

ASSESSING STUDENT SATISFACTION OF WEB-BASED INSTRUCTION

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ABSTRACT

Among the issues in education today, none is more far reaching and pivotal than the development and utilization of new technologies. Among the technologies which are in their infancy is the use of the web as a delivery system. Web-based education is viewed as both a threat to those who subscribe to traditional teaching pedagogues and as an opportunity to those who see it as a means to expand the reach of an institution and use resources efficiently.

While distance education is a reality for many institutions of higher learning, the current literature speaks more to the technological and quantitative aspects of these delivery systems more so than qualitative ones. There is less research on the outcomes of web-based instruction because of its relative newcomer status to distance education. With the possibility of web-based instruction to deliver outcomes of a traditional lecture class, at issue is what type of modifications are necessary in the pedagogy to optimize this result.

There is little in the current literature which compares the satisfaction among students who enroll in web-based courses vis-à-vis those who take the same course in a traditional classroom environment. The research question for this study asks if distance education, and specifically a web-based course, offer the student the same learning experience, satisfaction, and outcomes of a traditional class.

To answer the research question, a pilot study was conducted at Northern Arizona University in the Spring of 1998. In this study, two sections of the same undergraduate course were taught concurrently by the same instructor during the same semester; one as a traditional lecture class (n= 40) the other as a web-based class (n= 15). Both classes used identical pedagogical materials consisting of

PowerPoint slides of key lecture comments. Creative Advertising Strategies, a junior level class, was chosen as for this study.

This course is required for all advertising majors and is an elective in the promotion track of the marketing major and was selected as it utilizes both lecture material and team project work.

At three intervals during the Spring, 1998 semester student perceptions were measured utilizing a 17 question instrument administered in both sections. Among the dimensions evaluated were: convenience, overall satisfaction, ability to have questions/issues answered, ability to progress satisfactorily, and ability to work on a team project. Questionnaires were administered at roughly monthly intervals at 4, 8, and 12 weeks into the semester. A five point Likert scale was utilized to measure the student perceptions for each question.

Overall, five broad conclusions are implied:

- (1) Students in both the web and lecture sections reported greater overall satisfaction as the course progressed throughout the semester.
- (2) Throughout the semester, the lecture section reported greater over-all satisfaction with the class at all reporting intervals.
- (3) The greatest strength reported by students in the lecture section was "faculty and student interaction" while web students cited "convenience."
- (4) The greatest weakness reported by students in the lecture section was "inconvenient time/location " while web students reported "lack of faculty and student interaction." This was the opposite of the strengths noted by each section.
- (5) Consistent with lower over-all satisfaction in the web class, students performed 4% to 10% below the lecture class on both the mid-term and final exam.

Further research incorporating the learning from this pilot study is indicated.

When the course was developed, CEO's or Vice-Presidents from top Internet companies were recruited as guest lecturers.

As anticipated from the focus group findings, 77% of students surveyed indicated they would not be willing to take an additional prerequisite in order to take the proposed course. One interesting finding from the survey was that 42% of the students already have a home page.

When asked if they would like a project to be part of the class, 87% indicated they would. When asked if the project should be a simulation or a real client project, 12% said simulation, 64% said real client, and 24% indicated both. When the course was offered, the teams were allowed to choose real clients as part of the project to both develop an Internet marketing plan and for the marketing part of a web site.

Survey Conclusions

This research clearly identified a strong interest in an Internet Marketing class and the authors of this report worked together to create a pilot class based on this research and their experience in the field.

The students most interested in taking this new course were Business majors concentrating in Marketing. They preferred to take a course with a practical rather than theoretical orientation. They wished to not only learn the theory, but also put it to practice with a project, preferably with a real client.

Although there was much interest in this new course, students are unwilling to take additional prerequisites beyond those already in their business program in order to take this course and prefer that this course be an elective rather than required.

Assessment of the Computer Environment

Because all of the professors interviewed described major problems in getting a lab that worked reliably, an assessment of the proposed lab was made. An assessment of software needs also was made. Site licenses for all software was secured and installed on the cart to be used and in the labs.

Course Description

The following course description appeared on the syllabus based on a compilation of all the research that had been completed.

This course provides students with the knowledge of the role of online marketing and the tools a manager can use to make online advertising, public relations, and sales and customer relations, effective for his or her company to create a competitive advantage. It compares the new

interactive marketing methods with traditional marketing approaches and examines how to view them strategically from a marketing perspective. Exploring on the Web will be required either in a lab or with a student's personal computer. Both group and individual projects will be required.

The topics covered in class included a history of the Web, brand equity building, models of Internet Marketing, effective Web design elements including audio and video streaming, creating a competitive integrated online and traditional marketing program to establish lifetime relationships with customers, and research for online customer profiling and segmentation. Other topics included the differences in effective online advertising including how to design it, how to charge for it, and how to buy it. The sales topics included online promotions, secure payment systems, how to convert surfers to buyers, interactive and online public relations, security, electronic transactions, legal issues, and privacy concerns.

Grading included a midterm and final, as well as group and individual projects.

Midterm	100
Final	100
Group Project	
Tours/Analysis	20
Tour Presentation	15
Group Web Site	75
Group Web Report	75
Group Web final Presentation	30
Individual labs (5 points each)	35

The group projects included a Safari Presentation Tour in class for 45 minutes of three Benchmark sites in five areas by five teams including Cool Graphics/Entertainment, Advertising, Sales/Promotion, PR/Social Responsibility, and Customer Service/Support with handouts for the class and a written report. This project also included securing a real client, developing a competitive advantage report based on expert interviews and a marketing focused web site. Individual aspects included take home labs examining benchmark sites and written analysis on specified sites each week.

Final Course Results

The pitfalls of actually implementing the course included finding a lab and an Internet hookup which worked, obtaining quality guest lecturers, and identifying a relevant text. For instance, the first week the main server for the University crashed, making the Internet show-and-tell lecture impossible to deliver. The cart had

online connecting problems throughout the course. Backups of web sites using a web snake were brought in on Zip disk after the first frustrating week.

The second week, we discovered that inadequate fiber optic hookups (ten) caused the network to crash when thirty students attempt to go online.

The third week, all in lab exercises were abandoned and take home labs were instituted. Because extensive in-class lab exercises were then not possible due to the online hookup problem, an hour of each week's class was filled utilizing five top guest lecturers in online marketing. Although this unexpected revision was due to a pitfall, it also proved to be a blessing.

Staying Current

Take home labs needed to be updated the night before the class got them because of the frequent domain name changes. This also held true for online in-class show and tell examples because companies removed elements from web sites that had been planned as examples for the various lectures.

One of the obstacles was finding a suitable book when there are no academic texts on Internet marketing. Although no academic Internet marketing text was located, the week before the course started, the text, *Net Results: Web Marketing that Works*, by Rick Bruner and USWEB, a 1998 trade book was selected because it covered sales, advertising, and public relations on the web.

Conclusion: Ongoing Revisions in a Changing Environment

Course development needed to be ongoing because of a variety of pitfalls that occurred despite careful planning and development. The need for small classes and adjustments to the curriculum became evident during the first three weeks of classes. An ability to improvise to overcome pitfalls will be invaluable for anyone doing Internet marketing course development. The group project, safari tour, and exams were successful elements for the course. Because of the surveys, the competitive analysis, and the awareness of the potential pitfalls, backup plans for the problems were quickly adopted. It takes careful contingency planning in a constantly changing hyperlinked environment to successfully teach an Internet marketing course. The need to constantly update both lectures and labs and to monitor developments will be critical for those involved in course development and teaching Internet Marketing.

Is There Response before Click Through?," *Journal of Advertising Research*, Mar/April, 1997 p. 33.

Downes, Larry, and Chunka Mui, *Unleashing the Killer App: Digital Strategies for Market Dominance*. Harvard Business School Press. Boston, MA, 1998.

Hoffman and Novak Feb 19, 1996 from *A New Marketing Paradigm for Electronic Commerce*. Information Society Paper Presentation.

Hoffman, Donna L. and Novak, Thomas P., "Marketing in Hypermedia Computer-Mediated Environments: Conceptual Foundations," *Project 2000*, Owen Graduate School of Management, Vanderbilt University, 1996.

Katz, E., and P. F. Lazarsfeld, *Personal Influence*, Glencoe: Free Press, 1955.

Myers, B. A. (1985). *The Importance of Percent-done Progress Indicators for Computer-Human Interfaces*. Proc. ACM CHI'85 Conf. (San Francisco, CA, 14-18 April), 11-17.

Peppers, Don, and Martha Rogers, *The One-to-One Future*. 1997 Doubleday

Robbin, Zeff and Debra Aronson, *Advertising on the Internet*, John Wiley and Sons. New York. 1997.

Sellers, Don. *Getting Hits: The Definitive Guide to Promoting Your Website*. Peachpit Press. Berkeley, 1998.

REFERENCES

Briggs, Rex and Hollis Nigel, "Advertising on the Web: