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ESTABLISHING A LEARNING RESOURCE ON THE WORLD WIDE WEB

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Un programme interactif basé sur le Web a été mis en place comme complément à une série de leçons sur la santé publique. Les pages de Web ont été configurées avec des liens qui facilitent l'accès à des sites à distance. A la fin du semestre, un questionnaire d'évaluation a été distribué aux étudiants qui ont suivi cette matière pour évaluer l'utilisation de ce programme. Quatre-vingt-dix pour cent des étudiants qui ont complété ce questionnaire ont jugé le programme facile à utiliser et la majorité ont jugé qu'il ajoutait un plus par rapport aux leçons. Pourtant, un large groupe d'étudiants a choisi de ne pas utiliser ce programme et des problèmes logistiques ont limité l'accès au Web pour quelques étudiants.

Explosive development of the World Wide Web (WWW) as a communication resource has prompted extensive interest in its potential as an instructional medium. The WWW provides rapid global access to information. University faculty have responded by placing course syllabi and notes on University servers, however, much of this material is currently presented in a traditional linear format. The WWW provides an opportunity to create an interactive learning environment that gives students the chance to explore subjects in depth at their own pace. Audio, video, animation, and text can be readily included without being restricted by the bounds of a hard drive or CD ROM. Effective use of the WWW for instruction, however, requires a different approach to preparing instructional materials. Accordingly we developed a WWW based interactive learning environment as an adjunct to a series of public health lectures. WWW pages were created using hypertext markup language (HTML) and Page-Mill (Adobe Systems Inc.). Active links that facilitated student access to remote sites were used to enhance text and images stored locally. Information quality, utility, and validity were maintained by accessing and reviewing information at remotely linked sites. Core material subject to examination was separated from supplemental material by preceding links containing supplemental material with an asterisk. To facilitate communication between students using the Web site, a listserv was created to give students the opportunity to discuss course material. The listserv also served as a "bulletin board" for the instructor to post course information.

An evaluation form was distributed to students enrolled in the course at the end of the semester to assess their use of the learning resource. Forty-one (53%) of the 78 students that were enrolled completed the form. Twenty-one (51%) of the 40 students that responded used the learning resource. Twelve students (60%) that did not use the learning resource felt they did not have enough time to access the material on the Internet. Four (20%) felt it wasn't a worthwhile use of their time. Five (25%) students tried to use the learning resource but abandoned their attempt because they found it frustrating. Students that used the resource accessed the Web site 1-16 times (median=5, Q1=2.3, Q3=9.8). Student sessions with the learning resource, for 70% of the students, averaged more than 30 minutes in duration. Ninety percent of the students found the resource easy to use and 100% (n=18 that responded to the question) believed it was a useful adjunct to classroom instruction. Thirteen of these students (13/18) believed that the resource should be expanded to encompass all college courses. Several logistic problems were encountered when implementing the use of the learning resource. Although, supplemental material was designated with an asterisk, many students (60%) expressed concern about not being able to differentiate core material from supplemental material. Several students also expressed concern about difficulty encountered when attempting to remotely access the Web site from slower computers at home with less sophisticated graphics capabilities. Less than one third of the class subscribed to the listserv. Although it proved useful for responding to student questions and providing supplemental information, lack of universal participation by all students limited its utility as a communication tool during the semester.

Numerous content, presentation and delivery related problems must be addressed when converting standard course materials from their linear format into an interactive learning resource: 1) reevaluating what is core material; 2) selecting appropriate adjunct materials; 3) ensuring information quality; 4) ensuring that remote links are active; 5) structuring individual pages to sustain student interest and facilitate exploration; 6) selecting or creating images, animation, audio and video materials; 7) accommodating access from remote sites; 8) training students to use the Web pages; 9) providing "help support"; and 10) providing adequate numbers of seats at computer terminals for students. Faculty considering using the WWW in instruction should carefully consider the time commitment required to create an effective interactive learning resource.

Information placed on the WWW is not a replacement for classroom instruction. Web page development for courses should be viewed as a supplemental learning opportunity. However, as the WWW evolves, its effective use will facilitate the transition of instructors from their traditional role as information resources to facilitators of learning.

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