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Disciplines
Fashion Design | Fiber, Textile, and Weaving Arts | Graphic Design | Industrial and Product Design

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Student Perceptions of a Hybrid Course

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Abstract
This study explores students’ (n=156) perceptions towards a hybrid introductory textile science course offered at the university level. Results suggest students are satisfied with the hybrid learning model, preferring the hybrid learning model to both the online-only and offline-only course presentation format.

Introduction
The goal of hybrid courses is to join the best features of offline teaching with the best features of online learning to promote active independent learning and to reduce class seat time (Young, 2002). Hybrid courses are not traditional distance education courses, as they are not entirely online. They are also not simply traditional classes with a website, as online time replaces some classroom time. Further, these classes often require extensive course redesign as information posted online should augment the offline assignments and discussions. Hybrid courses offer advantages over face-to-face teaching by making the best use of physical resources and maximizing student learning by providing a variety of teaching and learning formats. They also offer advantages over totally online courses, due to the reduced but not eliminated professor-student and student-student contact (Garnham & Kaleta, 2002; Reiboldt, 2001; Robertson & Stanforth, 1999; Volery & Lord, 2000).

Institutions of higher education have become increasingly engaged in utilizing the Internet and computers as pedagogical tools. This is because of the relative affordability of computers and the ever-increasing simplicity and processing speeds of computer and Internet applications (Jurison, 2000). As such, online learning has grown significantly over the past decade due to its real and perceived benefits (McGinn, 2000). According to the National Center for Education Statistics, in 2000-2001, 90 percent of public 2-year and 89 percent of public 4-year post-secondary institutions offered some type of distance education courses with an estimated 1,472,000 enrollments in college-level, credit-granting distance education courses (U.S. Department of Education, 2003). Among institutions offering distance education courses, 90 percent offered asynchronous Internet instruction and 43 percent offered synchronous, or real-time, Internet instruction (U.S. Department of Education, 2003).

With the increased availability of the Internet, many colleges and universities focused on developing fully online courses that required no face-to-face meetings, hoping to attract students who could otherwise not get to campus. In recent years, however, many colleges and universities have encouraged students who live on or near their campuses to take hybrid courses. John R. Bourne, professor of electrical and computer engineering at Franklin W. Olin College of Engineering, Fairleigh Dickinson, surmised that in the near future, “somewhere in the 80-90 percent range of classes could sometime become hybrid” (Young, 2002).

Purpose
As a result of the phenomenal adoption and growth of hybrid learning environments it is imperative that educators and administrators understand the experiences of students who have participated in hybrid learning and assess student satisfaction with elements of these courses. Thus, our main objective in this empirical study is to examine student perceptions and overall satisfaction with a hybrid course. It is not our intention to describe or analyze student retention of material or learning of the information, but rather student perceptions regarding the course format. This is especially important since student perceptions have been correlated to adoption and willingness to register for online courses (Singh & Pan, 2004). An introductory textile
science course taught during the spring 2005 semester was selected for this study. The basis for the selection was that this hybrid course incorporates traditional in-class, face-to-face weekly laboratory meetings as well as online Internet components.

Method
The target population for this study was defined as students currently enrolled in the introductory textile science course at a land-grant university in the Midwest portion of the United States. A total of 163 students were enrolled in the course; 156 students or 96 percent of the students completed the survey.

The questionnaire designed for this study contained items drawn from previous research. The items used to assess participants' attitudes towards the course and the required course components (i.e., required online activities, required offline activities) were based on items previously used by Johnson, Burnett, and Rolling (2002) and Wang and Newlin (2000). Students were asked to evaluate elements of the course by answering questions such as, “How did you learn? Rate the value of the [various offline and online elements] in learning concepts and principles covered in this course.” These items were presented in a Likert-type scale format in which participants were asked to indicate their level of agreement (1=strongly disagree, 5=strongly agree) with specific written statements. A limited amount of demographic information (e.g., year in school, major, interest area within the major, GPA) was assessed to allow students to maintain anonymity. As an incentive for participation 20 extra credit points were added to each participating student’s final grade. The students had 24-hour access to the questionnaire for one week.

The Course
The introductory textile science course is a required 4-credit course for all undergraduate students enrolled in the apparel, merchandising, production, and design program. The catalog description states that this course discusses “textile fibers, yarns, fabrication, coloration, and finishes; quality and performance application to apparel, furnishing, and industrial textiles.” Like other university science courses, the introductory textile science class requires students to memorize factual information as well as apply their knowledge in a hands-on laboratory environment. The introductory textile science class consisted of twice-a-week laboratory meetings. In these meetings, students applied their knowledge of textile science through individual and group experiments and in-class assignments. Other offline assignments included the completion of a fabric names notebook, the creation of an apparel products line or a home furnishings line, and extra credit opportunities (e.g., participation in local needlework club events, a visit to a regional living history museum). Online assignments included lecture content with corresponding weekly quizzes, paragraph response lab assignments, and a mandatory discussion board in which students needed to summarize assigned readings. All online assignments were posted to WebCT, a web-based, university-supported organizational format. The graded components of the Web-based course were open-student, open-book, and open-note.

Participant Characteristics
The final sample was composed of 156 individuals. The majority of the students indicated that they were sophomores (n=79) or freshman (n=37) and nearly all were majors within the apparel, merchandising, production, and design major (n=153). Most participants indicated that they had overall GPAs of either 2.0-2.9 (n=64) or 3.0-3.5 (n=56) out of 4.0. Participants (n=109) typically spent between 30 minutes and 2 hours studying the material for the course each week, and the majority of students believed that they would receive either an A (n=97) or a B (n=45) for the final grade in the textile science course. Most students indicated that this textile science course was not their first course to use WebCT. In fact, the majority of students (n=105) indicated that they had used WebCT in four or more of their previous classes. The participants (n=142) primarily accessed WebCT for the textile science course from home computers. For the most part, the undergraduates indicated that they enjoyed using computers (mean equals 4.11). In general, the participants encountered few problems using computers and the WebCT program to complete the textile science course. Only six students indicated that they had “much” or “great” trouble using WebCT in the course.
Results
Participants’ responses seemed to indicate that they had a positive attitude toward the hybrid introductory textile science course. In general, participants tended to agree with the statement that they were satisfied with the course overall (mean equals 3.65). Additionally, participants indicated that their attitude toward the course improved after completing the course. The results of a t-test comparing their initial attitude toward the course (mean equals 2.32) with their attitude toward the course at the end of the course (mean equals 3.68) indicated that their attitude toward the textile science course significantly improved after they completed the course (t-value equals negative 10.69; p-value equals 0.00). Furthermore, participants tended to agree with the statement that they would prefer to have the lecture presented online, but to attend live lab sessions (mean equals 3.36), which was the way in which the hybrid introductory textile science course was presented during the semester. The results of a series of t-tests indicated that participants believed that they preferred the hybrid course format to a traditional, offline course format (mean difference equals 0.39; t-value equals 2.71; p-value equals 0.01) and to a course format that included exclusively online elements (mean difference equals 0.81; t-value equals 5.46; p-value equals 0.00). Considering all of these results, it seems to be the case that the undergraduates who completed the hybrid textile science course were generally content with the presentation format of the course material.

In terms of required course activities, participants indicated that they preferred the required offline activities to the required online activities. The results of a t-test comparing their attitude toward the required offline activities (mean equals 3.31) with their attitude toward the required online activities (mean equals 2.13) indicated that their attitude toward the required offline activities was significantly greater than their attitude toward the required online activities (t-value equals 23.64; p-value equals 0.00). This is not to say that the students did not have a positive attitude toward individual online activities. In fact, out of all of the offline and online activities about which participants were questioned, an online activity (i.e., completing online quizzes) received the highest mean attitude rating (mean equals 3.68) from participants. However, the mean attitude rating for this online activity was not statistically significantly different (t-value equals 1.46; p-value equals 0.15) from the mean attitude rating (mean equals 3.54) for the required activity which received the second highest mean attitude rating out of all of the offline and online activities (i.e., the required offline activity of interacting with teaching assistants during the laboratory sessions). So, while participants did seem to have a positive attitude toward many of the individual online components of the course, they also seemed to prefer the offline activities, as a whole, to the online activities, as a whole. These findings seem to indicate that, based on student preferences, offline activities should not be abandoned in the introductory textile science course, again supporting the use of a hybrid presentation format for the course.

Discussion
Student perception of the hybrid course improved after completion of the course. Improved perceptions of the course most probably occurred as students became more knowledgeable concerning course expectations and gained a better grasp of course material. The study of textile science requires an understanding of many technical terms and definitions. While this element of the course may have been initially daunting to the students, the course may have become less threatening once the students became actively involved in the learning process. Additionally, the opportunity to access and study the technical information online at their own pace and convenience may have eased the students’ tension. Furthermore, the opportunity to apply the material through hands-on activities in face-to-face lab sessions may have served to positively reinforce the students’ confidence as they mastered of the course material. Thus, the hybrid learning format of this course worked well for students primarily because the offline, hands-on activities directly supported the online, independent learning of technical content and information.

Students preferred the offline activities to the online activities, with the one exception of the online learning quizzes. The learning quizzes allowed students three attempts at answering lecture content material. These experiences provided immediate feedback to the students. The quizzes also represented a non-threatening assessment of learning because only the highest grade
of the three attempts counted towards the final grade. Overall, however, students seemed more satisfied with the offline activities. The students, especially those with a design focus within the major, could have been responding positively to the creative components involved with the production of a fabric names notebook and the creation of an apparel products line. Students may also have enjoyed the active learning and social engagement that occurred both inside of the lab setting and outside of the classroom (e.g., while visiting a regional living history museum or attending a needlework club event). The online activities were more focused on the memorization and comprehension of key course content, whereas the in-class activities included more tangentially related activities. Although students preferred the more imaginative assignments completed offline, they responded positively to the online presentation of the more technical material.

Conclusion

Results from this study seem to indicate that undergraduate students may prefer hybrid courses to exclusively online and exclusively offline courses. While the undergraduates who participated in this study preferred the required offline activities to the required online activities, they also seemed to prefer to have some components of the course online (e.g., the quizzes) and some components of the course offline (e.g., the labs). It would not be recommended, then, to have this textile science course completely online.

This is not to say, however, that no courses should be presented exclusively online or to imply that all courses should become hybrid courses. Due to the fact that this study used a survey method with student participants from only one hybrid course, the results have limited generalizability. Researchers interested in the differences between hybrid learning formats and other learning formats should conduct controlled experiments to obtain more definitive results concerning the differences that exist among online and offline learning formats. Additionally, because student perceptions of learning and the course requirements were assessed, this study’s results cannot be used to support arguments concerning the effectiveness of hybrid courses. Future researchers interested in measuring actual student learning and retention of class information could design a study to compare differences in student academic achievement in hybrid, traditional, and distance education classes.

References


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