

Capstone Project for the Faculty Certificate Program

A Web-Based Active Learning Online MGMT200 Course

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Abstract

My project was to build an active learning based online course for Management 200: Introduction to Management Information Systems. The course was designed to primarily use Microsoft Office products and utilized the Desire2Learn course management system. The evaluators of the course were self-selected students from the regularly enrolled MGMT200 courses taught by me during the fall and spring semesters of the 2004-2005 academic year. Massive changes were made between the fall and spring semesters based on student feedback from the fall. Only moderate changes are planned for fall 2005. The major challenge for the course is that it is primarily skilled-development based, giving the students more hands-on experience with Excel and Access so I had to be creative with the active learning concepts.

Introduction

The Internet revolution has had a major impact on higher education, particularly in the area of online education. If a public institution of higher learning has not engaged in online courses, it will if for no reason other than to meet customer demand (Poehlein, 1996). Volery and Ford conducted a survey in 2000 to identify critical success factors for online education programs. The survey results indicated that certain combinations of online course material, teacher quality (communication with the student and giving feedback) and general online access quality as being the major factors that discouraged students from completing the course or enrolling in another course. Media richness was not among the criteria for online course success, despite many studies that point to video as a vital component to student enjoyment of online courses. Rather, step-by-step examples of what to do were considered the most effective learning tools from the student's perspective. For this reason, I forwent the video and concentrated on creating step by step PowerPoint slides of critical examples, complemented by a limited amount of theory, and a lot of exercises and quizzes. Using the exercises and quizzes created a wonderful opportunity for active learning in the online environment.

Course Components

COURSE DESCRIPTION

This course is designed to help students identify, develop, and improve the necessary skills to be outstanding managers of data to generate information, knowledge and wisdom. Further, the course is designed to aid the student in developing business communication and team skills. Topics covered include understanding the impact of information systems on the modern organization and society, and using information systems for decision support, organizational and enterprise-wide support. Students will have an opportunity to broaden their thinking and information leadership potential by participating in numerous exercises designed to help understand the role of technology in the modern workplace.

The course objectives is to provide the student with an overview of information systems while developing their analytical and critical thinking skills through the application of productivity tools.

When the student completes this course, they should be able to:

1. Explain how data, information, people, and procedures are combined to form an information system in various business functional areas.
2. Discuss the types of information systems that are needed to support the various levels of a business enterprise.
3. Discuss the process of analyzing, designing, and developing an information system.
4. Demonstrate an ability to use Microsoft Office software i.e. spreadsheet, presentation graphics, and database software to analyze business problems and support business decisions.
5. Demonstrate an ability to use the Internet and other network resources.
6. Intelligently discuss important issues that promise to affect the future of information technology.
7. Intelligently discuss how information systems influence organizational competitiveness.

TEXTBOOK

There is no regular textbook for this class. All the reading material is available on Desire2Learn. **Most** of the general reading material is in the form of PowerPoint slides. The cases are in Microsoft Word. However, if a student feels he or she needs to read more about a particular topic or feel they need more detail, there is a detailed chapter available on e-book reserves. No student used the e-book reserves during either semester.

REQUIRED SOFTWARE

Microsoft Office including Microsoft Word, Microsoft Access, Microsoft FrontPage, Microsoft Excel and Microsoft PowerPoint

This is an introductory course, so little or no additional business information technology (IT) systems background is assumed. In reality, however, students enter this course with vastly different backgrounds ranging from minimal exposure to a high level of business IT expertise. For this reason, all of the lectures, exercises, problems, and quizzes are made available immediately so that students are able to complete most of the exercises on their own pace, including self-selecting into group exercises.

ASSESSMENTS

Exercises/Projects

Students are expected to complete 16 projects during the semester, including 1 required group project to experience virtual teams. Other group projects are self-selected, meaning students can elect to complete the other 15 exercises on their own or with a group. Group work is only required in the one virtual team exercise.

Quizzes

Each lecture is accompanied by a hands-on exercise preceded by a detailed example, especially if the exercise requires the use of applications software. Each lecture is also followed by a quiz of 5-10 questions that requires students to demonstrate application of the material beyond what was covered in the class. Each quiz can be taken as many

times as possible to earn a perfect score (the quizzes contain a set of randomized questions, with a test bank of approximately 30 questions per topic OR a pre-set mathematical formula, minimizing the opportunity for repeat questions).

Exams

The exams are designed to evaluate the student's comprehension of material rather than just memorization. Questions will include multiple answers, fill in the blank, true-false and essay. The questions are also designed to improve the student's critical thinking skills.

WORKING IN GROUPS

Students are encouraged to work in groups on any assignment but not on the quizzes or exams. Students are required to work in a virtual team the first week of classes and from that experience it is expected they will form groups with which to work throughout the semester. Not all students will work in groups but for students who are not working, the social interaction is an absolute necessity to develop their social skills. Thus, the non-working students are encouraged to participate in group discussions, and if they are on or near campus, to meet face-to-face if desired. This semester, I provided space in my office for them, replete with nourishment (hence the missing desk).

ARBITRATION

Students have one week after the date of grades submission to contest a final grade as posted on the MNSU grades system.

GENERAL COMMENTS

- All assignments, quizzes and exams are to be submitted using Desire2Learn. I do not accept paper copies. I recommend students print a copy of each completed exercise and quiz as study guides.
- Students are encouraged submit questions to me via email but if the question is common enough, I answer the question via the discussion board under the frequently asked questions discussion.
- I generally respond to email within twenty-four hours, excluding weekends.
- Any act of dishonesty related to the projects will result in lowering a student's course grade by one letter. Dishonesty during an examination will result in my assigning a disciplinary grade of F.

TOPICS/MODULES COVERED

Introduction to the Class

What is a "Business?" How to organizations use information?

Role of Information in Society

Being Information Literate: Information Literacy

Information Literacy, and Qualitative and Quantitative Information Systems

What are systems? Role of systems in business and society

Introduction to Databases, Microsoft Access and Microsoft Excel

Designing Information Systems: General Design/Tables, Input/Forms, Input from other data sources, data processing, output

Designing Information Systems: Networked systems and web-based systems

Business Information Systems: ERP, CRM, Operational Systems, Collaboration

Systems, Decision Support Systems, Visualization Systems

Current Topics in IS: Information Ethics, Computer Crimes, Information Security, Mobile Computing, and U-Commerce

COURSE LAYOUT

Because the course is online, I changed the course layout from one of an hour and 15 minutes two days a week with homework to an hour and half per day, four days a week format (I may change this). The format allows students to complete the course at their own pace while also allowing me to keep track of individual progress. By having the material available Monday – Thursday, I can use Fridays to evaluate student progress, send reminder emails, etc to make sure students are getting sufficient attention from the instructor. Each module has a group discussion board that groups self-select into to discuss topics. I do not require group discussions EXCEPT for the virtual team project that occurs within the first week of classes. However, group discussions are used as a second tool to improve the grade that is borderline (e.g., 1 or 2 points from the next highest grade level but not 10).

ASSESSMENT STRATEGIES

Pre-test

A pre-test is given the first hour of class; covers topics/modules across syllabus. Correct answers are awarded as extra credit points (up to 20 extra credit points, e.g., not enough to keep them from having to take a quiz, exam or complete an exercise but enough to bridge them between a very high C and a B-)

Quizzes

Quizzes are available prior to the beginning of a new module in which students are encouraged to take prior to the lecture which does not count unless the student earns a perfect score. The student can take the quiz up to four times, with only the highest score counting. The questions from the quiz are a bank of about 30 questions per module, with the modules including math using the Arithmetic 2+2 option in D2L. Otherwise, the questions are usually multiple answer, true false, or fill-in the blank.

Exercises

Students are given a minimum of one exercise for each module. While many of the exercises are designed to test their knowledge and improve their skills, some of the modules are active learning based. For example, the “What is a Business module” begins not with an explanation and lecture but with student’s brainstorming about what constitutes a business, *asynchronously*, and at the end of the week, the students drop-box a three slide presentation on what constitutes a business. I then take from the slides the best concepts and present them as the presentation of what constitutes a business as the lead-in to the brainstorming about how businesses use information. Many of the skilled-based exercises are case-based utilizing cases I have developed from current events in the private as well as public sector found in the Wall Street Journal, current scholarly literature, and popular business magazines.

Reflective Papers

This semester I had the reflective papers added to the final exam as I wanted an overall picture of people’s impressions of the online material. But in the fall, I plan to incorporate reflective papers at the end of any module where reflection is most valuable (too many reflection papers, I found out last semester, diminishes the student’s desire to complete them). Planned reflection papers are included for the information literacy exercises (of

which one requires the students to work as virtual team mates), the designing of a business website, and the use of applications technology in business.

Exams

There are three scheduled exams for the class, two covering one half of the class, and are depth questions, based more on the exercises than concepts, and a final that is similar to the breadth questions on the pre-test.

SUMMARY

The course was presented during Fall 2004 where students enrolled in my regular class could opt to take the course online without penalty (or switch back and forth depending on their schedule). The course was improved with comments from the fall 2004 cohort and re-presented again in the Spring 2005 with the same option (regularly enrolled students could take the course online). All students took the opportunity to do at least one module online. During the fall, 24/72 took the class online, in the spring 40/108.

D2L is not as conducive for online courses as other technologies I have worked with. The collaborative tools are not easy for students to organize and share information. Also, the limitations of the interface make it difficult to create a more icon based approach to the courses.

I had limited problems with cheating but enough such that I did institute no partial credit on math or multiple select questions (students quickly figured out that if I gave partial credit on the multiple answer questions and that if only one or two answers were correct, they would do better to not give any answers).

Also, I need to provide much better feedback and hints to students on quizzes.