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DESIGNING AND DEVELOPING ONLINE COURSE ASSESSMENTS

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ABSTRACT

Online instruction continues to thrive, but instructors and designers often struggle to develop effective forms of online assessment that are relevant and accurately measure learning. Despite the widespread use of computers in teaching and learning, their use for assessment has only been limited. The purpose of this paper is to look at how online course assessments can be designed effectively by focusing and answering the following three questions: How can we construct successful assessment strategies and frameworks that are specifically designed for online learning environments? How can instructors ensure that their assessments are aligned with course objectives, activities, and assignments? How can we effectively implement the different types of online assessment?

Keywords: *Online, Assessment, Design, Develop, Instructor.*

INTRODUCTION

Online course assessment is the process used to measure certain aspects of information for a set purpose where the assessment is accessed on a computer via the internet or a similar computer network. It is used primarily to measure cognitive abilities, demonstrating what has been learned after a particular educational event has occurred, such as the end of an institutional unit or chapter. With the wide availability of course management software, the world-wide-web has become increasingly attractive mechanism for delivery assessment. Using effective techniques is an essential part of effective teaching and learning in the electronic environment.

There has been a long standing tendency to associate computer-based assessment with automated multiple-choice questions, possibly because it was one of the earliest uses of computer technologies. Computer-based assessment not only automates routine tasks like marking multiple-choice questions, but can enrich student's learning experiences (Brown, Race and Bull, 1999). To have an effective online assessment, the types of assessment selected for an online course should: measure the stated objectives; be consistent with course activities and resources; be specific and descriptive for the evaluation of students' work and participation; and avail for timely student feedback. To be able to design and develop online course assessment, one must consider and answer the following:

1. How can we construct successful assessment strategies and frameworks that are specifically designed for online learning environments?
2. How can instructors ensure that their assessments are aligned with course objectives, activities and assignments?
3. What technologies can be implemented to support the various assessment options?

ASSESSMENT STRATEGIES AND FRAMEWORK

How can we construct successful assessment strategies and frameworks that are specifically designed for online learning environments? When the right considerations and plans are put in place to create an online assessment, that is using computers in assessment, there are a number of perceived benefits which Harvey and Moge (1999) list as:

- Large numbers can be marked quickly and accurately
- Students' response can be monitored
- Assessment can be stored and reused
- Immediate feedback can be given
- Assessment items can be randomly selected to provide a different paper to each student.

Assessment can draw upon a myriad of testing or measurement tasks ranging from informal, teacher designed activities to norm referenced tests. There are several effective online assessment strategies such as objective and performance assessment. An objective online assessment must be stated and defined for the students. Some examples of objective online assessments are quizzes, tests, exams, homework, peer assessment, and self assessment. These types of assessment can be use with considerations for cheating and plagiarism. Performance online assessment makes effective use of rubrics (content, processes, and attitudes), peer assessment, student self-assessment, cases and projects, and student portfolio.

Selection of an appropriate assessment strategy is another key to developing and designing online course assessment. To select appropriate assessment strategy, one must first establish the online course expectations and what it will take to fulfill the expectations. The Illinois Online Network (2005, 1) recommended the use of a variety of online assessment strategies including discussion, chat, team/group for collaboration and corporation, and individual assessments. These online techniques should be used to assist in developing and designing an overall assessment strategy for the online course and when they are used, developing assessment then becomes easier.

COURSE OBJECTIVES, ACTIVITIES AND ASSIGNMENTS

How can instructors ensure that their assessments are aligned with course objectives, activities and assignments? The fundamental role of assessment is to provide meaningful feedback for improving student learning, instructional practice, and educational options. Managing students' assignments, providing feedback to students, and assessing students' learning are all key factors to aligning online course assessment to course objectives, activities and assignments. Instructors and designers must establish the purpose of assessment, the criteria being measured, and the intended outcomes before meaningful assessment can be achieved (Gaytan 2002).

To create an assessment that aligned with course objectives, activities and assignments, the learning outcomes must be determined and the process of developing assessments should be employed. To determine the learning outcomes, focus must be on what students should know in order to function in authentic situations; what students should know or accomplish based on the critical course content; and what evidence must student display as proof of knowledge or accomplishment. The process of developing and designing assessment involve determining: what needs to be assessed, using formative and/or summative assessment; the function of the assessment and appropriate measures, aligning assessment with course activities and learning outcomes; and the appropriate feedback through graded or ungraded assessment.

TYPES OF ONLINE ASSESSMENT

Online assessment is the process used to measure certain aspects of information for a set purpose where the assessment is delivered via a computer connected to a network. It is widely accepted that assessment has many powerful effects on student learning and most often the assessment is some type of educational test. These effects include not only what is learned, but also students' approaches to learning. Different types of online assessments contain elements of one or more of the following components, depending on the assessment's purpose: formative, diagnostic, or summative. Instant and detailed feedbacks as well as flexibility of location and time are just two of the many benefits associated with online assessments. There are many resources available that provide online assessments. Pre-Testing can be done prior to the teaching of a lesson or concepts, where students can complete an online assessment to determine their level of knowledge. This form of assessment helps determine a baseline, so that when a summative assessment or post-test is given, quantitative evidence is provided showing that learning has occurred.

Research suggests that high-quality formative assessment has a strongly positive effect upon student learning. Formative Assessment is a self-reflective process that intends to promote student attainment. Cowie and Bell (1999) define it as the bidirectional process between teacher and student to enhance, recognize and respond to the learning. An assessment is considered formative when the feedback from learning activities is actually used to adapt the teaching to meet the learner's needs, it occurs when educators feed information back to students in a "low-stakes" manner that enables the student to learn better and engage in a self-reflective process regarding the feedback. Its purpose is to provide both feedback on performance and suggestions during the learning process for improvement. In online assessment situations, objective questions are posed, and feedback is provided to the student either during or immediately after the assessment. Such an assessment can be provided using a wide range of methods, in a form of quizzes, tests, exams, homework, peer assessment, and self-assessment. If the primary purpose of evaluation is to support high-quality learning, then formative assessment ought to be understood as the most important online assessment.

Black and Wiliam (1998) referred to formative assessment as assessment for learning, as opposed to assessment of learning. They stated that the key elements of formative assessment include:

- The identification by faculty and learners of learning goals, intentions or outcomes and criteria for achieving these.

- Rich conversations between faculty and students that continually build and go deeper.
- The provision of effective, timely feedback to enable students to advance their learning.
- The active involvement of students in their own learning.
- Faculty responding to identified learning needs and strengths by modifying their teaching approach(es).

Formative assessment is integral to a good online learning experience. Weekly lessons can have their learning goals and outcomes explicitly stated. The discussions boards, chat rooms and blogs allow for rich and reflective conversations (synchronously or asynchronously). Online quizzes can give instant feedback. Groups can be set up for peer-review and feedback. Through monitoring, faculty members can adjust their approach as necessary

Summative assessment in an online environment differs in form and function from the formative assessment process. It represents a "higher-stakes" evaluation of student learning at a given point in time, generally used to assign grades to students; it requires making a judgment about the learning that has occurred; and it is not designed to provide the immediate feedback useful for helping students during the actual learning process. Summative assessments provide a quantitative grade and are often given at the end of a unit or lesson to determine whether the learning objectives have been met. It can also be used to check students' mastery of a subject every few weeks or months. Some examples of summative online assessment include high stakes tests, interim tests, midterms, and final exams.

CONCLUSION

Designing and developing online course assessments provide instructors with concrete clues about students' achievement of learning objectives. To facilitate a successful online course assessment, instructors must construct successful assessment strategies and frameworks that are specifically designed for online learning environments; ensure that the assessments are aligned with course objectives, activities and assignments; and effectively implement the appropriate online assessment.

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