

A Tale of Two Formats

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Abstract: The study examined one teacher's perspective on teaching the same material in an online format and in a face-to-face format. The instructor's reactions varied in part as a function of the topic being taught. Some topics were seemed to be suitable in either format whereas others were better in one format or the other. The instructor noted that the class who had face-to-face interaction changed dramatically when they began these modules.

Given the tremendous investment in computer technology in higher education during the past 20 years, it is of considerable interest to investigate students' learning outcomes when technology is an integral part of the teaching-learning process. Much of the research related to online courses has been devoted to demonstrating that students in a distance-learning course perform as well as those in a traditional course. Russell (2002) identified 355 studies that found no significant difference in student outcomes for traditional versus online instructional formats. However, Joy and Garcia (2002) conclude that much of the research is flawed. Among the problems they note are the failure to control for time on task, confounded treatments, selection problems, and small samples. In one study, for example, students who selected to take an online course in computer programming were older, less likely to be involved in a traditional undergraduate program, and worked more than those who chose the face-to-face version of the same course (Dutton, Dutton, & Perry, 2002). Comparisons of outcomes in the two versions of the course were confounded by the differences in the student populations involved.

Other studies that compared learning in traditional, face-to-face, classroom-based ("lecture") college courses with learning in computer-based, distance education ("Web") courses have yielded inconsistent results. The mixed pattern of learning outcomes may stem from individual differences in ability, attitude, or personality associated with selection effects and/or a failure to have equivalent levels of structure across course formats (Maki & Maki, 2002). Online courses may include proven instructional treatments that are not present in the comparison instruction. For example, in Maki and Maki's comparison of web-based and lecture-based instruction in psychology, students using the web-based instruction were required to complete mastery quizzes on the web and were provided with immediate feedback. The students in the lecture class did not have these opportunities for practice testing or feedback. Thus, it is difficult to separate out the effects of the format from the effects of particular instructional activities.

Relatively little attention has been paid, however, to the experience of the instructor in an online format or in a face-to-face format. The present study examined the experiences of an instructor who taught the same course content and used the same activities in two different formats. We used the same instructional activities in two different formats. Half of the students completed the entire semester in a traditional format. The other half completed the first half of the semester in the traditional format and the second half of the semester using Web-based curricula materials and assignments ("hybrid" format).

Method

Participants

The course was a junior level educational psychology course. The instructor, Patti, taught two sections of the course, each with 35 students. Patti was a certified classroom teacher and had taught fourth grade for four years. She had also served as a supervisor for student teaching and had a master's degree in Educational Administration.

Materials

All students (irrespective of course format) had access to a course website on which outlines of assigned readings, practice quizzes, links to related materials (e.g., research articles, newspaper reports, activities, organizations) were available. The senior members of the research team also designed special curricula materials (five units, 1 per week) to be used for students after the midterm. The units were based on key instructional problems that teachers face in classrooms and were intended to promote students' integration of theory and practical

issues. These materials were to be used in either the hybrid sections (online) or by the regular sections (in class). For example, a series of videotape segments of cooperative learning in classrooms was made available online for those in the hybrid section and the same videosegments were shown in the regular classrooms.

Procedure

Student teams were formed during the first seven weeks of the course and these teams continued throughout the semester. The groups shared ideas, engaged in discussions, completed exercises, and commented on one another's work. During the first 7 weeks of the course, the emphasis was on teaching basic concepts related to educational psychology and providing the theoretical background for these concepts. The materials available on the course websites supported this function. To facilitate a true comparison of the effect of the hybrid format and regular class, it was important that all students have exposure and competency with technology. The instruction in all of the sections involved the use of web-based instruction as demonstrations in class but also as homework assignments in the initial course period.

After the midterm, the focus was on integrating theory and practice. In the hybrid version of the course, this was accomplished online while the traditional class continued to meet. In the traditional classroom, instructors introduced the content and students worked in small groups and engaged in discussions, produced materials, commented on one another's work. In the hybrid sections, students completed the same activities as those completed by students in the traditional classroom but did so asynchronously. The key differences between the two formats were in the timing of students' contributions and the potential in the hybrid sections to revisit materials as needed. All participants took the same examinations constructed by a member of the team who did not teach a section of the course.

Patti taught the same content and used the same activities in the two sections of the class (online, face-to-face). Each week, the first author interviewed Patti about her experiences in teaching the two versions of the class. There were a total of six interviews, each lasting approximately 30 minutes. Five of the interviews related to specific content taught and the sixth interview was a review of the entire experience. The interviews were transcribed and analyzed using NVIVO qualitative software.

Results

Reaction to the Online Format

Patti had many positive comments to share about the online format. Features of Webct such as the ability to track the amount of time students' contributed to the online discussions allowed Patti to quantify students' participation. Patti felt the students were engaged and provided detailed, well-supported answers. Another positive feature of the online environment was students were able to view the video as often as needed. Not only did this give students more time to view each clip, it also relieved any pressure to "get it all" the first time.

Being able to re-watch the video clips also raised the level of accuracy of students' responses. By having the video clips available online, students were able to re-watch the videos to check the accuracy of their own as well as other students' responses. This improved the overall quality of the students work. Finally students were able to use the Internet as a resource to research relevant background information. This improved the quality of their responses. While Patti had many positive comments about the online format, over the duration of the course, she became overburdened by the amount of time the online class required. Patti spent hours responding to individual as well as group responses.

Another limitation of the online environment was the lack of immediate reaction. Essentially students had an entire week to post their responses. This created periods of little posting and response to others students' critiques. Students' procrastination limited the interaction between the group members and produced rushed work.

Reaction to the In-Class Format

When asked about the positive features of the in class format, Patti elaborated on the instantaneous interaction between her and the students and to the material. Patti was also impressed by the amount of work students were able to produce given the small number of students in each group coupled with the

limited amount of time they were given to complete the assignment. Patti noticed a dramatic change occur within the in-class cohort between the first two sessions. Attendance increased, the students were prepared for class and were applying the material at a deeper level. Overall Patti felt more connected to the students and enthusiastic about working with the groups. Thus increased attendance and participation led to an overall higher interaction between the students. This fueled more productive and well-informed discussions. The in class format allowed Patti to respond instantly to concerns and questions and guide the discussions in the appropriate direction. Patti was pleased at how the lesson planning activity progressed in the in class format. Students' actively participated and provided detailed, well-supported responses. Patti also enjoyed the opportunity to give immediate feedback to students' questions and clear up any misconceptions that may arise.

It is clear that Patti values learning and enjoyed the opportunity to clear up misconceptions immediately and be a part of students interacting. She even began posting feedback for the in class group on WebCt to allow for more discussion time in class. Patti is truly enjoying the classroom atmosphere. Patti feels the interaction of the class will help students on the essay part of the final exam. She asserted that she enjoyed having the opportunity to lecture some of the material to the in-class group, which she stated was a real benefit. Patti also acknowledged that the group lessons and assessment tasks were easier to create in class, again due to immediate reactions.

When asked about the limitations of the in class format, Patti expressed disappointed by the lack of information regarding time students' contributed to the material. WebCt allowed Patti to track each students' time and contribution to the group summaries, while the nature of the in class format made it difficult to determine who was contributing what. In other words, because students' efforts weren't easily identifiable and measurable it was difficult to assess who was doing the work. Patti also felt that the pressure to complete all the activities with the 90-minute class period was a limitation of the in class format. Students in the in class format were not able to view the clips multiple times for accuracy like the online group. Finally, Patti commented on how difficult it is to know whether students have read before class and are prepared to contribute to the assignments. She also elaborated that there was insufficient time to complete all the activities effectively.

Discussion

Patti's reactions to the two formats varied in part as a function of the topic being taught. She felt that some topics (the Pupil Assistance Committee exercise) worked better in class because of the utility of the spontaneous interaction of classmates to one another's judgments of the video they saw. The structure of the in class format lends itself to active discussion of the video clips. She felt it was difficult to have that interaction in the online format. Patti felt the mood of the online group was rejuvenated from the lesson planning activity. Students enjoyed viewing and critiquing other groups' work. Patti noticed that when students enjoyed the activity they provided more detailed and timely responses on Webct. Patti admits that at first she was hesitant of the dedication of the in class group, but witnessed a dramatic difference in the students performance from when they began these modules. In fact, at the start of this project Patti was concerned with her lack of control over the in class group, but as time progressed, she felt that she had more control with the in-class group then over the online group because she could guide the discussions and answer students questions as they arise. She also felt that the online group lacked the social interaction that was fueling the progress of the in class group. Patti enjoyed how the assessment activity worked with the online group. They had a higher quality of responses, used the text to support their ideas, spent more time with the material, and had the benefit of being able to re-watch the videos a second time. The results will be further discussed at the conference.

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