

(5a) Proposal Title and Abstract

Web-Based Multimedia Teaching Aids for Operations/Supply Chain Management

The proposal's purpose is to create a set of multimedia teaching aids to enhance the instruction of Business Decision Modeling, OMGT3223, Operations and Supply Chain Management, OMGT3123, and Logistics and Materials Management, OMHT4743/OMGT6743. Historically these are taught as survey courses and many times lack real life examples for students to reflect on. The teaching aids will provide students with rich examples of the processes businesses use to model and solve problems. Successful outcomes as well as not-so-successful outcomes will be presented to give students perspective on what strategies work and which do not. The multimedia teaching aids enhance student learning by providing real life examples coupled with an interactive interface. An example of a multimedia teaching aid being developed is a video tour of operations at the Ports of Morehead City and Wilmington. The aids are Internet based and integrated into the Operations and Supply Chain curriculum via the instructor's website. This allows for widespread distribution, real time update of material as needed, and multiple format provision (i.e., text, sound, video, and hyperlinks). The aids will be designed, created, and updated using software such as Camtasia, Dreamweaver, and Macromedia Flash.

(5b1) Purpose/Objective

The purpose of this proposal is to provide students with real life examples centered on business problem solving. It is well documented that students, learn more, learn at a faster rate, and retain more when real life examples are used.¹ The three courses (OMGT 3123, OMGT3223, and OMGT4743/6743) this proposal will impact are taught as standard survey style courses. However, as with any survey based course the vast majority of the material is contained within texts and/or discussed in lectures. There is a lack of teaching material regarding real world business applications and a greater lack of student involvement in these business applications. In addition, any examples that do exist tend not to be multimedia in nature or Internet based leading students to a one-dimensional learning experience.

The first objective of this proposal is to increase student involvement with real world business examples. The aids involve companies that student's experience or have experienced in their everyday lives here in Eastern North Carolina (e.g., NACCO, PCMH, North Carolina Port Authority, Moen). A second objective is to allow easy access to these examples for students. With the proliferation of computers and the World Wide Web, multimedia style aids delivered via the Internet have become a very effective avenue to bolster students understanding of classroom material as well as real life examples (INFORMED, 2003).²

Organizationally the aids are to be arranged around some noteworthy successful and not-so-successful industry scenarios. Successful, as well as not-so-successful, scenarios are chosen to give students the ability to distinguish good decision-making versus poor decision-making at the operations level. Learning outcomes include demonstrating a better understanding of

¹ Corey, R. (1996). Uses of Cases in Management Education. HBS Press: Cambridge, MA.

² INFORM-Ed (2003). The Educational Website of the Institute of Operations Research and the Management Sciences

business operations and processes, comparing problem solving methods of different Eastern North Carolina businesses, as well as identifying common roads to success.

(5b2) Project Description (Approach/Method/Procedure)

The method of developing the aids is two fold: (a) material will be collected from a number of companies in Eastern North Carolina in a number of different industries and (b) collected information will be aggregated into a teaching aid utilizing a web-based multimedia approach. This material includes but is not limited to related business articles, financial statements, and video clips of pertinent company events including employee interviews, plant tours, commercials, etc. Preliminary information including general business information and video footage of employee interviews, facility tours, and process capabilities has been collected.

In being referred to as multimedia, the aids will incorporate text, video, and sound into the presentation. The aids will be developed using a web developing tool such as Dreamweaver and published via the College of Business website. The teaching aids will be assigned accordingly within the OMGT3123, OMGT3223, and OMGT4743/6743 curriculum. A partially completed teaching aid regarding the North Carolina Port Authority can be found at the following URL: <http://core.ecu.edu/omgt/krosj/NCPORTS1.html>. A total of four aids (two successful and two not-so-successful scenarios) will be developed. The effect of the aids will be measured using the survey detailed in section (5b5).

(5b3) Need and Impact

OMGT3123 and OMGT3223 are a required course for all Business majors while OMGT4743/6743 is a crosslisted undergraduate and graduate course for Operations and Supply Chain Management majors only. I teach a combination of 3 sections of the courses per semester with average enrollment of 35 per course and 2 sections during the summer session. Therefore,

approximately 280 students per year will be impacted by this curriculum enhancement.

Approximately 50% of the OMGT3123 course, 50% of the course curriculum of the OMGT4743/6743 course, and 25% of the OMGT3223 course curriculum will be impacted by this proposal. At present, there is no reasonably priced or comprehensive medium (i.e., textbook, website, etc.) that introduces the range of topics covered by or the multimedia content suitable for these courses. The use of web based, multimedia aids not only meets this need but also allows for an easy, inexpensive manner for distribution of materials and enhances instruction by providing students with many different learning media (text, graphic, video, and sound).

(5b4) Schedule of Activities and Their Proposed Deadlines for SS1

This proposal request is for the development of four initial multimedia teaching aids based around two successful and two not-so-successful scenarios. The preliminary materials (e.g., news articles, video clips, financial statements, industry comparisons, etc.) that have been collected must be organized into complete multimedia teaching aids. The provided schedule is based on previous experiences with development of curriculum and web-based teaching material.

Date	Activity
May-Week 1 and 2	Organize collected material-chose 2 successful & 2 not-so-successful scenarios for development into multimedia teaching aids
June-Week 1 and 2	Integration of files into multimedia web-based tools
June-Week 2 and 3	Complete teaching aids & post to website for perusal & testing
July-August	Complete evaluation instrument-integrate teaching aids into lesson plans
Fall/Spring Semesters	Teach with new multimedia teaching aids integrated-evaluate at end of course

(5b5) Evaluation Plan

Each of the instructor's sections will have the multimedia teaching aids integrated within the course. At the end of the course, students will be asked to complete a survey instrument that collects data on two high level areas: (1) recollection of key concepts, terms, and techniques,

and (2) impact of the multimedia teaching aid experience on overall learning. The survey will be administered via BlackBoard. It will specifically ask students to respond to a set of descriptive and exogenous variables (e.g., major, gender, etc.) and survey their recollection of common course curriculum concepts using ten randomized multiple choice questions selected from a question pool. Due to space constraints only a partial example copy of the survey is available at the end of this proposal. The full survey can be perused at the following URL,
<http://core.ecu.edu/dsci/krosj/asesmnt4a.htm>.

Please indicate which answer best describes your current status:

Standing	Fr.	So.	Jr.	Sr.		Major	ACCT	FIN	MGMT	MIS	MSCM	
Gender	M	F				Expected grade in this course	A	B	C	D	F	
Approximate business GPA												
4.00	3.75	3.50	3.25	3.00	2.75	2.50	2.25	2.00	1.75	1.50	1.25	1.00

Use the 5-point scale to rate your response to the following questions:					
Overall from your class experience:	1-Strongly Disagree	2-Disagree	3-Neutral No Opinion	4-Agree	5-Strongly Agree
Would "multimedia", experiential learning in class help you understand topics more clearly?					
	1	2	3	4	5
If you had more multimedia experiential learning would your understanding of course material be clearer?					
	1	2	3	4	5

- Twenty samples of size 3 are taken from a stable process, and the average means of the sample means is 412.5, the average sample range is 10.5. What is the lower control limit (LCL) for the xbar-chart?
A. 412.5 B. 0.00 C. 401.76 D. 1.5
- A product has demand of 4000 units per year. Ordering cost is \$20 and holding cost is \$4 per unit per year. The EOQ model is appropriate. The cost-minimizing solution for this product will cost _____ per year in total annual inventory costs.
A. \$400 B. \$800 C. \$1200 D. \$0
- Fabricators Inc. want to increase capacity by adding a new machine. The fixed costs for machine A are \$90,000, and its variable cost is \$15 per unit. The revenue is \$21 per unit. The break-even point for machine A is
A. \$90,000 B. 90,000 units C. \$15,000 D. 15000 units
- Break bulk cargo at a port facility must be loaded
A. In containers B. Above deck C. Individually D. By hand