ASSESSMENT: HOW TO GET FEEDBACK TO THE STUDENTS

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ABSTRACT

In spite of the money and efforts spent on assessment, universities are still struggling with the questions: Have instructions improved? Are students learning more? Are institutions more effective? At the same time, accreditation bodies such as the AACSB and the Higher Learning Commission are placing more importance on the assessment effort. Even among universities which have relatively mature assessment processes, students are typically not taught to use self-assessment as a way to evaluate their own learning. Alverno College has very successfully implemented the self-assessment process as a means for their students to measure how well they are learning. A graduate program in information systems is used as an example of the faculty's efforts to learn about assessment and to implement the assessment plan.

Keywords: Accreditation, assessment, exit competency exam, IS program assessment.

INTRODUCTION

Feedback is a fundamental element of learning. It helps students to identify what they have learned, to keep track of their personal leaning progress, and to decide how to emphasize their learning efforts (8). After years of assessment activities, universities are still asking the questions: Have instructions improved? Are students learning more? Are institutions more effective? There is only scant evidence that students were learning more or that institutions were becoming more effective. In fact, no national standards or measures of college student learning exists and no widely accepted patterns of evidence for judging institutional effectiveness are available, (9). At the same time, accrediting agencies such as AACSB and the Higher Learning Commission are emphasizing the importance of assessment as a tool of accountability (1). In fact, the Higher Learning Commission has developed an assessment culture matrix with which to place institutional assessment efforts. The next section discusses the assessment project for a graduate Information Systems (IS) program.

THE ASSESSMENT PROJECT

Angelo and Cross (3) defined the assessment process as a multi-dimensional method of appraising the learning that occurs in the classroom before and after assignments and exams are graded, with the feedback used to improve teaching and therefore student learning. Feedback is a key factor for both students and teachers in the learning process (12). Moreover, according to Huba and Freed (9), assessment is the process of gathering and discussing information from multiple sources and diverse sources in order to develop a deep understanding of what students understand and can apply with their knowledge as a result of their educational experiences; the process culminates when assessment results are used to improve subsequent learning. Both Angelo and Cross (3) and Huba and Freed
(9) agree that the assessment process does not finish after the feedback is provided. The process must continue until the assessment results are utilized for future educational improvement. Figure 1 illustrates the assessment process.

**Figure 1: The Assessment Process (Huba and Freed, 2000)**

In addition, Gouli and et al. (8) proposed an integrated framework for educational assessment. The framework is named “AssessToLearn”, and it follows a three-step process (i) ascertaining the students’ prior knowledge – activating Knowledge, (ii) promoting knowledge construction and identifying conceptual changes – constructing and enriching knowledge, and (iii) assessing knowledge construction – refining knowledge.

At a midwestern regional university, the administration established the Office of Curriculum and Assessment and the Faculty Senate the Assessment Council to monitor the assessment process of programs. Funding is also provided to aid in the assessment efforts of the departments and units. The university's assessment policy sets out the following general policies and principles:

1. Student learning outcomes assessment is defined as the ongoing monitoring of the extent to which students are developing the knowledge, skills, beliefs, and attitudes that are appropriate for graduates of the respective academic programs. Assessment is tied to course goals and program objectives (4).
2. Assessment information shall be used by the unit doing the assessment to improve student learning and may not be used for personnel decisions or for resource allocation decisions.

3. Departments are responsible for:
   a. developing unit assessment plans (including student learning goals and objectives, program standards and methods of measurement) and to update the plans on a five-year cycle;
   b. developing a structure within the unit (e.g., committees, coordinators) to help ensure that assessment activities will be completed in a timely manner;
   c. providing a yearly summary reports on assessment activities, which need not cover all goals of the program, to the Office of Curriculum and Assessment;
   d. reviewing assessment plans and activities periodically to ensure that they are leading to program improvement;
   e. considering providing recognition and reward for assessment activities in the department bylaws, which may include credit in any of the four contractually recognized areas for personnel decisions (teaching, research, professional development, university service);
   f. providing regular feedback to department/unit faculty/staff on assessment activities, to share assessment information; and to promote the "conversation among faculty/staff" of the implications of assessment for program improvement.
   g. providing regular feedback to students on assessment activities within departments and to share with them, as appropriate, conclusions reached as a result of assessment activities;
   h. involving students in meaningful ways in assessment activities; and
   i. communicating to the Office of Curriculum and Assessment ways in which specialized accreditation requirements address assessment.

While most faculty members will agree that assessment is a good thing, the ability to identify good assessment techniques is not intuitive. In fact, traditional assessment measures focus on the professor. How organized is the lecture? How accurate and up-to-date is the information in it? Is the class motivating enough to rouse the interest of the students in the subject matter? Ironically, the professors are the ones who learn the most; i.e., they actively seek new information, integrating with what is known, organizing it in a meaningful way, and having the chance to explain it to others (9). In fact, each time the professor teaches the class, her understanding of the materials deepens.

What is needed is to facilitate self-assessment by the students themselves, perhaps using the development framework of Alverno College (2). Their faculty members have identified four
components of skills inherent in self assessment: observing, interpreting/analyzing, judging, and planning. Within that framework, a student may demonstrate different levels of self assessment ability. Table 1 illustrates these four components with the levels of ability. Students would have to be taught the process of self assessment.

Table 1: Development of Self Assessment (2)

<table>
<thead>
<tr>
<th>Component</th>
<th>Beginning Proficiency</th>
<th>Intermediate Proficiency</th>
<th>Advanced Proficiency</th>
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<tbody>
<tr>
<td>Observing</td>
<td>Reports own behavior in the performance</td>
<td>Makes sense of the set of criteria as a whole in relation to own judgment of performance</td>
<td>Self monitors and adjusts ongoing actions or plans accordingly</td>
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<tr>
<td>Interpreting/Analyzing</td>
<td>Identifies patterns of strengths and weaknesses in performance</td>
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<tr>
<td>Judging</td>
<td>Connects criteria and performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td>Identifies aspects of approach to learning to maintain and aspects to develop further</td>
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Consequently, instructors have to find the time to reflect on what learning outcomes they want from their courses and programs. Then they have to measure how well their students understand and apply these learning outcomes. Finally they would have to engage their colleagues in assessment dialogues. All these activities require time; precious time that few faculty members have to spare. At the same time, assessment is a necessity. Hence, literature on assessment techniques that require little additional time from the faculty and students is especially critical reading, e.g., Elwell's article (7) on course-embedded assessment tools. Elwell (7) suggested that such assessment techniques are the most efficient and effective. Once faculty members decide which student learning objectives for their programs should be assessed in particular courses, they could measure their students’ learning with relatively minimal effort. The next section discusses the assessment of a graduate business program.

The Masters of Science in Information Systems (MSIS) Degree Program

The learning outcomes of the Masters of Science in Information Systems degree program were first developed when the program was established 1998. Upon the completion of this program, the students will be able to:

1. Complete the analysis and design of an information system;
2. Develop a transaction processing system using a procedural programming language;
3. Demonstrate and apply knowledge of database concepts with emphasis on the relational model and its application to business systems;
4. Develop a decision support system using a fourth-generation language;
5. Understand and apply appropriate research methods in conducting information systems research;
6. Understand various types of information technologies and how these technologies can be applied to help organizations meet their goals;
7. Apply systems development concepts effectively to all phases of an information systems development project.

Over a period of five years, all seven program outcomes should be measured. While the faculty is at liberty to measure all seven every year, in the interest of time and respect for the faculty's workload, only two of the seven program outcomes each year will be measured. It is also possible that as this project continues, the faculty may include other program outcomes that may surface as critical to the success of the students.

Within two years of the startup of the program, the faculty felt that the students needed the research writing course during their first semester in order to learn the skills critical to writing research papers. All students have to take a comprehensive exam during their last semester. This comprehensive exam covers the learning outcomes of the program. Students are only allowed to attempt this comprehensive exam a second time if they fail the first time. If they should fail the second time, they have to take courses identified by the faculty and take an exam in the areas that they failed to write satisfactory answers.

Another measure that is being used the first time this year will be the students' projects for their capstone course. A team of designated faculty will evaluate these projects. Both these measures are used to assess the students at the end of their program.

One question that is haunting the faculty is how they let the students know their academic progress before their last semester. These reflections and dialogues among the faculty highlight for them the fact that many of the students do not understand the theoretical foundations of their masters program. Consequently, plans are in place to provide new students, at their orientation, an overview of the program and the requirements for graduation. Emphasis will be put on the need for the assessment of the program and for the students to conduct self-assessment. Students should also understand that they may have to address any shortcomings in their portfolios by extra-curricular activities.

**RECOMMENDATIONS**

Many assessment plans use the competency exam based on the relevant model curriculum to establish that students are graduating with the skills identified by the faculty as needed in the marketplace (11). While this is certainly a good way to find out if the students are exiting their programs with the required knowledge, exams do not verify performance-based skills. The same students were not able to conduct self-assessment during their progress through their academic programs.
Solutions that may be implemented with minimal costs and time are suggested below:

1. Introduce the self assessment process and program learning outcomes during new students' orientation;
2. Facilitate students' self assessment at regular meetings as they progress through their programs;
3. In the classrooms, use feedback activities so that students understand where they are in their courses; the following activities may be used:
   a. At the beginning of the semester, ask the students to construct a course map with the course objectives.
   b. At the mid-point of the semester, require the students to get into groups to go over the course objectives. Students identified what have been covered and what have not been covered. Each group will then present their findings to the class. The instructor will discuss their answers with her opinions.
   c. Give the one-minute feedback.: what one thing have students learnt that they liked; what one thing they wished that they had learned.
   d. Shift some of the responsibility for learning to the students. What would they like the teacher to do to help them accomplish more? What would they like their classmates to do in order to help them learn better? What can students do to help themselves learn better in class?
   e. Develop, with the help of the students, the rubric for the course learning objectives, and have the students rate themselves at the beginning of the class, mid-semester, and at the end of the class.
   f. Use course management software to administer self-assessment quizzes and exams electronically (5). Such quizzes and exams need not be used for grade calculations but only for the students to evaluate where they are in retaining their knowledge of the course.
   g. Use games such as online crossword puzzles, simulation games, and interactive cases (6, 10) to help students develop a deeper hands-on knowledge of the issues and to motivate them to read the textbooks.

A problem with using traditional assessment techniques is the assumption that all students learn the same way. In fact, everyone, students as well as faculty, processes information according to three main modes: visual, auditory, and kinesthetic. Hence, class activities should be made up of assignments, exercises, and exams that tap into these three traits of students so that all students have better opportunities of doing well in their classes. As discussed earlier, the MSIS used only the competency exit exam to discern the knowledge of the graduating students. The faculty members are planning to incorporate other assessment tools and techniques in the program.

CONCLUSION

Although assessment is not easy, it is required and necessary in order to provide continuous improvement to programs. Traditional assessment methods do not assist students to improve their learning although they may help the professors concerned. Other more holistic assessment methods are required in order to provide faculty and students with the tools for self assessment.
REFERENCES