Hybrid and Traditional Course Formats

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INTRODUCTION

The use of technology as a teaching tool, for example, self-paced programmed instruction, has a long history. However, developments in "high tech" support have considerably broadened the choice and viability of alternative learning contexts and the question of the value of technology for learning has been argued on both sides. There are those who assert that technology has no influence on learning under any circumstances (Clark, 1983). Rather, it affects only the cost or extent of instructional delivery. It is the quality of instruction itself that impacts learning (Clark, 1994). Others claim that the characteristics and capabilities of various technologies do indeed interact with learners, and that effects vary based on characteristics of both the technology and the learner (Kozma, 1991).

The use of the Internet for the delivery of course material has burgeoned since the early 1990s (Gubernick & Ebling, 1997). In higher education, the Internet is used in the classroom in a range of ways, some more common than others. At one end of the spectrum are courses taught and degrees earned entirely online (The Associated Press, 2004). At the other end are traditional courses that use university intranets such as Blackboard (http://www.blackboard.com) to post announcements and readings but not as a venue for instruction. In the middle are courses taught using a hybrid approach that combines online and in-class instruction (Varanelli & Baugher, 1999). In a hybrid class, some percentage of material is taught in face-to-face classes and the balance is taught through online delivery. The number of hybrid course offerings has increased with the development of software that provides the ability to design functional, interactive sites that facilitate student-teacher communication, deliver course content, and perform administrative tasks (Samuels, 2000).

Given the rapid pace of software development and the growing role of computers in daily life, an increasing emphasis on the utilization of Web-based instruction seems likely (Hitt, 1998). Unfortunately, as an anonymous reviewer of this article commented, there is a "dearth of good research designs and methods…that investigate ways in which instructional media serve a wide variety of learners and shape the learning experience." In 1999, the Institute for Higher Education Policy reported a relative paucity of original research dedicated to explaining or predicting phenomena related to distance learning, stating further that much of that writing was in the form of "how-to" articles and essays (IHEP, 1999). More recently, Alavi and Gallupe's (2003) case review of the use of information technology in business and management educations programs concluded that "few objective assessments of the performance of [technology-mediated education programs] are initially undertaken" (p. 139).

Most extant research on this topic investigates the effectiveness of online (Web-based) instruction compared to traditional instruction. Results are inconclusive. For example, studies have found that "cyber students" learn as well as face-to-face teams (Wang & Newlin, 2000, 2001, 2002) and have a higher degree of satisfaction (Navarro & Shoemaker, 2000) and, conversely, that face-to-face teams report higher levels of satisfaction (Warkentin, Sayeed, & Hightower, 1997). It has been reported that virtual teams make more effective decisions (Schmidt, Montoya-Weiss, & Massey, 2001) and are more collaborative (McCollum, 1997) than either individuals or face-to-face teams and, conversely, that levels of communication effectiveness are similar for virtual and face-to-face teams (Chidambaram, 1996; Warkentin et al., 1997). Reviews of several research studies by Brownson (2000) and by Moore and Thompson (1997) concluded that performance outcomes of

distributed (distance) technology-mediated learning are not significantly different from traditional learning. Student satisfaction results were mixed. In a study by Goldberg (1997), students in a lecture class with access to supplementary Web materials performed better academically and had better attitudes toward the course than students in a conventional (lecture only) class or a fully online class.

None of this research investigated the efficacy of combined Web-based and face-to-face course instruction—the hybrid design.

The focus of the research reported here is whether the hybrid and traditional approaches differentially affect student performance and student satisfaction. To study this question, we compared student performance and satisfaction in introductory management classes of both designs, that is, the traditional design, which used the university intranet to supply optional support materials, and the hybrid design, in which half the class sessions were traditional and the other half were asynchronous online classes that included discussion boards, online assignments, online teacher feedback, and online announcements.

Given the lack of direction from the existing research stream, no hypotheses regarding student performance or the overall satisfaction of students with the instructor were proposed.

STRUCTURE AND ADMINISTRATION OF CLASSES

The study included three classes taught in sequential semesters: a fall hybrid class, a spring traditional class, and a summer traditional class. The in-class meetings for both the fall semester hybrid class and the spring semester traditional class were held at the same time (6:00 p.m. to 8:50 p.m.) on the same day of the week (Tuesday). Both were organized around a weekly work schedule. For students in the hybrid class, weekly online assignments and contributions to a discussion board were required, and attendance at in-class meetings was required and tracked. For students in the traditional class, weekly attendance was encouraged but not required or tracked. The summer traditional class covered the same material in the same manner as the spring traditional class, but it moved more quickly, with classes taking place twice a week for longer hours and with the class ending in six weeks as opposed to the typical fourteen weeks in a fall or spring semester.

The university where this research was conducted uses Blackboard as its internal network, or intranet. In the traditional class, Blackboard was used as a support function. On Blackboard, students could review announcements that had been made in class and access PowerPoint lecture slides prior to class. There was also an optional extra-credit assignment based on material in Blackboard's "External Links." The extra credit was not necessary to achieve a grade of "A" in the class. (The same extra credit assignment was available in the hybrid course.) Thus, a student in the traditional class could have ignored Blackboard completely without penalty.

For students in the hybrid class, Internet and Blackboard access were required. Students attended six face-to-face classes, excluding those attended for exams. The remainder of the course was taught through online PowerPoint slides, assignments, and discussion board threads. Assignments and discussion threads were designed to replace the lecture material and discussion of the traditional classroom setting. Six online assignments were given that covered course content not presented in the face-to-face classes. Participation in online discussions was required.

The courses were developed to be comparable except for the variable being studied, that is, traditional versus hybrid design. They were taught by the same professor, covered the same material, utilized comparable midterm and final exams, and used the same student evaluation survey to measure satisfaction. The same textbook (Certo, 2000, 2003) was used in both classes, as were the same PowerPoint slides (though the order and content of the slides was modified for the Internet format). All exams were taken in-class. There was no pre-screening to select students for the courses. However, self-selection can occur when random assignment is not possible.

In all classes, the midterm and final exams together accounted for the majority of the grade in the course. Each exam counted for 30% of the total in the hybrid class, 35% in the traditional spring class, and 50% in the traditional summer class. Most of the exam material was contained in the PowerPoint slides, and some questions came from the text. There was overlap between the slides and the text. Extra-credit questions on the exams came from similar, if not identical, sources for both types of classes.

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