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

Comments
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Computer Mediated Communication in Textiles

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Abstract
This study explored some aspects of computer mediated communication (CMC) in a web-based textile science class offered at the university level. Results suggest the CMC elements of popular press, online readings with a posted discussion board aided student acquisition, articulation, and application of course material. Students were pleased with the readability of the popular press readings.

Introduction
Technology-supported education in the United States higher education system has become a significant delivery mechanism of information due to the perceived advantages of using computers and the Internet over other forms of communication (Johnson, Burnett, & Rollig, 2002). With the proliferation of Internet based courses, questions arise concerning the quality of communication for teaching and learning purposes (Karuppan, 2001; Storey, Phillips, Maczewski & Wang, 2002). During spring semester 2005, the researcher integrated dimensions of computer mediated communication (CMC) into a web-based textile science undergraduate class. CMC connotes the interactive textual exchange of information in learning networks comprised of instructors and students communicating in real time or sequentially (Harasim, Hiltz, Teles, & Turoff, 1995). Purposes of this paper were to share student examples demonstrating their acquisition, articulation, and application of course material prompted by the online asynchronous discussion of posted readings.

There are many different technical kinds of CMC, including email, discussion groups, chats and messaging, multi-user domains, and audio-visual systems. The use of interactive textual exchange of information can supplement face to face sessions with students. In addition, through these interactive tools, students can increase their interaction with peers and instructor providing additional opportunities for acquisition, articulation, and application of course material. Formative and summative feedback can be given via interactive networks at various levels through a mixture of instructor set tasks/quizzes and peer or instructor comments via discussion boards, chat, or email (Pilkington, Bennett, & Vaughan, 2000).

Since the 1980s, when new communication technologies were developed, CMC has become an increasingly important aspect of university teaching. Edwards and Clear (2001) suggested that web-based tools such as electronic discussion were successful strategies that should be integrated into online teaching and into in-class learning activities. Goodwin, Graham, & Scarborough (2001) found that the development of an asynchronous learning network enriched the environment for distance learning. Pilkington, Bennett, and Vaughan (2000) found that graduate student participation in chat seminars, an electronic discussion board, was accompanied by above average performance in group-work. Greenlaw and DeLoach (2003) believed electronic discussions to be an interesting approach to teaching critical thinking because it combined the best of writing exercises and in-class discussions. These researchers stated that CMC provided opportunities for student acquisition, articulation and application of course work. An and Frick (2006) found that students perceived CMC as convenient especially for tasks such as idea generation.

216

Academic Exchange – Summer 2006
Purpose

Purposes of this paper were to share student examples demonstrating their acquisition, articulation, and application of course material prompted by the online asynchronous discussion of posted readings. During the spring semester 2005, the researcher integrated elements of CMC into the web-based textile science course, including weekly readings from popular press offerings and student-posted discussions of the readings. These readings broadly covered the topics of the course and could be grouped into the following categories: innovations in textile science, industrial applications of textiles, cultural and historical perspectives of textiles, conservation of textiles, and the finishing of cloth. Readings were selected by the instructor from websites of the following popular press sources, The New York Times, National Public Radio, MSNBC, The Wall Street Journal, The Washington Post, Public Broadcast Station, and CNN. Students were instructed to read one article per week and post a comment concerning the reading to the discussion board. Fifteen readings were required over the course of the sixteen-week semester. Cooperation and analysis of others’ opinions were encouraged through the constant availability of posted discussions of readings. The discussion board was displayed by the topic heading of each reading, enabling the threading of separate messages together. Threading facilitated a conversational back and forth accessible to all students and instructor. The instructor and the students of the course were able to view and comment on responses to the discussions of readings. WebCT allowed users to keep track of what discussions were read or not read, further enhancing the management of information and communication. The instructor monitored the state of the discussions and twice interjected positive comments regarding student participation in the discussion board.

The Course

The introductory textile science class is a required four-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.” The introductory textile science class consists of twice-a-week laboratory class meetings as well as completion of lecture content and quizzes posted to WebCT. WebCT is a web-based, university supported organizational format. The use of WebCT for transmission of content information in the introductory textile science course is perceived by students as a satisfactory method of delivery (Marcketti & Yurchisin, 2005).

Method

The population for this study was students 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; 155 students fully participated in completing the required number of posted discussions of the readings. The posted discussions were analyzed by the researcher using ethnographic case study methodology. The readings were grouped into three categories: postings that demonstrated acquisition of new knowledge, postings that demonstrated articulation of the textile science information; and postings that demonstrated application of course material to other course work or the personal lives of the students. The researcher provides three examples of students’ utilizing the posted discussions to show their acquisition, articulation, and application of new information.

Acquisition

Knowledge needs to be acquired or constructed through exposure to new information. Acquisition can occur in a variety of formats including individual readings and participation in hands-on activities. Once students are exposed to new information, reflective activities help students make meaning with the information. Through the
posted discussion of readings, students regularly commented on their acquisition of course material. The readings allowed students the opportunity to learn about more in-depth aspects of the general topics covered in class such as innovations in textile science, industrial applications of textiles, cultural and historical perspectives of textiles, conservation of textiles, and the finishing of cloth. Commenting on a reading that discussed the use of textiles in the automotive industry (Autos to drive fabric use, 2004), one student stated,

Until I took this class it never crossed my mind that fabric is used in almost everything, such as car seats, furniture, and home decorations. I mainly used to thing of apparel when I thought of textiles. I was surprised that this article stated that 88% of the fabrics used in the automotive industry are used in the seating and door covers. I also never thought that fabric used in the seat belts and airbags could actually save lives.

Although the instructor regularly commented on the ubiquity of textiles in the world, popular press readings allowed students the opportunity to “discover” the universality of textiles as encountered in everyday life.

Articulation

In addition to gaining new information, the posted discussions facilitated the verbalization of this new information through exploratory talk. Students regularly commented that the readings were “neat” and “interesting,” but the process of articulating, explaining, and justifying their comments demonstrated the use of critical thinking in the process of acquiring the new material. After reading an article concerning the future of nanotechnology in textiles (Johnson, 2004), one student commented,

The concept of ‘smart’ textiles is absolutely amazing. Turning garments into communication devices to track the vital signs of patients going home from hospitals is incredible. However, despite all of the good that may come as a result of this new kind of technology, I see a potential problem of privacy invasion that could become a threat if not controlled. The third to the last paragraph says “Nano-Tex is already licensing its technology to 20 of the World’s biggest mills, so there’s chance you may be wearing the fabric and not even know it.” I assume this is referring to the more mundane technology that guard against spills and wrinkles, but who knows? In the future we could be tracked for marketing research and not even know it. If I’m ever wearing a garment that is monitoring anything about me, I want to know about it.

This commentary suggested that this student was critically examining her beliefs regarding the future of nanotechnology and privacy concerns.

Application

According to educational psychology, learner-centered paradigms emphasize student’s application of material to enduring and emerging issues in real-life contexts (Bransford, Brown, & Cocking, 1999). Students in the introductory textile science course often commented on the connections between the newly acquired information learned from the readings with experiences and events that occurred in their own lives. One student commented on a reading about the increasing popularity of knitting (Cool knitters, 2002).

After listening to this piece on knitting by NPR, I’ve come to the realization that knitting has become more popular among the younger generation after thinking about my own friends and family who knit. It’s quite fascinating to me that such young women are organizing their own knitting clubs. The woman in Manhattan who has her knitting circle called “A Stitch and Bitch” is one of the many good things for young people to get involved with who want to have a sense of integration, contemplation, process or just socialize with others who share the same interests. Many others may find [knitting] therapeutic while some are fascinated by the pieces that are created with only two simple needles and a [skein of] yarn. These things are more rewarding to
them while a majority of our culture is obsessed with instant gratification and closure according to the audio bit. I believe if knitting was more popular and offered as an extracurricular activity, I'd be more than willing to take my time and learn.

By reading the article on knitting, this student synthesized experiences from his own life and information from the popular press article to communicate his beliefs regarding the purposes of knitting.

Discussion
Of the 163 students enrolled in the textile science course, 155 or 95 percent of the students completed the required assignment of reading and posting a discussion on fifteen of the popular press readings posted by the instructor to WebCT. On the end-of-course evaluations, many students commented that the popular press readings and discussions were successful aspects of the course to be maintained. On the five-point Likert-type scale asking students to “rate the value of the popular press readings and discussions in learning concepts and principles covered in this course,” students assessed the activity positively (mean equals 3.65). Students commented on the evaluations that the readings were easy and enjoyable to read and that they often shared interesting readings with family and friends. One student commented on the evaluation form that the readings, “allowed students to get involved more fully with course content....the readings helped me learn and really think about course material outside of the classroom.” Students that were less enthused about the readings expressed frustration with the number of readings and discussions required. Several students commented privately to the instructor that the sheer number of readings were difficult to complete. Despite these frustrations, the overall positive attitudes expressed towards the readings and the required postings seem to suggest that the majority of students enjoyed the CMC elements added to the WebCT, web-based course format.

While the instructor was generally pleased with the quality of the posted discussions and the issues raised by the students based on the readings, there was disappointment with the amount of misspelled words used by the majority of the students. The number of spelling and grammatical errors could be a result of the invisibility of the instructor. Because the instructor commented only twice throughout the semester on the discussions, students could have felt less pressure to “impress” or write for the approval of the instructor. Further, because the articles were popular press offerings, students may have felt more at ease writing conversationally, rather than academically.

Conclusion
The purposes of this paper were to share student examples demonstrating their acquisition, articulation, and application of course material prompted by the online asynchronous discussion of posted readings. Instructors should be advised that the readings selected for the online postings were popular press offerings that sought to educate and entertain the reader, rather than provide detailed technical information. In spite of this limitation, this paper adds to the discussion regarding the use of CMC in university classrooms. Further, this paper illustrates ways in which CMC scholars can exploit the possibilities offered by powerful and flexible analytical tools for collecting, organizing, and exploring digital data.

References


