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Asynchronous Course Delivery: Instructor and Student Views

By P. Adams, J. Dugas, R. Fleck, & T. McQueen

Introduction

Accompanying the projected growth in computers, bandwidth improvements will make Internet use a more satisfying experience, leading to increased usage. Because broadband transmission is expected to grow from roughly one million households today to nearly twenty-six million by 2003, providers of e-learning will increase their exploration of this modality as users familiarize themselves with it as a means of knowledge production and transmission. It follows that faculty in higher education will explore strategies that increase student achievement and satisfaction in asynchronous teaching and learning. Use of the Internet for course and program delivery will increase.

The potential of the Web as both a set of tools and a medium for course delivery offers limitless possibilities for creating innovative course design that can be more effective than some classroom experiences (Hafner & Oblinger, 1998). There is evidence that building an online community begins with establishing good online program administration. Central to this is the infrastructure to support online delivery coupled with the faculty who create, deliver, and manage the courses. This, in turn, translates to better-informed and more enthusiastic teachers, which leads to more satisfied students, who report learning more in an online class.

The debate continues among educators as to the effectiveness of asynchronous teaching and learning in higher education. Some argue it provides a new context for teaching and learning, chiefly because it removes the constraints of time and physical presence. Yet others wonder how a process that deviates so markedly from hundreds of years of traditional teaching and learning can possibly embody quality education (Phipps & Merisotos, 2000). At Columbus State University, whose mission is ". . dedicated to academic excellence,...serving regional needs,..and employing emerging technology. . .which support quality programs...", close examination of online delivery through descriptive research will shed light upon this methodology and potentially contribute to increased understanding of its educational effectiveness.

Background

In the summer of 1999, the Vice President for Academic charged the Regents Distinguished Teaching Professor to direct the Grant Proposal Program for the development of web-based core curriculum. The program was intended to develop undergraduate courses in areas A through F. The courses were to be ready for on-line delivery in the Spring 2000 semester. Faculty developing the courses received a small stipend and a reduced teaching load.

A committee of four (4) faculty, consisting of CSU's two (2) most recent representatives to the system-wide Faculty Development Institute (FDI) and two (2) previous attendees at the Faculty Development Workshop (FDW), created a Request for Proposals. Applicants were requested to describe course enrollment patterns, evaluation practices, and current instructional methodologies used to deliver the core course. They also described their skills in technology applications, course modification plans, and how they might evaluate students enrolled in an asynchronous course.

From the fifteen (15) asynchronous course proposals submitted, nine (9) courses were selected, involving fifteen (15) faculty. A needs assessment was conducted at the first meeting of this asynchronous learning community to determine needed support. The following support events were scheduled for the Fall 1999 semester.

- Six (6) Web CT Workshops over three (3) days focusing on basics and online testing
- Two- (2) day Microsoft FrontPage Workshop
- Research-based presentation on asynchronous teaching and learning titled Characteristics, Behaviors, and Learning Styles of Students and Faculty in Asynchronous, Traditional, and Web-Enhanced Courses
- A series of Friday morning workshops covering scanners, digital cameras, video and audio streaming, and graphics
- An open-forum panel discussion by faculty supporting and questioning the appropriateness of asynchronous course delivery

All nine courses were delivered in the Spring 2000 semester. It was determined that existing course evaluation instruments were not suitable for asynchronous courses. Much of the traditional item content was not relevant, and needed data for this project was not addressed. The subcommittee designed two (2) new instruments, one (1) for faculty teaching the courses, and the other for students. The faculty survey addressed issues involved in the development, administration, and actual teaching of the course; support needed and received; and student interaction. The student instrument focused on demographics characteristics, reasons for selecting the course, and overall satisfaction.

An Example

CISM 2105: Introduction to Computer Information Systems was created for asynchronous delivery by two (2) faculty, each experienced in the traditional offering of this course. They found that one of the most difficult issues in developing a computer skills class was not the delivery of content, but the management of student performance and participation. The formalized strategies, protocols, and policies, developed by the course authors and summarized below, address these issues and have been adopted by other faculty with some success. The course portal can be found at:

http://atcob.colstate.edu/CISM2105/index.html

Freshmen and transfer students usually take a beginning-level course in computer skills. They share a need for the class as a prerequisite for other courses. At many institutions, freshmen have priority in the registration process to assure that they are able to enter required courses. Hence, those with the least computer ability register for courses first. Since the instructors could not control the process, many students enrolled in the course because they valued time flexibility over course content. These students were often ill prepared for the rigor and self-discipline required in an Internet-delivered course.

The course schedule (booklet and Web version) listed a URL for a course portal. The schedule booklet specified that a potential student should visit this portal within the first calendar week of the semester. In addition, the policies that were developed for the specific course were summarized and printed in the schedule book. The instructors could not require that students visit the course web site, although they did expect that those considering enrolling in the course would visit the portal. They also had some expectation that faculty advisors would visit the site before recommending enrollment. The course portal provided links to self-assessment sites, which helped students assess their readiness for taking an online class.

From the beginning, the instructors realized that they would have to communicate with students in very specific terms. The first step was an attempt to create a single paragraph of conditions and caveats that would be conveyed to students prior to enrollment. As they developed the paragraph and sought advice from colleagues, the paragraph expanded to a page and then a Web site. A shorter version was adopted by the University and appeared in the printed schedule booklet.

All students were required to participate in the chat areas as a way of developing a learning community. To encourage all to participate, questions were asked of specific students. Also, one of the instructors signed on in student-mode and asked questions. Participation in other online courses taught the CISM instructors to train students how to

interact electronically with faculty. The primary issue was how long a student might expect to wait for a response faculty. A policy of a maximum response time of two business days was established. Interestingly, one student expected the faculty member to make "house calls" to resolve hardware issues.

Textbooks and other course materials supported Microsoft Office User Specialist (MOUS) testing. This format provided external validation of course content and rigor.

Results

This section presents the evaluation results from all courses. Not all students participated in the study, and not all faculty submitted collected evaluative data.   As seen in Table 1, below, most students in this sample were female (N-38), either Caucasian (N=24) or African-American (N=10); all males were Caucasian (N=7). Academic standing ranged from a low of 8.9% seniors to a high of 31.1% freshman (graduates=20.0%; sophomores=17.8%; juniors=22.2%). Almost half (48.9%) of the students worked full time, and either lived in campus dorms (13.3%) or within 15 minutes traveling time (40.0%) to the University.

Table 1

Student Age Distribution Across Gender and Race

AGE

Gender	Race	Mean	N	Std Deviation
Female	African-American	20.70	10	3.06
	Asian-American	21.00	1	
	Caucasian	29.83	24	9.43
	Hispanic	35.00	1	
	Other	29.00	2	8.49
	Total	27.08	38	8.85
Male	Caucasian	29.43	7	10.01
	Total	29.43	7	10.01
Total	African-American	20.70	10	3.06
	Asian-American	21.00	1	
	Caucasian	29.74	31	9.39
	Hispanic	35.00	1	
	Other	25.00	2	8.49
	Total	27.44	45	8.96

It is interesting to note that most students selected an on-line course because it removed traveling issues, thereby reducing or limiting work conflicts. They used a home computer or one in a CSU computer lab for the course, and most reported they did not need to upgrade or buy specific software for the course. Most felt confident with their computer skills, and had used the computer for e-mail, downloading files, sending attachments, and researching.

Equally divided were opinions as to whether or not students felt their approach to learning had changed. One student commented, "I find I need a classroom to remind me to do my work!" Conversely, another respondent stated, "Taking this class helped me organize my studies better." Most importantly, as seen on Figures 1 and 2, below, students were satisfied with their online course experience and would like to take another asynchronous course.

Figure 1
Student Satisfaction with Online Course

Figure 2
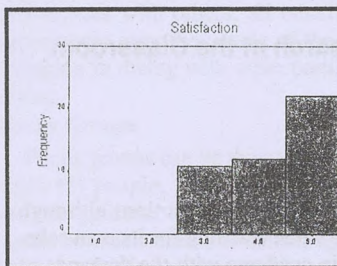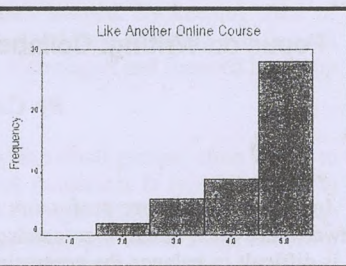**Student Response to Taking Another Online Course**

Students perceived their interaction with peers to decrease in both amount and quality, as illustrated in Figures 3 and 4, below. On the other hand, although they also felt the amount of interaction with their instructor decreased slightly, they felt the quality of that interaction had increased.

Figure 3
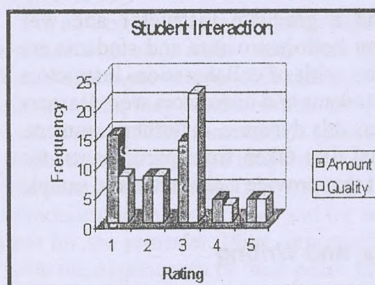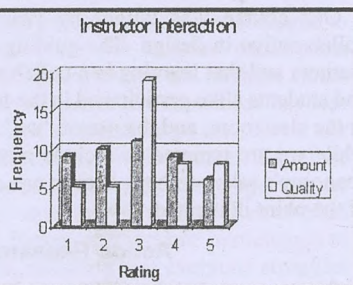**Student Interaction by Amount and Quality**

Figure 4
Instructor Interaction by Amount and Quality

Summary

• Students selected an asynchronous course because it was convenient.
• Most students who selected an online course lived within 30 minutes of campus.
• Students who enrolled in an online course perceived their computer skills to be average or better.
• Online courses were accessed mostly at home or through a CSU computer lab.
• Student peer interaction decreased slightly in both quantity and quality.
• The amount of interaction between student and instructor decreased slightly but increased in quality.
• Students were satisfied with their asynchronous course, and would like to take another.
• Difficulties with online courses occurred in logging on, getting started with the course, getting needed materials from the bookstore, and obtaining feedback from the instructor.

Detailed data are available from authors upon request.

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