

Designing Program and Course Assessment

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It is true that many of goals of a program are not achieved until long after graduation as knowledge and skills are refined in the graduate's life and work. However, assessment of student learning remains a present responsibility. We have to be clear about the extent of student learning before they graduate. We then have to assess the extent to which this learning has occurred and determine what needs to change in or to make learning more effective.

Any assessment format disadvantages some students, and using the same few formats disadvantages the same students time and time again. Therefore, students' success in higher education depends disproportionately in mastering these few assessment formats, and this gets in the way of our attempts to use assessment to measure their subject-related knowledge and skills. It is possible, and well within the bounds of "academic rigor" to diversify the ways in which we test or assess student learning. One approach to diversifying assessment is to increase the range of assessment instruments and formats; and supplement conventional grading practices with grading practices that include collaborative work, portfolios of a range of work, tasks that measure more complex cognitive activity, competence interviews (examination orally administered), and so on. Assessment processes can be embedded at strategic points in student work. For example, during a capstone course, during and after an internship, at the end of their first nine hours of course work, and so on.

Direct measures directly measure the knowledge and skills students have acquired in a course or program. They include the following:

- *Paper/Thesis.* Students develop an argument and support it with information or data they have gathered. They present their ideas in writing that is organized and coherent. These assessments develop students' inquiry skills and their ability to process large amounts of information.
- *Project.* Students complete an assignment over a prolonged period of time. To be successful, they must set goals, plan, use resources, organize, make judgments, and craft a written and/ or visual presentation of material. The project may require working with others, as well as an oral presentation of results.
- *Development of a product.* This type of assessment is a project whose focus is on the development of a tangible product. The product itself, as well as the process and quality of reasoning that led to it, is evaluated.
- *Performance.* Students prepare and present a performance of a valued activity.
- *Exhibition.* An exhibition is a project, product, or performance that is presented to judges and defended or debated with them.
- *Case study / Critical incident.* Students are given a realistic example of an application in their field. They respond with an analysis or professional response, using information and skills they have acquired.
- *Clinical evaluation.* Students perform a professional service in a real-life setting.
- *Oral exam.* Students answer spontaneous questions put to them by experts. They must think on their feet; draw upon relevant facts, theories, and/ or perspectives; and speak in a coherent, organized fashion when presenting their ideas.
- *Interview.* An interview is similar to an oral exam, but the forum in which it is carried out may not be as public or involve as many questioners as an oral exam.
- *Comprehensive exam.* Students complete a time-limited essay test that requires them to organize and present central ideas, facts, and concepts in response to questions.
- *Portfolio.* In response to a goal developed by the professor or by professor and student(s) together, students gather examples of their work to include in a portfolio. They write about aspects of their learning and achievement and include their written reflections in the portfolio. Professors and individual students talk together about portfolio contents, gaining greater insight

into the student's progress. (Huba and Freed 1999, 222-223)

Indirect measures include self-report surveys, interviews, alumni surveys, employer surveys. They provide suggestions or perceptions of student learning but don't measure learning itself. Their importance lies in how students and stakeholders *perceive* the effectiveness of a program.

Various types of indirect assessment are possible such as surveys, individual interviews, focus groups, reflective essays. Questions such as the following stimulate reflection:

- Describe the most valuable thing you learned in our program, and explain how this will be useful to you in your future.
- Which of the program's learning objectives are the most and least important to you? Why?
- Explain how you have grown as a person and as a [professional field] during your experience in the program. To what do you attribute your growth?
- Thinking about your experience in our program, describe how the program could be improved to increase your learning.
- Many students are understandably interested in preparing for a career. How might our program be changed to better prepare you for your anticipated career?
- Faculty vary in their teaching styles. What types of teaching have been particularly effective in helping you learn?
- Faculty have asked you to complete a number of group projects and activities. What did you learn about effective teamwork and how did you learn these lessons? . . .
- Explain why you selected the items for inclusion in your portfolio and what they reveal about your growth. . . . (Allen 2003, 125)

Designing Assessment Processes

One or more of the following questions are used by professors in developing assessment tasks:

- What general categories of cognition are important to assess in this course (e.g., simple recall, ability to apply, "higher order" cognitive ability)? What grade level priorities are appropriate for each of category of assessment? Are the categories consistent with the learning outcomes articulated for this course?
- What areas of development other than cognition should be given attention in this course and how best are these areas assessed?
- What metacognitive capacities (control over the thinking processes involved in learning) do I expect students to demonstrate? Metacognition includes such higher order activities such as planning how to approach a task, evaluating progress, using knowledge in a strategic manner, predicting outcomes, allocating resources effectively, executing decisions.
- What real-life settings require use of knowledge I have identified; what ill-defined problems do students typically deal with? What tasks should students complete to demonstrate their capacity for working with ill-defined problems?
- What criteria should I and my students use in critiquing student work?
- What techniques of assessment are appropriate for this course and why?

Self- and Peer Assessment¹

A diversified assessment process can include ways for students to make judgments about their own and others' work (Sometimes students are better judges of their own or others' work). In some cases,

¹ Adapted from Phil Race. "A Briefing on Self, Peer and Group Assessment", LTSN Generic Centre, November 2001.

placing students in the position of judging the quality of their own work according to criteria enhances their learning. This involves students making judgments about their own work and can include reflective logs, diaries, action plans, and so on.

In peer-assessment, students offer evaluative comments on the selected work of their peers. In general, peer assessment is most effective and consistent when more than one student evaluates the work of another. Since students naturally compare their work with others, and make judgments about how their peers respond in class, a more intentional process of peer assessment can help them make these judgments more effectively. Further, students can learn a great deal about their own work by assessing how others manage the same task. In larger classes, faculty tend to use graduate assistants in evaluating student work. Their skills can be enhanced as they participate in more intentional practices of self- and peer-assessment. Then, because we are concerned about lifelong learning, practicing self- and peer-assessment skills is likely to improve their career capacities in performance appraisals, team building, and so on.

Essay and Scaffolded Essay Assessment

In essay tasks/examinations, students respond to one or more complex questions exploring all aspects of the topic. Students plan their response, include as many relevant points as possible, and support each idea. By examining the logic behind students' responses, the professor is able to analyze student the reasoning and communication skills.

The scaffolded essay assessment can be used to reduce the apparent size of the assessment task. Scaffolded essay assessments pose specific questions that require a more in-depth response than a one-word or single-phrase answer but are not as complex a response as an entire essay requires. In scaffolded essay assessment, a larger essay question is broken down into several prompts that require short answers that test their knowledge of the subject material.

Using Portfolios in Assessment

Portfolios are used for two primary purposes in assessment: to evaluate learning in a program, and to promote student learning. Clearly, stated learning outcomes are necessary in providing direction for each of these purposes.

In one form, the portfolio contains all the work a student produces in a course or program (e.g., papers, projects, problems solved, performance reviews, videotapes of presentations). Students may be required to include a written explanation of the importance of each entry in the portfolio. When used in assessment, the complete portfolio allows the professor(s) to evaluate the extent and type of work required in a course or program. Portfolio review allows faculty to judge how well students are performing and/or improving. Electronic portfolio systems are available which greatly reduce storage, and facilitate collection and review.

In another form, the portfolio includes selections of student work. For example, students assemble evidences related to one or more outcomes. Students collect multiple drafts of the same task to demonstrate improvement. Or students may select material that shows stages in the development of work. Written logs or journals stimulate self-reflection. Reviewing these logs allows faculty to discern the ways in which students think about and approach their work—and may provide insight into the effectiveness of various aspects of a program. When students are expected to reflect on, compare, and revise their work, the quality of learning often improves.

Huba and Freed provide an example of how a higher education institution developed guidelines for portfolios based on the school's mission statement. Students were to include the following in their portfolio:

- A. Two works which show growth as a critical thinker (one work done early and one done later on)
- B. A work that shows interdisciplinary thinking
- C. A work that shows your knowledge of cross-cultural issues related to scholarship by and about women
- D. A work that shows your knowledge of cross-cultural issues related to scholarship by ethnic minorities
- E. A work that shows your skills in using the scientific method or science reasoning
- F. A work that shows your skills in an aesthetic analysis
- G. A work that you consider one of the most personally satisfying results of your experiences . . . (this could be work from a class, an account of an experience, a work from a co-curricular activity, etc.)
- H. The Writing Assessment Portfolio . . . and
- I. A cover letter which describes the method that you used to put your portfolio together and what you learned through this process . . . (in Huba and Freed 1999, 243)

References

Allen, Mary. 2003. *Assessing Academic Programs in Higher Education*. Jossey-Bass.

Huba, Mary and Jann Freed. 1999. *Learner-Centered Assessment on College Campuses: Shifting the Focus from Teaching to Learning*. Allyn and Bacon.