Beyond Communication: Technology Driven Decisions

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As part of our ongoing efforts to improve our programs and courses, for external review (NCATE, NCA, etc.) as well as internal decision making, we are beginning to monitor and track our students' performance using a formal process. Evaluating and assessing student learning for the purposes of program and course improvement is not a new idea, but is becoming more critical in this age of accountability.

Branta (2002) explored the use of technology in support of decision making for program improvement in a graduate teacher education program. A web-based assessment system was used to analyze student assessment data for quality improvements at the course as well as program level. The system provided web-based forms for data entry and management, along with reports which can be customized to provide accurate and timely information about program and course quality. This assessment system was complemented by a wider set of resources, including student surveys, course evaluations, self-assessments, and student products to provide a comprehensive picture of the preparation process.

Pilot

In collaboration with technical support staff in the Grand Valley State University institutional marketing department, this author worked to create and implement a Data-Based Management System (DBMS) and online data collection system with a focus on tracking student assessments that was based on Branta’s work. As a result, a series of web-based forms were created that allow instructors to enter and maintain common assessment data – standards, assessments and evaluation rubrics.

During the Spring/Summer term of 2005, this assessment system was put through a small-scale test – using 5 graduate educational technology course sections with less than 150 students – to ensure that it worked and to identify any problems or bugs. There were some obvious glitches in the system, but overall, it was well received by instructors. Based on this pilot test, the system was put into production in the Fall 2005 semester and included data on all the graduate educational technology courses and students enrolled. Instructors were given access to the system, shown how it works, and encouraged to use it to complement what they were doing in the area of student evaluation and grading.

Feedback has been gathered from instructors on the system and also on the assessments themselves in an effort to improve all aspects of the assessment process.

Results

The early results are encouraging, and so far have brought about some productive and interesting discussions. The following questions have grown out of this work:

- Are there identifiable areas where students seem to struggle within a course or across the program? If so, what can the data tell us about possible ways to address these issues?
- How similar are students’ proficiencies across courses taught by different faculty members? How similar are they across terms? Or across modes of instruction (face-to-face, online, etc.)?
- How well do adjunct instructors understand and implement common assessments and rubrics? How well do tenure and tenure-track instructors understand and implement these items?
- What patterns or themes emerge from the data that provide ideas for program improvement?

It is the Educational Technology Program’s goal to continue to use the online assessment system in the future and gather more data for decisions about improving our programs and courses. We have started to modify the assessments and rubrics, based on feedback from instructors, and are considering making the system available to students. We also plan to use data from the system, in combination with student work products, to help identify exemplary work products for clarification and discussion with students, and examine course evaluations for additional factors used for program improvement.

Conclusions

When technology-based assessment systems, like the one described here, are used as part of a broader collection of processes for gathering and analyzing data, the results move us closer to the promise of decision-support tools for improving the quality of programs and courses within the College of Education. The next step may be to develop and implement a unit-wide assessment system, using technology across the college, and to put into place policies and decision-making steps to ensure that all of our students are achieving the necessary performance milestones as they move through our programs. These are long-range goals that we, as an institution, must embrace if we are to realize the potential of technology to help shape our programs now and in the future as a vehicle for data-driven decisions as well as increased communication.

References