

Student-Centered Assessments

for

Distance Education Learners

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Assessment Questions

As more and more student enroll in distance-learning programs, questions about the best types of assessment need to be addressed. Can educators continue to use traditional forms of objective based testing online as they would in a face to face situation? What are the major challenges facing online assessment? What really is assessment and why is it used?

Assessment

There are a variety of opinions on what the exact definition of assessment is. According to Thomas A. Angelo, the director of the American Association of Higher Education Assessment Forum (1995),

Assessment is an ongoing process aimed at understanding and improving student learning. It involves making our expectations explicit and public; setting appropriate criteria and high standards for learning quality; systematically gathering, analyzing, and interpreting evidence to determine how well performance matches those expectations and standards; and using the resulting information to document, explain, and improve performance. When it is embedded effectively within larger institutional systems, assessment can help us focus our collective attention, examine our assumptions, and create a shared academic culture dedicated to assuring and improving the quality of higher education.

It appears that the only part of Angelo's definition that the k-12 environment is concerned with is matching performance with standards. With The No Child Left Behind initiative, little emphasis has been placed on raising the bar any higher than the comprehension level on Bloom's Taxonomy. There is a philosophical dichotomy in place where mandated standardized

testing has hindered student learning by failing to develop assessments that do not reach the analysis, synthesis, and evaluation levels.

Accountability

Educational institutions are responsible for providing a service. How well those services are provided must be quantifiably measured and reported to the stakeholders. Accountability in k-12 education is a concept through which student outcomes are assessed and reported (Smith, 2008). Public schools across the country are held accountable by the expectations set by state and federal government. Student's progress and achievement are assessed in terms of meeting government standards, and funding and accreditation can depend on how well these standards are met. The same concept of accountability applies, if not more, to distance education. The viability of e-learning will depend on its ability to measure up against its detractors who claim traditional forms of education are superior.

Improving Student Learning

Along with providing accountability, assessments should focus on improving student learning, something NCLB has not done. There is such an emphasis placed on performing well on state and federal standardized tests that educators today now spend more time than ever 'teaching to the test'. Projects, hands on experiences, field trips, interdisciplinary units and even programs such as art, music and physical education have suffered as a result. According to the Center of Educational Policy (2008), art and music instruction has declined by 35% since NCLB was enacted. Standards should be a road map for those designing course curriculums not the whole educational experience. As stated earlier, standardized test do not challenge learners to reach those higher order levels of reasoning. Improving student learning will

continue to be a challenge until the federal government shifts some of its emphasis on accountability and standard-based reform philosophy.

Motivation

Assessment can also be a form of extrinsic motivation for the learner. Assessments are used to report student grades, in which their grade point average is calculated upon and thus used as one component of acceptance into an institution of higher learning or remain enrolled in one. With the current economic recession and increasing college tuition rates, the financial burden some students face is quite daunting. One way to offset some of the cost is to receive an academic scholarship, which more often than not has some minimum criteria for student grade point averages. Furthermore, in countries such as the United States, where competitive activities constitute a large part of the culture, testing is often seen as an opportunity to pit one's ability against those of others (Simonson, 2006).

Teacher Quality

Lastly, coming back to the topic of accountability, assessment can be used to measure teacher quality. Teacher quality depends on the rigor of their preparation program, licensing agency, experience, commitment, but ultimately student performance. Trying to quantify a quality teacher is a difficult task. The idea of merit-pay for educators was recently supported with increased federal funds by President Obama in a speech March 11, 2009, but criticized by teacher unions (Meckler, 2009). There is also the realization by educators that they are in a profession with so little control. According to Ingersoll (2007),

Teaching is an occupation beset by tension and imbalance between responsibilities and power. On the one hand, the work of teaching...is both important and complex. But on

the other hand, those entrusted with the training of this next generation are not entrusted with much control over many of the key decisions concerned with this crucial work.

Online Assessment Challenges

The need for accountability in distance education programs continues to rise alongside the increasing number of students taking advantage of it. According to Ruth (2007), "Courses at a distance already reach close to 20% of all the college students enrolled in the United States." Traditional assessments used in a face to face classroom can't be the only method used while teaching at a distance. The whole integrity of the course would be under extreme scrutiny if its only instruments for assessment were in the form of multiply choice and calculation questions, which is prevalent in most science and mathematics courses. The authenticity of one's own work and questions of cheating must be addressed.

Cheating

The topic of cheating or the extent to which it happens can be difficult for many educators to face. In a perfect world students would utilize their academic training and perform to the best of their abilities during assessments, but unfortunately, that is not the case. Disturbing statistics report that 70% of American high school seniors admit to cheating on at least one test, and 95% of the students who said they cheated were never caught (Bushweller, 1999). Dick (2003) reports 12 studies of cheating, mostly with college students, in which an average of 75% of students reported cheating sometime during their college career. To make

the problem worse, many professors who do distance learning don't see cheating as a major problem (Kaczmarczyk, 2001).

The popularity of distance learning can be attributed to the flexibility it affords to its learners. For the most part, students can work on their courses and perform their assessments where and when they want to. This poses a problem for educators because there is no way to ensure all the students are taking the assessment simultaneously, thus creating an opportunity to supply answers to other students. One solution to prevent sharing is to randomize questions taken from a test bank or pool. However, according to Wang (2006, pg. 235), this type of random selection requires the availability of a large number of questions, usually hundreds and thousands of them, depending on the number of questions to be picked each time. The table below is provided by Rowe (2004) to illustrate the common questions shared by two students relative to pool size.

Table 1. Example calculation of the overlap of two randomly chosen student tests.

Number of questions selected at random	Pool size	Average number of questions in common for two students
5	10	2.5
10	20	5.0
20	40	10.0
30	60	15.0
40	80	20.0
5	15	1.7
10	30	3.3
20	60	6.7
30	90	10.0
40	120	13.3
5	25	1.0
10	50	2.0
20	100	4.0
30	150	6.0
40	200	8.0

Creating large question banks poses two problems for an educator; it can be very time consuming and with such variability of questions are the students being fairly assessed with respect to one another.

Student Verification

There is also a challenge instructors face surrounding how to confirm the assessments submitted are actually from the students who are receiving credit or certification for the course. Some solutions suggested by Wang (2006, pg. 236), include the once-a-semester on-campus exam, open book exams, or proctored supervision. Though, the on-campus exams and proctored supervision measures completely defeat the advantages of flexibility for distance education and create scheduling conflicts. Locating a dedicated testing site to administer the exam can be logistically challenging and costly, and finding an impartial proctor, one who has no vested interest in the outcome of the exam, is difficult.

Listed below are a few other solutions and philosophies presented by educators in a professional discussion board on the topic of cheating.

Here are an accreditation team member's comments on cheating in a program for a Master of Science in Nursing. "If they want to cheat they will either online or in person; however, they are only hurting themselves. This has been a lastly comment I tell people because it is so true. If they cheat on a test and that knowledge is needed in the field it will cause them to fail there instead of on the test."

Here is a comment from a high school teacher. "Parents could be the proctors. If the student had to have parents sign a form or meet for a 20-30 minute class on proctoring,

it might help the parent take a more active role in making sure that cheating is not happening.”

Have these people lost their minds? Parents have more at stake than the student considering most financially support their children’s academic pursuits. Then there is the comment about nurses only hurting themselves by cheating, they work in the health care industry! If they are going to fail it shouldn’t be at the cost of the patient’s wellbeing, it should be in school. The absurdity of these comments helps illustrate the need to address the problems of cheating and how different assessment techniques need to be implemented for distance learning.

Recommendations for On-Line Assessments

The need to alter assessments for distance learning is not solely a function of accountability, as much as it is a need to account for new instructional practices of the teaching and learning environment. Moving courses from the traditional classroom to an online setting fundamentally shifts human interaction, communication, and learning paradigms (Robles & Braathen, 2002). Assessment needs to be developed during the instructional design phase and not as an afterthought to an end of course final. It should be in place before the instruction is planned and definitely before implementation. Assessment should be designed to measure what students know and don’t with respect to learning objectives or expectations. Two experimental studies have shown that students who understand the learning objectives and assessment criteria and have opportunities to reflect on their own work show greater improvement than those who do not (Frederikson & White, 1997).

Assessments For Learning

There is a philosophical shift among some educator working in both traditional and distance education, from *assessments of learning* to *assessments for learning*. Assessment of learning centers mainly around high stakes objective tests that are traditional used by the government, where as assessment for learning focus on the learners. It is student-centered: where self assessment, peer evaluation, cooperative learning, and student input are all components to the learning. It also incorporates the ideas of formative assessment by using frequent feedback to make revisions to instruction. For example, take a typical homework assignment completed by a student the evening after she was taught a lesson. Upon grading it the next day she ended up missing 5 of the 20 questions. Assessment for learning would suggest an opportunity exists to fill in gaps to the misconceptions as opposed to just recording a 75% in the grade book. This philosophy of assessment for learning coincides well with distance education, which requires students to take responsibility for their learning.

Interaction

Interaction has long been considered by educational theorists to be a key to success in learning (Wang, 2006, pg. 61). Student – student and student – teacher interaction has been a main concern for distance education providers. With the use of a course management system this concern has been greatly reduced. If utilized, discussion boards can provide an opportunity for students to communicate by posting comments and responding to others. Informative feedback can be provided by peers creating situations that require students to evaluate and analyze their own idea and those of others.

On-line Quizzes

On-line quizzes offer ways to check student's factual knowledge about an objective. They provide immediate feedback to the student, allow for retakes, and are relatively easy to develop and administer using a CMS. Though, as stated earlier, the question of accountability should make designers of a distance courses consider how on-line quizzes are utilized. If a small portion of a student's final grade (10%) was dependent on the completion of the quiz instead of its actual score many of the previously stated problems would be alleviated while still accomplishing the purpose of the assessment.

Collaborative Work

Nothing mimics the realities of the work place in education as well as students working together as a team on a project, presentation, or real world problem. According to most directors and administrators, those most likely to get fired or fail to advance within the organization are the ones who work poorly with others. So why not provide students with those skill sets to meet the needs of the real world? It is simple; assessing cooperative learning activities is more difficult. Assigning individual grades poses problems because some group members might not have fulfilled their portion of the project. Therefore, grading the group as a whole will either results in the other group members picking up the slack or the quality of the work will be reduced. This situation isn't that different from what happens in many business, educational, or government organizations around the world every day. Eventually those doing more work will have decide if their efforts alone will permit them to rise to the top or if further action in required. It can be hard to decipher the main contributors from the slackers in a distance education project. However, creating criteria that allows students to rate the

participation and performance of other team members could prove to be vitally important during grading and not to mention motivating for those less compelled to participate.

The technological advances of the last 10 years have greatly enhanced the methods with which students can collaborate. Students can communicate on private discussion boards, e-mail, text message by phone, talk on the phone, and use Wikis. They can create presentations using multimedia tools such as PowerPoint, OneNote, or use a stylus to digitally ink on their monitor as they would a piece of paper. Finally, students can incorporate digital pictures, audio, and even video into a project. All of these applications can be saved, organized, and transferred via the web. As technology and bandwidth increases, so will the use of these applications for students and teachers.

Essays

Research, critiques, and position paper all require a student to gather, evaluate, and then synthesize that information using knowledge from the course to build relationships for new situations. Technology has significantly reduced the time required to conduct research and compose writing. Students can search scholarly data bases and view full text without ever going to the library or waiting for a book or a paper on inter-library loan. The ease with which having another person proofread a paper is only a mouse click away. Revising content and correcting errors is almost effortless when compared with the old paper and pencil format. Submitting the paper on a CMS alerts the student with a message that the content has been received.

The subjective nature evaluating essays can be made easier with the use of a rubric. A rubric is a guide for how the paper will be graded; establishing points and weights for the

quality of work with respect to different aspects of the assessment. Rubrics can be provided to students prior to assessments, clearly defining the instructor's expectations.

Conclusion

As the mechanism of learning paradigms are changed, so should the assessment delivery method (Xin & Creasy, 2004). Assessments for distance learning need to be integrated during the instructional design phase. Clear expectations and specific criteria relating how assessments will be graded and how each assessment contributes to the students overall success should be conveyed. Assessment should be student directed consisting of: discussion boards, on-line quizzes, collaborative projects, real world problems/case studies, and essays. The use of multimedia applications should be encouraged to enhance these assessments. Further investigations related to the topic on *assessments for learning* should be considered. Finally, with such a large emphasis of on-line assessments placed on the student's writing skills, it is important that the instructor design rubrics that focus on the objectives of the course more than a student's writing ability.

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