent reflection on the information you received take place?**

How did you analyze the information you learned from your measures? Departments are urged to reflect on the methods and standards used to reach conclusions; that is, once the data are gathered, how did you go about evaluating the data? What methods, subjective or objective, did you use to assess your findings? A common subjective method is a departmental conversation. You should report details about that conversation, such as the following: Was it a retreat or departmental meeting set aside for this purpose? Who was involved? All departmental members? Anybody in addition to departmental members? Commonly, objective measures involve statistical analyses of tests administered – some description of the method should be provided. Regardless of method, departments need to think about and make clear the standards they use to conclude to what extent the program has succeeded.

QUESTION ASKED BY THE ASSESSMENT COMMITTEE
o   Are the methods employed appropriate?

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5. What results did your analysis yield? What did you learn?

It is important to demonstrate that the department has examined thoroughly the data gathered and has thoughtfully analyzed how the data compare to the department's curricular goals. The evaluation should not just state conclusions, but should describe the results of the various study measures as well as the implications of the results—do students meet departmental learning goals?

A department may find gaps or other inadequacies in its assessment methods. It is appropriate to note those conclusions here and make recommendations for future assessment practices.

QUESTION ASKED BY THE ASSESSMENT COMMITTEE
o   Is the analysis of appropriate depth and breadth?

6. In what ways do your students demonstrate in their culminating experiences the broad reach of a liberal arts education, keeping in mind that Denison's goals are to
a) cultivate autonomous thinkers with the ability for creative/critical thinking;
b) further development of a set of competencies in writing, quantitative reasoning, and oral communication;
and c) develop an intellectual community, consisting of working, learning and supportive relationships with peers and professors.

As noted in Denison's Assessment Plan, our assessment program is focused on the major because it is a concentrated intellectual challenge presented to our students, the test of all they have learned before – including the competencies they have honed in general education courses. Second, we believe with Ernest Boyer that it is a mistake to view general education and the major in competition; rather, "these two essential parts of the baccalaureate program should be intertwined," not only in their execution, but in the assessment of their learning outcomes. Liberal education outcomes are best measured "in context," and we chose the major as our primary context because "liberal education outcomes . . . reach their highest level of cultivation in the context of the student's area of specialization or major field(s)

We asked this question of departments for the first time in the 2007-08 assessment reports and will use the responses to continue to craft our assessment of general education learning goals.

7. What have been your feedback mechanisms? How have you factored what you learned back into the curriculum?

A feedback mechanism is some systematic way for a department as a whole to reflect on the results of the assessment measures of student learning. Examples typically include retreats or other departmental meetings in which assessment is addressed in a structured discussion. Developing this report, too, can be considered a feedback mechanism, and it should be shared with departmental faculty for their information and approval, especially when it includes programmatic changes.

Closing the feedback loop is essential. Please describe exactly what it is you have done to factor what you learned back into the curriculum. Did the results of your analysis confirm the achievement of your goals? Or did the results suggest there are ways you can improve reaching

those goals? If the latter, what are they? When adequate provisions for ongoing communication are in place, the results of assessing student academic achievement become the basis for faculty and academic administrators to agree upon changes that could improve student learning and are therefore important to introduce. Such changes are then used to update planning documents, and to include as proposed priority expenditures in annual budgets.

QUESTIONS ASKED BY THE ASSESSMENT COMMITTEE
o   What feedback mechanisms has the department employed?
o   Are the feedback mechanisms appropriate and reliable?
o   Was the feedback sufficient?