Chapter 8

Using a Learning Management System to Facilitate Learning Outcomes Assessment

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ABSTRACT

Increased demands for accountability among state and federal policy makers require that colleges and universities improve the process of measuring student learning outcomes. Despite a growing need, there has been limited development of integrated, electronic processes and tools that facilitate assessment of student progress toward program-level learning outcomes. Collecting student course materials, classifying by program and course-level objectives and reporting the results remains a tedious and labor-intensive task. This project demonstrates how course-level assessment data from a learning management system (LMS) can be utilized for program-level outcomes assessment. A pilot system was developed to integrate data from a LMS to provide continuous reporting of program and course-level assessment with minimal additional effort from faculty and students. This chapter shares the authors' outcomes assessment system development approach, faculty development approach, and the lessons learned from their project, including the challenges confronted during system implementation.

INTRODUCTION

Over the past decade institutions of higher education have focused increased attention on the assessment of student learning outcomes. In part, this is a reaction to increased calls for accountability in higher education as expressed by various political and competitive forces, encouraged by the debate

surrounding the reauthorization of the Higher Education Act of 1965 (Lovett, 2004; Shulock, 2004). However, it also reflects a growing understanding on the part of faculty and administrators regarding the role outcomes assessment plays in both shaping the student learning experience as well as shaping the academic programs and curriculum from which students graduate. Both regional and professional accreditation agencies acknowledge this growing call for accountability and have integrated assess-

ment standards into the accreditation process (AASCB, 2005). Measurement of these broad program-level outcomes requires program administrators, faculty, advisory boards and other constituent groups to determine what metrics constitute mastery or demonstration of a particular skill or accomplishment.

This expanded interest in outcomes assessment, while important and welcomed, creates several challenges for college faculty and administrators. For example, the manual process of monitoring the integration and achievement of learning outcomes within courses and degree programs is typically a labor intensive, paper-based process often driven by accreditation visits and timelines. Faculty and administrators are asked to report which outcomes are addressed by which course activities and how student achievement is assessed. This information, along with sample student work, is then collected by department chairs and deans who organize and present it to visiting accreditation teams. Therefore, there is a need for a systematic and automated approach to linking course level activities and assignments with program goals and institutional mission for assessment purposes.

While assessment as a tool for improving student learning and educational programs offers great promise, existing processes for presenting outcomes assessment and collecting and summarizing student achievement are somewhat limited. In a 2008 report, Eduventures found that 76% of institutions surveyed identified difficulty in collecting and analyzing outcomes data as a "top five challenge" in implementing comprehensive assessment programs. There is a need for a more systematic process and an easier method for linking course level activities and assignments with program and institutional-level learning outcomes (Maki, 2004). Some institutions are experimenting with the use of ePortfolio systems to collect and organize student learning artifacts over the course of their tenure with an institution, and others use dedicated electronic outcomes assessment systems

to collect and report on student achievement toward course, program and institutional objectives. However most institutions surveyed by Eduventures had not yet purchased an institutional software system for managing the outcomes assessment process

Although most universities have not purchased dedicated outcomes assessment systems, a growing number already own or license a Learning Management System (LMS) system. Today's LMS have the ability to capture and store every course activity, whether an exam, assignment, project, or discussion, along with the grades and evaluation of each of these activities. This capability allows the LMS to be used to facilitate the collection, analysis, organization, and reporting of course-level assessment data. The authors of this chapter initiated the use of a LMS system for outcomes assessment in an effort to improve the learning environment of students, to enhance the communication between program administrators and faculty, and to satisfy the reporting needs of their professional accreditation agency. This chapter:

- examines the role of the LMS in facilitating the measurement of student learning outcomes,
- discusses the technical approach used in adapting an LMS to measure student outcomes assessment,
- discusses strategies for facilitating faculty adoption and use of the system,
- reviews the challenges confronted and lessons learned from this case study,
- discusses future directions in the use of an LMS for outcomes assessment.

ELECTRONIC OUTCOMES ASSESSMENT

There is some confusion regarding the terminology associated with outcomes assessment. Terms such as learning outcomes, learning objectives and assessment are sometimes used interchangeably,

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