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## Reality check: Asynchronous instruction works!

Sheila R. Curl

Leslie J. Reynolds

Brent A. Mai  
Fairfield University, bmai@fairfield.edu

A.E.S. Macklin

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# Reality check

## Asynchronous instruction works!

by Sheila R. Curl, Leslie J. Reynolds, Brent Mai, and Alexius E. Smith Macklin

Never before had I asked a student to cite an emoticon. In traditional classroom instruction, it is unlikely that this would have come up at all. However, in an asynchronous course, you never know where an online threaded discussion on citation formats will lead.

As library educators, we have the opportunity to have an impact on a student's chances for success in locating and managing information. We must draw upon the students' familiarity with new technologies and teach them how to effectively articulate their information need, identify appropriate resources, evaluate what has been retrieved, and redirect their continued searching. The challenge that confronts us is compounded by the fact that many students enter the library only through a virtual door.

In recognition of the shifting paradigm involving information and new technologies, Purdue University's Electrical Engineering Technology (EET) program asked the Purdue Libraries to develop a credit course that would teach the students how to effectively locate, evaluate, and present information. The course, Information Strategies, has been a required course in EET was designed and taught by the libraries' faculty since 1993. It has subsequently been adapted to other disciplines, as well.

As evolution of new technologies continued, course instructors proposed the devel-

opment of an asynchronous version of this course to the Indiana Higher Education Telecommunications System (IHETS). The development grant was awarded and the first Web-based version of this course was offered Spring 1999.

The purpose of the IHETS course development grant was to "enhance and convert [the Information Strategies course] to a digital format, which will allow asynchronous statewide access." In July 1998, the investigators, Professors Sheila Curl, Leslie Reynolds, Brent Mai, and Alexius Smith, began adapting the traditional course for delivery over the Internet.

### Course development

Initially we planned to adapt the conventional linear format that had been used in the classroom. We began course development by deconstructing the course itself. We realized it was critical that we integrate search strategies, evaluation and citation formats, as well as address Web sites to draw in the students' interest. We decided to adopt and adapt Subramanyam's circular model of the evolution of scientific information as the framework on which to hang the course.<sup>1</sup> The specifics of this adaptation will be addressed in forthcoming papers.

Once this model was in place, we designed the online lecture and discussion materials, activities, assignments, quizzes, and

### About the authors

Sheila R. Curl is head of the Engineering Library, Leslie J. Reynolds is an assistant engineering librarian, and Alexius E. Smith Macklin is user education librarian at Purdue University, Brent Mai is director of Walker Management Library at Vanderbilt University; e-mail: curl@purdue.edu; reynolds@purdue.edu; alexius@purdue.edu; brent.mai@vanderbilt.edu

case studies. During course development, we learned about WebCT, a Web-based course management software package. By using this course management software we could meet most of our educational objectives without having to employ someone to program these features.

WebCT enables the instructors to integrate assignments, tests and self-tests, discussion via bulletin boards and chatrooms, and it provides a group work area for students. The process of evaluation became central to the course: identify resources and evaluate, locate resources and evaluate, use resources and evaluate. The course design changed to put evaluation and search techniques first. The redesigned course incorporated case studies as well as problem-based learning.

### Course offered

The course was included in the Purdue, West Lafayette, Course Schedule for spring 1999. We contacted academic advisors in the Department of Electrical Engineering Technology and faculty representatives in the Statewide Technology Program so they would be aware of this option when registering students.

Nineteen students were enrolled in the course in January 1999: fifteen from West Lafayette and four from the Statewide Technology Program at Indiana University Kokomo. We are currently teaching the course for the third consecutive semester (thirteen West Lafayette students and one

Kokomo student) and it is on the schedule for fall 2000. We are also developing a version of this course for students in the School of Management and a version that can be taught as an independent study. We are investigating the inclusion of modules from the asynchronous course into other Purdue courses taught using WebCT.

### Initial evaluation

Originally, we did not plan to meet with the students face-to-face. However, after several students contacted instructors to express confusion and frustration, we decided to meet in person with the entire class. Those who could not attend the meeting in-person joined the discussion via the WebCT chatroom. We met with them again face-to-face two weeks later to discuss continued progress. The level of the students' frustration and confusion had been reduced.

The redesign of the course for Fall 1999 included a mandatory face-to-face meeting during the first week of class. The purpose of the meeting was to reduce the anxiety of learning online and to eliminate the most common technical problems experienced by the students.

The first iteration of the course used e-mail accounts in WebCT and campus/commercial providers. This led to confusion for both the instructors and the students. The instructors now only send the initial course meeting announcement and course login instructions to students' campus/commercial e-mail addresses; all other corre-

## Web course development timeline

*November 1997:* Course proposed and IHETS grant application submitted

*April 1998:* IHETS grant award announced

*July 1998:* IHETS grant funding received

*Fall 1998:* Student programmer hired, equipment purchased, course model designed

*January 1999:* Course offered and 19 students enroll (first time)

*May 1999:* 16 students complete the course

*Summer 1999:* Course revised and WebCT used exclusively

*Fall 1999:* Course offered and 30 students enroll (second time)

*September 1999:* Final grant report submitted

*Winter 1999:* Course revised

*Spring 2000:* Course offered and 14 students enroll

*Summer 2000:* Course revision planned, course adapted for management students

*Fall 2000:* Course scheduled to be offered

spondence occurs within the course Web site. The students must "come to class" to know what is going on and take responsibility for their education. Development of the course for subsequent semesters uses only the WebCT e-mail, thereby reducing student's confusion about communication locations.

Since the students cannot see the instructors or one another, the e-mail, chatrooms and topic discussions must carry the emotional content of our message in addition to the message itself (hence, the aforementioned discussion that led to the request for the citation for emoticons). These students are comfortable in online discussions. There is a significant use of humor by both instructors and students, which makes otherwise technical content engaging.

### What did we learn?

Students who can expect to be successful in an asynchronous course are those who come to the course Web site a few times a week, for ten to fifteen minutes each time. Coming to the course Web site regularly is analogous to coming to a traditional class. Students who keep up with readings and assignments and participate with their group are more likely to successfully complete the course. Preliminary analysis logs, of course, show a strong correlation between frequency of visits and grade earned.

Typically, the students who use their own computers do better than those who use only computer labs. Those who rely only on computer labs, where hours and the number of computers may be inadequate, are most likely to become disengaged with the learning process.

The computer skills that students brought to class were uneven. Some were proficient with using computers, others lacked the skills and confidence to try new things. For example, we found ourselves demonstrating cutting and pasting from a document to a window in the course Web site to help a student complete an assignment successfully.

Students reported liking the flexibility of scheduling that an online course allows.

Cooperative and collaborative learning was evident throughout the course. The instructors taught the students, the students taught each other, and the instructors learned from the students.

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### Conclusion

As library educators, we must address the information literacy process and not just the skills for retrieval. This information literacy process facilitates a lifelong learning habit that forces one to think beyond the button-pushing of a particular technology.

Today, students go to the Web first—if we teach them how to apply skills for the Web to other resources, then we have accomplished our goal. Since many people only enter the library through a virtual door, our online presence as research facilitators is essential.

### Note

1. K. Subramanyam, *Scientific and Technical Information Resources* (New York: Marcel Dekker, 1981), 5. ■

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*(Children's Literature . . . continued from page 579)*

print version. Also included are selected *Horn Book* resources for parents, authors, and illustrators. Access: <http://www.hbook.com/>.

• **School Library Journal.** The primary audience for *School Library Journal* is school librarians, media specialists, and children's librarians. This trade publication offers articles, book, media, and Web site reviews. The electronic version provides selected articles, best book lists, editorials, and an index to the print version of *SLJ* to 1997, with an index to reviews to 1995. Access: <http://www.slj.com/>.

### Note

1. The Caldecott Medal was named in honor of 19-century English illustrator Randolph Caldecott. It is awarded annually by the Association for Library Service to Children, a division of the ALA, to the artist of the most distinguished American picture book for children. Permission to reproduce granted by the ALA. ■