A STUDY OF STUDENT PERFORMANCE IN AN ONLINE *INTRODUCTORY FINANCIAL ACCOUNTING* COURSE COMPARED TO A TRADITIONAL CLASSROOM SETTING

Mike Simon, MBA, CPA
Louisiana State University in Shreveport
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The use of online courses in higher education has become increasingly widespread in recent years. However, there has been ongoing debate regarding the achievement of certain learning objectives by students and the means of measurement applied by those facilitating various courses, particularly in the field of accounting. Recent opportunities at Louisiana State University in Shreveport have allowed for the study and comparison of student performance in an online course format compared with that of a traditional classroom setting for Introductory Financial Accounting course offerings for the fall semester 2010. The results provide preliminary evident as to the relative merits of the two approaches.

THE STUDY

For the study, the author taught two sections of Introductory Financial Accounting in two different learning environments – online and traditional classroom. This afforded the opportunity to compare the performance of students enrolled in the sections taught in the traditional classroom with that of the online section of the course. At the start of the semester, there were 42 students registered for the classroom section and 28 students registered for the online section.

For consistency in general comparison purposes, the students in each section were assigned the same homework problems, issued quizzes covering the same material, and were administered in substance the same exams. Students participating in the online course physically attended class to complete their exams in the presence of the instructor, but quizzes were administered and completed online compared to the traditional classroom students who completed their quizzes during regular class sessions. Also, students participating in the online course were required to submit online a short weekly assignment whereas students in the classroom course completed the assignment as part of their homework which was then reviewed during regular class sessions with the instructor.

Quizzes
The traditional classroom students were measured on their best five out of seven quizzes administered while the online class students were measured on their best seven out of 10 quizzes administered. The seven quizzes administered to the traditional classroom students were in substance identical to seven of the 10 quizzes administered to the online students. In order to keep students engaged and to help compensate for physical class attendance and traditional in-class participation, the instructor decided to measure student performance on a more frequent basis (10 quizzes) for the online section compared to less (seven quizzes) for the classroom section. In addition, the quizzes for the classroom were administered on specified days/dates in a time-controlled environment on the day/date of the quiz, while the online course students had a window of time (72 hours) during which to complete their quizzes. Also, students in the online section had access to the course text book and any other aids for the quizzes while the traditional classroom students completed their quizzes during the first 10 – 15 minutes of class on previously announced days/dates.
Exams
Students in both sections of the course were required to physically attend class in order to complete the four exams administered during the semester. Exams for both sections were given in a time-controlled environment administered and supervised by the instructor on the same day/date and the substance of each exam for both sections was identical.

All course materials and resources were made available to students in both learning environments. One issue often raised in the debate over the two learning environments is the interaction and discussion that occurs in the classroom setting when compared to the nature of an online setting. In an effort to facilitate similar interaction and discussion within the online group, the instructor made available to students an electronic bulletin board where students had the opportunity to post and share questions or comments about course material with each other and the instructor. These posts were not mandatory and were not a means of measurement for the online section.

Withdrawal Dates
Students in both sections had the opportunity to withdraw from the course by specific dates predetermined by university administration. Depending upon these deadlines, students received either no grade or posting on their transcript with tuition refunded in-full or a grade of “W” with some or no refund.

RESULTS
Comparisons of the student learning, as measured by student performance on quizzes and exams, offered some interesting results. Further examination of the course withdrawal rate, pass/fail ratio, and specifically the overall mean score for each class became even a greater matter of interest than the means of measurement for student learning.

1. Overall quiz mean scores for students who completed their relative section of the course with a passing grade was 82.2% for the traditional classroom section compared to 93.9% for the online section.

2. Overall exam mean scores for students who completed their relative section of the course with a passing grade was 82.8% for the traditional classroom section compared to 86.7% for the online section.

3. Overall total mean scores for students who completed their relative section of the course with a passing grade exclusively including scored quizzes and tests was 82.2% for the traditional classroom section compared to 87.7% for the online section.

Although these measurements seem to lead the reader to believe that students in the online section outperformed the students in the traditional classroom, in looking at the course withdrawal rate and pass/fail ratios, we find a significant matter of interest.
1. 39 of the 42 students, or 92.9%, that initially registered for the traditional classroom section completed the course with a passing grade. Two of the 42 students, or 4.8%, failed the course, and one student received an incomplete grade. None of the students that originally registered for the class withdrew from the course, but rather tried to complete the course as best possible.

2. 19 of the 28 students, or 67.9%, that initially registered for the online section completed the course with a passing grade; significantly lower than the completion and pass rate for the traditional classroom section. Three of the 28 students, or 10.7%, failed the course, and six of the students, or 21.4%, originally registered withdrew from the class by the designated deadline.

Discussions with students who withdrew from the online section revealed that their primary reasons for doing so were 1) the course was more challenging and time-consuming than initially expected, and 2) the students felt that they would attain a better learning experience and grade for the course in a traditional classroom setting. These students further indicated that while they were able to comprehend the material provided in an online English or Composition course previously completed, they were unable to comprehend the material covered in the online version of the Introductory Financial Accounting course.

Revisiting the results of each section to include all students who completed their respective section regardless of a passing grade reveals yet another matter of interest, particularly pertaining to the comparison of overall exam mean scores.

1. Overall quiz mean scores for all students who completed their section regardless of passing grade for the traditional classroom section was 81.0% compared to the online course of 91.0%.

2. Overall exam mean scores for all students who completed their section regardless of passing grade for the traditional classroom section was 80.2% compared to the online section of 79.1%.

3. Overall total mean scores for the students who completed their section regardless of passing grade for the traditional classroom section was 80.3% compared to the online section of 80.9%.

**CONCLUSION**

Although the fall semester was the first in which the Business School at Louisiana State University in Shreveport offered its Introductory Financial Accounting course online, the school and university in its entirety plan to potentially expand online offerings in the future. How we measure the results of these initial courses is critical to ensuring future courses are successfully developed, implemented, and modified.
It seems no surprise that the overall quiz mean scores for all students who completed their section with or without a passing grade for the online section surpassed those in the traditional classroom setting. In addition to having more time to complete each quiz, and perhaps more so a contributing factor, was the ability of students to use their text books and other aids. However, there is very little difference between the overall exam mean scores for all students who completed their section with or without a passing grade. In fact, students in the online section actually scored 1.1 percentage points below the traditional classroom students. These results seem to indicate that students in both sections had a relatively similar comprehension of the tested material, and that both online and traditional classroom settings can potentially provide quality means for student learning. Finally, both faculty and students need to shed any misperception that online course sections are “easier” than courses held in a traditional classroom setting, particularly in highly technical areas such as accounting, finance, statistics, etc. to ensure few withdrawals and failing scores for students encountering online courses for the first time.