Volume 4, Number 2, Fall 2005
ISSN: 1541-4914

Establishing Guidelines for Determining Appropriate Courses for Online Delivery

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Abstract

The purpose of this case study was to determine if one particular course is appropriate for online delivery. Two classes, one offered online and one offered traditionally, of a comparative education course were compared. Results of the study indicate that students' satisfaction with the online course was at least comparable to that of the traditional class. The results also indicate that the online course assignments were appropriate for meeting the course objectives. Guidelines useful for determining appropriate courses for online delivery are discussed.

"Teach from the Beach!" This is a common catchphrase used by the administrators of the Department of Distance Learning at one state university in the Southeast. Those individuals responsible for encouraging faculty to expand their use of available online course development programs use this type of advertisement frequently. Most of the emails, posters, workshops, and brochures that encourage online delivery of courses praise the convenience to faculty and students of such courses. Very rarely do we hear the pedagogical benefits of online delivery of courses. Should faculty members be swayed by convenience? How do faculty make decisions regarding the most appropriate delivery of courses?

Plotnick (2004) argued that, "Despite pressure for faculty to infuse technology into their teaching, little data exist on the extent to which technology-enhanced instruction in higher education is actually effective in helping faculty members reach instructional goals" (p. 1). The purpose of this case study is to add to the existing literature on the effectiveness of online delivery of courses. Specifically, the study attempts to determine if one particular graduate course is best suited for online delivery or traditional delivery. That is, can the course objectives be achieved with both methods of delivery and if so, how do students feel about online courses? Graduate students' satisfaction and feelings of a comparative education course taught traditionally were compared with those of a comparative education course taught 100% online. The online course was taught using WebCT, "a template-based online course building and collaboration system" (Carter, 2002, p. 11). The study concludes with discussion of a plan the researchers intend to use when determining whether or not a course should be offered online.

The significance of this study is that we need to critically examine our motives for using WebCT, an examination that is lacking in existing literature. Our motives for teaching online should not be influenced more by convenience than by pedagogy.

Certainly not every course in higher education is conducive to online delivery. But, how do we decide which ones are? Should decisions be based on needs of faculty, needs of students, needs of the program, or a combination of these?

Research Questions

This study attempts to answer to following questions:

1. Can a comparative education course be taught effectively online?
2. Are the comparative education course objectives met using a traditional method of delivery and online method of delivery?
3. Do graduate students prefer comparative education courses taught traditionally or online?
4. How should faculty go about deciding whether or not a class is appropriate for online delivery?

Review of Related Literature

WebCT is defined in the following way:

WebCT is a tool that facilitates the creation of sophisticated World Wide Web-based educational environments. It does this in three ways:

> **1.** It provides a consistent interface allowing the design of the presentation of the course (color schemes, layout, etc.)
> **2.** It provides a set of educational tools to facilitate learning, communication and collaboration.
> **3.** It provides a set of administrative tools to assist the instructor in the process of management and continuous improvement of the course.
> WebCT is a tool built *by* instructors *for* instructors. It was built by educators at the University of British Columbia as a tool to allow other educators to build sophisticated Web-based learning environments without a lot of time, resources or technical expertise. WebCT is pedagogically neutral. Its goal is to provide a set of tools useful for a broad range of teaching methodologies, yet make it easy to experiment with new techniques (UWG WebCT Faculty Handbook, 2005, p. 1).

WebCT offers course developers and course users a wide range of communication tools such as email, discussion boards, and chat rooms. In addition, course developers can build course syllabi and course calendars and import audio and video (Carter, 2002). WebCT is intended to be used by those with minimal technical expertise (Morley & LaMaster, 1999). Morss (1999) stated that "WebCT has provided a relatively easy-to-use environment for creating sophisticated Internet-based courses that might otherwise have been beyond the ability of the typical faculty member, i.e. a non-computer programmer" (p. 394).

Although most of the popular course development software is intended for those individuals with limited technical expertise, some technical savvy is necessary for creating an online class. First, developers should be familiar with the features that make asynchronous courses (participants need not be logged on simultaneously) popular. Such

features include bulletin boards and email (Smith & Rose, 2003). Knowledge of synchronous course (participants need to be logged on simultaneously) elements are also important. Chat rooms are examples of synchronous course elements. Those who have not frequented chat rooms will find the jargon confusing. Acronyms are often used to save time and make communication easier. Popular chat room acronyms include LOL (laughing out loud), IIRC (if I recall correctly), IMO (in my opinion), and TY (thank you).

Why is WebCT a valuable tool for faculty? Distance education in general has become an important part of the professional development needs of a large population. With the varied needs of the individuals we serve, "we must take students where they are (often already engaged in the workforce) and work with them in ways that take best advantage of their available time, energies, and interests" (Carr-Chellman & Duchastel, 2001, p. 146). Simply put, online courses are important to faculty because they are valued by the constituencies we serve. Despite the demand for online classes, faculty are responsible for ensuring the course is of equal quality as those taught using traditional methods of delivery.

Quality online courses do exist, but not without extensive planning on the part of course developers. Carr-Chellman and Duchastel (2001) developed a set of key components to be addressed when creating an ideal online course. The first component of an ideal online class is the study guide. The guide "must include the traditional elements of good instructional design, in particular a clear description of the instructional aims and learning objectives of the course" (p. 149). The study guide orients the students to the course and lets them know what to expect for the duration of the course. The second component is a quality textbook. The authors suggest that the ideal textbook should not be an online text. The online text is often not as portable as traditional texts and therefore not favored by students. Another component of the ideal online course is quality assignments. Students must be able to see the benefits of assigned tasks and how these assigned tasks are related to the course objectives. Students also benefit from seeing examples of past students' work. This allows the student to see both satisfactory and unsatisfactory examples of what they are expected to complete. Perhaps the most important element of an ideal online course is frequent communication, both asynchronous and synchronous. Students should receive immediate feedback when posting assignments on bulletin boards and through email. In addition, frequent chat room communication is valuable to build relationships in the absence of face-to-face meetings.

Despite faculty's best efforts to create the ideal online course, some courses are just not suited for an Internet-based environment. Taylor (2002) argues that most classes can benefit from some degree of an online component, however

> not all courses can be effectively transformed from a hands-on, classroom experience to a totally computer-based learning environment. Whether reworking an existing classroom delivered topic or developing an entirely new online presentation, course developers and facilitators need the answers to some fundamental questions:
>
> * What advantages would there be to putting my course online?
> * What benefits are there for my students?
> * What benefits are there for my school or organization?

* What benefits are there for me as a teacher or trainer? (p. 25).

Course developers must be able to answer these questions before creating an online course.

What does research suggest about the effectiveness of online courses? For the most part, research indicates that online courses are at least as effective as traditional courses. Russell (1999) referred to this as the "No Significant Difference Phenomenon." In an examination of 355 research reports, summaries, papers, and dissertations, he concluded that students enrolled in technology-enhanced courses perform as well as their counterparts in on-campus courses. Some (Twigg, 2001), however, would like to see online instruction move beyond producing "no significant difference" to transforming the way people teach and learn. Twigg (2001) suggests that online instruction can and should strive to create a paradigm shift and move away from being "as good as" traditional learning.

In a study of 114 undergraduates enrolled in a child development course, Plotnick (2004) found that students participating in online versions of the course showed statistically and practically significant changes in technology use, skill, enjoyment, and a reduction in student computer anxiety. The author suggests that the online learning component improved student learning, student motivation, and course communication. In another study of 84 pre-service teachers, Peterson and Bond (2004) found that there was no statistically significant difference in student performance when comparing students enrolled a traditionally delivered problem-based instructional planning course and the same course delivered online. However, qualitative data did suggest face-to-face instruction was more effective for lower-performing students, a phenomenon that needs further attention and research.

In addition to research related to student achievement in online courses, some research has looked at student and instructor perceptions of online learning. Santally (2005) found that students involved in such courses were satisfied with their level of learning and, if given the opportunity, would not prefer to revert back to traditional methods of delivery. All of the graduate students enrolled in the course indicated that they were prepared to act as change agents for this new conceptualization of the teaching and learning process. Kurtz, Sagee, and Getz-Lengerman (2003) found that some students initially had negative attitudes toward online learning. They suggest that the negative attitudes may be a result of the lack of choice between an online course and a traditionally delivered course. Course instructors may also have negative attitudes toward online courses. Shaw and Young (2003) compared two graduate level courses and found online instruction required 30% more instructor time than an equivalent course delivered traditionally.

Though limited, research specific to WebCT is also available. One study (Morss, 1999) looked at a WebCT course taught over a span of three semesters. Surveys from 500 students were examined to determine their reactions to the online courses. Overall, the data suggests that the WebCT-aided instruction

- is not time consuming or burdensome to the students;
- helps at least some of the students focus their attention on the subject and learn more quickly;
- is not favored to immediately replace either text or conventional textbooks as a preferred method of instruction; and

- provides an important exposure to the technology associated with many disciplines (p. 403).

Research also suggests that WebCT-aided instruction is effective in helping students acquire knowledge and skills and this method of delivery is effective for meeting stated course objectives (Pena, 2004). In addition, Pena (2004) found that WebCT-aided instruction is perceived by students to be an effective method of course delivery.

Research on the effectiveness of online learning is in its infancy. In fact, Sunal, Sunal, Odell, and Sundberg (2003) suggest that the studies of online learning to date "can inform us in regard to variables and best practices that may form the basis of future research" (p. 20). These authors suggest that the existing research should be seen as hypothesis—generating research with a goal of hypothesis-testing research. The existing research should be viewed as a beginning upon which researchers build knowledge of appropriate research variables and research designs.

The review of related literature here has provided a definition of online learning, in general, and WebCT, specifically. In addition, the review discusses the benefits of WebCT and why it is an important tool for faculty. Components of ideal online courses and current research on online learning are also discussed.

Methodology

This study was conducted at a state university in the Southeast. The college serves approximately 12,000 students at both the graduate and undergraduate level. The participants include 16 graduate students, 2 male and 14 female, enrolled in a traditionally delivered comparative education course and 20 graduate students, 3 male and 17 female, enrolled in an online delivered comparative education course. The purpose of the study was to determine whether future comparative education course offerings should be delivered online or traditionally. In order to answer this question, the researchers examined student evaluations of the course to determine students' satisfaction with both courses, course syllabi to determine quality of assignments, and student surveys completed by all students taking the online version of the course. We also wanted to develop a plan to use when deciding which courses are best suited for online environments and which courses are best suited for traditional environments.

This study compares an online comparative education course with a traditionally delivered comparative education course. The traditional class was offered in the Summer of 2003 and the online course was offered on the Summer of 2004. Both of these Summer courses were six weeks in length. The instructors of the courses have similar instructional methods. Both are social studies educators who make frequent use of constructivist instructional methodologies. Both are proponents of technology integration in all areas and model this in their teaching. The instructors planned the courses collaboratively and used the same course objectives and textbook. As much as possible, the same assignments were required for both classes. Some assignments had to be adapted to meet the needs of the online course. Students enrolled in the traditional course spent approximately 36 hours in class involved in lectures or guest speakers. Students enrolled in the online course were required to participate in three 1-hour-long chats. All other work was completed independently.

Two surveys were used to gather data. One survey was the student course evaluation used at the end of all courses at the university. Only those seven survey items related to the course itself were included in this study. Survey items that were specifically related to the instructor were not used. The survey items included were:

1. The assignments help me understand the subject.
2. A variety of instructional materials/methods were used in the course.
3. Tests/assignments require problem solving and/or creative thought.
4. Test content is representative of assigned material.
5. I have learned a great deal about the subject.
6. The course is challenging.
7. The course is stimulating.

Students responded to the above items with 5 = Strongly Agree, 4 =Agree, 3 = Undecided, 2 = Disagree, or 1 = Strongly Disagree. Open-ended items related to student satisfaction with the course were also used. The second survey used to gather data was the survey completed by all students enrolled in online courses at the university. The items included:

1. At the beginning of the quarter my attitude toward on-line learning is positive.
2. At the end of the quarter my attitude toward on-line learning is positive.
3. I now find WebCT easy to use and understand.
4. I feel more comfortable participating in class online.
5. I would like to take classes that are mostly online.

At the conclusion of the online course, both instructors examined the survey data and the syllabi. From the data and our own experiences, we developed a plan useful when making future decisions about online courses.

Results

Results of the student course evaluation surveys are included in Table 1. Overall, the online students had more positive responses toward the course than the students in the traditionally delivered course. In addition, there was statistically significant difference between the two groups on all survey items except the item "Tests/assignments require problem solving and/or creative thought."

Table 1
Means and Standard Deviations for Student Course Evaluation Surveys

	M	SD	t	p
Item 1 (assignments)				
Group 1	3.38	1.41	-4.72	.000
Group 2	4.90			
Item 2 (problem solving)				
Group 1	4.13	.96	-2.00	.053
Group 2	4.76			
Item 3 (test content)				
Group 1	3.81	.98	-5.43	.000
Group 2	5.00			
Item 4 (content learned)				

Group 1	3.63	1.59	-3.89	.000
Group 2	5.00			
Item 5 (challenging)				
Group 1	3.75	1.44	-2.36	.024
Group 2	4.70			
Item 6 (stimulating)				
Group 1	3.75	1.40	-3.22	.003
Group 2	4.80			
Item 7 (total)				
Group 1	3.88	1.31	-2.63	.013
Group 2	4.75			

The open-ended items provided valuable insight into students' satisfaction with the course. When asked to comment on the course content, one student in the online course stated, "This has been a very informative course. I have learned a great deal about the educational systems of other countries and understand more about my own." Another online student stated, "This was an especially informative course. I believe it has provided me with knowledge and the ability to make decisions on the school level." A student in the traditionally delivered class said, "Although this course was interesting, I do not know how much information I will implement in my classroom." Overall, the online group tended to respond to this item more and more positively than the traditional group

The students were also asked to comment on the value of the book, homework, assignments, and tests. Responses from the online group included the following:

- "Assignments were relevant and thought-provoking. Made me think and reflect. No mere busy work."
- "Great text book! It started out slow but was the most interesting text I have EVER read! Writing the reflections required my reading to take place prior to discussions and chats."
- "I have had other online courses that seemed to be overloaded with work. Although this was tough, it was just the right amount."

With the traditional class, one student stated that, "Outlining the chapters was not helpful, but the guest speakers were very interesting." Both groups found the text difficult to read and understand.

Examining the syllabi to determine to extent to which the assignments were reflective of the course objectives was very insightful. Because the instructors planned the courses collaboratively, they included many of the same assignments. The assignments for the traditional course included: class attendance, a 10 page research paper on the educational system of a developed county, reflections of each chapter of the book, journal entries for each class meeting, invite speaker familiar with the educational system of another country to class, and mid-term and final exams. The fact that the university is located in a large metropolitan area made the requirement of inviting a speaker familiar with the educational system of another country rather easy to accomplish. The speaker had to have attended or taught school in a different country. The assignments for the online class included: chat room attendance, 10 page research paper on the educational system of a developed county, reflections of each chapter posted

to the main bulletin board, interview a person who attended or taught in a school in another country, and mid-term and final exams. The guest speakers were definitely the most enjoyable experience for the traditional class. When planning the online course, we knew that replacing this assignment would be difficult. The interviews and the discussions that ensued on the bulletin board were interesting but not as powerful and dynamic as live speakers. Video and audio could have been used with the online course but would have proved very difficult for all involved. Overall, it seems as if the assignments and instructional methods used to meet course objectives in the traditional class were rather easy to replicate in the online class, with the exception of the above-mentioned assignment.

Finally, the surveys completed by the online students provided a more in-depth look at students' satisfaction with online courses in general. For the item "At the beginning of the quarter my attitude toward online learning is positive," 58% of the students strongly agreed. When asked about their attitude after the quarter, 83% strongly agreed that their attitude toward online learning was positive. All of the students either agreed or strongly agreed that WebCT was easy to use and understand. When asked to comment on whether they felt more comfortable participating in class online, more than half of the students were undecided or disagreed. This may be contrary to some findings that online classes encourage class participation from students who would remain uninvolved in traditional classes. More than 90% of the students responded that they agree or strongly agree that they would like to take classes that are mostly online. Open-ended items on the instrument asked students to suggest ways to improve the course. Many students suggested more chat times for the course. The course was offered during a six-week summer term and included three scheduled chats. Students would like to see more interaction among students. One student suggested more required responses to assignments posted to the bulletin board to encourage more student interaction. The same student indicated that the instructor should promote the use of the bulletin board for discussions and not merely as a forum for submitting assignments.

Discussion

The case study attempted to answer the following research questions:

1. Can a comparative education course be taught effectively online?
2. Are the comparative education course objectives met using a traditional method of delivery and online method of delivery?
3. Do graduate students prefer comparative education courses taught traditionally or online?
4. How should faculty go about deciding whether or not a class is appropriate for online delivery?

The data from course evaluations and an examination of the syllabi for the courses seems to indicate that the comparative education course can, indeed, be taught effectively online. The student evaluations indicate that students value the learning experience offered in an online environment. Also, an examination of the two syllabi indicates that the learning experiences provided meet the stated objectives of the course. Finally, these graduate students had more positive attitudes towards the online course.

After a careful examination of the student course evaluation surveys, course syllabi, and distance learning surveys, it seems as if this particular course is well suited for online delivery. However, a plan for deciding which courses to teach online in the future is needed. Offering online classes so that one can "teach at the beach" is not appropriate. Faculty need to be able to professionally and persuasively defend and justify their decisions to teach a course online. What needs to be considered when making this decision? Based on our experience with this and other online courses and from the data from this case study, we intend to use the following plan when determining appropriate courses for online delivery.

Step 1: Examine Program Goals

Examine program goals to determine if offering online classes is consistent with the intended outcomes of the program. Program goals should be the driving force behind instructional decisions. In addition, many programs have residency requirements. For example, some programs require at least 75% of the courses used towards a degree be taken on campus.

Step 2: Examine Course Objectives

Examine syllabi to ensure that course objectives can be met successfully in an online environment. Many courses require hands-on experiences that are not possible online. Often course objectives require students to perform some task in the presence of large groups, such as presenting a lesson plan. These types of activities are best suited for traditional course delivery.

Step 3: Determine the Needs of Students

Meeting the needs of the students is of critical importance. A formal or an informal survey would be ideal to gather information on students' needs. Programs that include mostly students already in the workforce may benefit from at least some courses being offered online. Also, programs that serve students from a wide geographical area may also benefit from online classes.

Step 4: Determine the Level of Support Available

Determine the level of support available to both faculty and students. Faculty need access to online class development software and frequent staff development workshops. Students need access to technical support both before enrolling in such courses and while they are enrolled. Faculty are often not qualified to answer many of students' technical questions.

Step 5: Pilot Test the Online Course

Once deciding to offer a class online, gather as much data as possible during the first course offering. Survey students to see how the course can be improved. Continue to examine course assignments and course objectives to ensure that the course is effective in meeting these goals.

Following these guidelines will ensure that online courses are offered for the right reasons. Although convenience should be considered, it should not be the driving force behind our instructional decisions. Meeting program and course objectives should be the most important consideration when making such decisions.

In summary, this case study supports the notion that some online courses can be at least as effective as traditional courses. Students benefit from online course offerings and enjoy taking such courses. With much thought and planning, course assignments can be restructured to successfully meet course objectives. And finally, faculty wishing to

transform a course to an online environment should follow established guidelines intended to determine those courses best suited for such delivery.

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