

IMPROVING ONLINE COURSE DELIVERY

Larry R. Taube, University of North Carolina at Greensboro
Department of Information Systems and Supply Chain Management
lrtaube@uncg.edu; (336) 334-4987

ABSTRACT

Many departments and faculty are using various online delivery mechanisms to teach their classes. The types of mechanisms range greatly in appearance, content delivery, efficiency and effectiveness. What lessons can we learn from those who have gone before us regarding online delivery? What lessons have we learned in our endeavors?

This presentation is initially focused on a completely online course offered at The University of North Carolina Greensboro for the Bryan School of Business and Economics. The author will expand the coverage to additional online courses from different universities in an attempt to learn more about effective and efficient online course delivery and improved student learning in these types of courses.

Given the growth in online courses that is predicted, one would expect to see much more written and published about the topic. This presentation attempts to expand our knowledge on both effectiveness and efficiency.

BODY

Initial Concerns with Course Effectiveness

As universities offer more and more courses online, it is vitally important that we analyze the effectiveness of those offerings, from a student engagement viewpoint to a student-"friendliness" one to a student learning effectiveness standpoint. Efficiencies, from both professor and student perspectives, must also be part of the analysis.

The Bryan School of Business and Economics has offered both face-to-face and online sections of the same required undergraduate core courses for about four years. The author is presently in the fifth iteration of offering the required Operations Management course via online delivery, and has made many improvements over the past four years. Our assessment of student learning was primarily through various learning outcome assessments and end-of-semester student evaluations of both the course and the professor. While Bryan faculty and department heads had also evaluated appearance and content delivery issues, there was still a need for an outside perspective.

Several organizations were selected as possible outside "auditors". A series of criteria were established; these were based on overall process used, client feedback, amount of expected interaction between the organization and teaching faculty, and cost. The Bryan School of Business and Economics utilized an organization named Quality Matters [x] to receive outside feedback regarding the effectiveness for two of our undergraduate core courses. This presentation reports on the modifications that were made based on the recommendations from Quality Matters.

Course Background

Operations Management (SCM302) is a required core course, taught with class sizes around 80 and online sections around 70. Roughly 90% of the SCM302 students will not take another Operations or Supply Chain course, and few possess any prior knowledge of Operations Management. Bryan students sometimes have little appreciation for this course, before, during or after they take it! We have many engaged learners who succeed because of their hard work and their willingness to learn new topics and integrate this knowledge into their general business competencies. The larger challenge for SCM302 (and Bryan in general) is to engage all students in this conversation within all of the common courses and help them succeed.

Description of the Online Learning Improvements within SCM302

Many student learning enhancements are promoted through the online delivery of SCM302, and then many of these are then integrated back to the face to face sections. Lessons learned from online delivery also need to be applied to f2f classes in order to further enhance student learning.

Student course evaluations for the Summer 2011 online offering of this course were excellent. This was somewhat surprising, since many of our students have little or no prior experience with online courses. Furthermore, SCM302 might not be the best course to start one's online experience with, and the compressed summer time frame worsens the stress! There are many different components of the course, and combined with the focus on applying mathematical skills, some students can easily have a less-than-smooth experience with the online version.

The online course design focused on two basic aims: to provide both structure AND to provide flexibility. The structure was important to keep students on schedule with readings and assignments, to enable them to find the resources they needed in a timely fashion, and to give them many opportunities to interact with me. The flexibility was important because students learn in so many different ways, they learn at different times, and they appreciate having some leeway in how and when they deliver assignments. The Bryan School's COOL (Committee On Online Learning) survey [1] indicated that flexibility is very important to undergraduate students also.

Structure was provided by an assortment of devices:

- a. Creation of 40 lesson plans that were divided up into 4 equal parts with 4 exams.
- b. Two emails sent prior to Day One to notify students of important online resources
- c. Additional email sent the first class day directing students to START HERE! link
- d. Getting Started Document with all links on one page
- e. Weekly reading and homework assignments to accomplish all lesson plans and various student learning objectives
- f. Online chapter quizzes and graded homework assignments tied to lesson plans
- g. Topic and Exam Schedules, with all assignments and due dates posted
- h. Methods to contact me, and expected response time based on day of week

Many students have commented positively on these components, as they can always determine what the expectations are of them at any point in time and what they need to do next. I try to do this in f2f (face-to-face) classes also, but sometimes that does not work when you hold class once a week or a student misses a class. This information is always available online, provided they can find it – and the START HERE! and Getting Started resources help with that problem too. I think that the majority of the online students were very successful staying on track.

Flexibility was delivered in three main areas: student preparation, personal faculty support, and course support for different learning styles. All three are important, although certainly a diverse set of learning opportunities/presentations is the most important piece.

The very first online presentation within the course addressed the faculty member's expectations and the necessary level of student preparation to do well in class. Students had to view this video/audio presentation prior to accessing the syllabus. This was an attempt to raise their awareness of the differences created by online courses, how students would need to change their preparations and timing, and how they could find online help and find resources (including the professor) offline. The video and the discussion was successful in setting course expectations, both for the students and for the instructor.

One of the key components to student preparation and performance was the need to utilize excel for different assignments and exams throughout the course. This expectation was well received by the majority of the students, and used by them to produce solid student learning and course grades. Unfortunately, there was a wide range of acceptance, and some online students did not receive this message well, leading to poor performance re course grades. This message continued to be emphasized, in both online and face-to-face (f2f) sections. In the f2f sections, the message fell on even more deaf ears. This was surprising, considering they were in a f2f class. Again, this continues to be an emphasis for SCM302 in future classes, either f2f or online.

Personal support started with the professor's announcement of his willingness to meet with students in a variety of avenues, from a f2f meeting to a very quick email response time to online "live" discussions using Elluminate. Students were very surprised and appreciative of the fairly constant and personal contact they received during the entire Spring and Summer sessions. Of course, this availability is also very time-consuming and inefficient.

The Elluminate sessions received lots of positive feedback, as sessions were targeted to solve each specific mathematical problem types that would be on the upcoming tests. These were recorded and hence available both live and at later times, providing more flexibility for the students. These sessions were also offered to f2f students, and several of them took advantage of this learning opportunity.

Students in SCM302 students have always exhibited different learning styles and abilities concerning the mathematical and critical thinking components of the course. Some students want to see "thousands" of solved problems, while others are fine with two, and some are visual learners. This is always a balancing act for the professor, and rarely results in a solution that is satisfactory for everyone. Online offers many ways to provide flexibility, and SCM302 uses the following options:

1. Annotated powerpoint slides that are part of the lesson plans, explaining each type of homework problem step by step
2. CONNECT software for required chapter quizzes and homework problems
3. CONNECT software for optional homework problems with solutions provided
4. Course menu tab for Additional Homework Problems, with solutions
5. Course menu tab for Exam Quality Problems, with solutions
6. Screencam tutorials for using Excel to solve each type of homework problem
7. Elluminate sessions where I use Excel to solve different problems
8. Saved Elluminate sessions for future reference, and saved in .iOS and ipad formats
9. Met with small groups of students f2f for test reviews throughout course

Online students have written in their course feedback about the importance of these options and the effectiveness of the variety. This assumes that they are willing and able to take advantage of the different sources. The majority of the Summer 2011 online students did that!

SCM302, Version 2.0 - Fall 2012 version

Quality Matters [2] is a consulting firm that provides extensive feedback to online instructors about the effectiveness of their online course design. Three instructors chosen by the Bryan School to undergo an audit! QM feedback included many different areas of course delivery improvement as they gave SCM302 an initial score of 32 out of 100. Many improvements in the course were made for the Spring and Summer 2012 editions, and the overall score was raised to a passing score to about 85.

These instructors also offered a Bryan Master Teaching Seminar on Improving Online Course Delivery. The SEINFORMS presentation will include a powerpoint presentation on Improving Online Course Delivery [3] that provides some details about our improvements and the areas that were addressed. Their Standards consisted of:

1. The overall design of the course is made clear to the students at the beginning of the course.
2. Learning objectives are clearly stated and explained.
3. Assessment strategies use established ways to measure effective learning, evaluate student progress by reference to stated learning objectives, and are designed to be integral to the learning process.
4. Instructional materials are sufficiently comprehensive to achieve stated course objectives and learning outcomes.
5. Meaningful interaction between the instructor and students, among students, between students and course materials is employed to motivate students and foster intellectual commitment and personal development.
6. Course navigation and the technology employed in the course foster student engagement and ensure access to the instructional materials and resources.
7. The course facilitates student access to institutional services essential to student success.
8. The face-to-face and online course components are accessible to all students.

The online course has drastically improved the organization through new editions of the Getting Started Document and the Start Here link. A series of links that provide "one-stop shopping" for students that need various UNCG and Bryan resources, including a link named Keys to Success for Bryan Students.

Thanks for reading and participating in the presentation; I would enjoy receiving any feedback that you may have!

REFERENCES

1. COOL recommendations from Bryan School of Business and Economics
2. Quality Matters website: <http://www.qmprogram.org/about>
3. Improving Online Course Delivery powerpoint presentation by Larry Taube