Chapter 12
A Case Study Analysis of the Use of Online vs. Proctored Final Exams in Online Classes

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EXECUTIVE SUMMARY

This case study examines the results of an effort by a large regionally accredited institution to assure the integrity of its online final examination process. The question of whether the student outcomes achieved when administering an entirely online final exam are comparable to the outcomes achieved when administering proctored final exams for online (elearning) university classes is the primary focus of this study. The results of an analysis of over 100 online courses and 1800 students indicate that it is possible to establish processes and procedures that allow the results achieved by students on their final exam to be comparable irrespective of whether the final exam is proctored or is a fully online examination.

BACKGROUND

The online learning program evaluated in this study is a regionally accredited, university offering a range of undergraduate and graduate degree programs to students in both online and face-to-face formats. The university offers programs in business, management, and technology specifically directed toward working adult professionals. Online courses from each of these programs were included in the study.

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A secondary purpose is as stated by James, McInnis and Devlin (2002) the question is whether on-line assessment is having an influence on the quality of learning. This study directly addressed the issue of the need for online universities to employ processes that will scale to allow for effective management of large numbers of online course takers.

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fective management of large numbers of online course takers.

The study was a large-scale study that incorporated data from 100 online elearning courses and over 1800 students across the full range of undergraduate course offering at the institution studied. Through an analysis of archival course records and student final exam grades, the researchers were able to conduct statistical analyses of the data for a sample of 50 courses in each group (online and proctored final exams), a total of 100 courses and in excess of 1800 students.

SETTING THE STAGE

Enrollment in online courses has been growing at an extremely fast rate for the past several years and is projected to continue this growth for the foreseeable future. One of the issues this dynamic growth has created is the scalability of the internal management processes and systems within the university. Processes that were time-tested and worked well for a few hundred students tend to encounter problems when the student population increases to thousands and tens of thousands of course takers per term. The university studied is a classic example of such rapid growth.

As working business professionals participate in distance learning at increasingly higher rates, it is important to identify specific instructional technology that can scale readily to support this increasing population of course takers and provide positive outcomes for these students. Institutions of higher education are actively expanding or implementing online education programs to meet this burgeoning trend. The need to identify instructional technology that supports the increasing number of online course takers becomes increasingly important to the success of such programs.

LITERATURE REVIEW

This study focused on one of the key administrative and educational issues affecting eLearning, the scalability of the final exam process. Wellman and Marcinkiewicz (2004) state that "as educators adopt online instructional techniques, one of the challenges they face is assessing learner mastery of course content." James, McInnis and Devlin (2002) stress that if lower-order learning becomes the result of online assessment, then the gains made in efficiency, staffing and cost savings may be offset by a drop in the quality of the outcomes achieved.

The final exam process design assured that final exams were administered consistently and included comprehensive coverage of the entire course. All final exams included a wide range of questions, covering both lower level and higher-level cognitive skills as defined in Bloom's Taxonomy (Bloom et al, 1964).

Traditional assessment techniques are costly and time consuming efforts, which an online course management system should be able to alleviate, if the results of the online process can be trusted (Rowe, 2004). The issue of trust has been a significant factor in slowing the implementation of online testing. While plagiarism has been the a focus of many online programs there has been much less attention paid to other problems related to the issue of dishonesty in online assessment (Rowe, 2004).

It is important to remember that cheating on final exams is far from a new phenomenon and certainly not a situation, which is unique to the case of an online examination. Bushweller (1999) cites statistics stating that 70% of American high school seniors admit to having cheated on an in-class exam. Further 95% of the students who did admit to having cheated said, they were never caught. Numerous other authors support the perspective that cheating on exams is not a phenomenon unique to the online environment, including Cizek (1999) who makes the point that