From Chalkboard to Chatroom: A Novice's Guide

Dr. Shahron Williams van Rooij, Ph.D., C.D.E.P.
Academic Product Manager
Datatel, Inc., USA
E-mail: svr@datatel.com

As the growth in the number of institutions offering web-based courses continues, faculty members are becoming increasingly challenged by the need to balance sound pedagogical strategy with the dynamics of the Internet environment. Some faculty are embracing this challenge, volunteering to teach web-based courses and participating in every available opportunity to learn how best to incorporate technology into instruction. Others have been assigned to teach web-based courses, with turnaround times ranging from 6-months to only several weeks. With the exception of those technology early adopters who have themselves developed tools and systems for web-based education, most faculty members are relatively new to web-based teaching and have neither the time nor the inclination to undertake an in-depth assessment of courseware development tools. The image of 24 x 7 learning certainly has its appeal; however, for those faculty members making the transition from the traditional classroom to the cyber-classroom, the road is often rockier than was anticipated. This paper offers some suggestions on facilitating that transition.

Getting Started

A review of the basics of instructional design is a logical starting point. Learner goals and objectives, content and instructional method and strategy remain the key drivers. These in turn raise a sea of issues in terms of implementation via the web: student support, faculty support, text, lab and library resources, office hours, advising, and copyright. In addition, faculty members often have to juggle multiple roles, particularly in these days of premium IT resources. Those roles include subject matter expert, instructional designer, media specialist, classroom manager, and even first-line technical support. Nevertheless, the objective is to apply pedagogical best practices regardless of the method of course delivery [Spear 98a].

Criteria for Evaluating Courseware

There is hope on the horizon, however. Published guidelines and standards offer guidance through the maze of commercial and proprietary software products for developing web-based courses. In November 1997, the Midwestern Higher Education Commission (MHEC) Interactive Courseware Committee noted four key criteria for evaluating courseware [HREF1]. First, the courseware should provide well-organized and dynamic interactivity between the student and the course content, the student and the teacher/facilitator, and among students sharing the learning experience. The human-computer interface should also allow the instructor and the students to navigate the material easily and effectively. Second, the courseware should be consistent with current knowledge on learning theories and precepts, providing strong support for instruction and the instructor, and facilitating instructor involvement in the learning process. It should allow varying "time on task" in the learning process and allow variable levels of faculty mediation based on the student's progress. Next, the courseware should provide highly motivating learning environments. Asynchronous, non-linear presentation branching in response to interaction with the learner and independent exploration are essential. Finally, the courseware should be faculty-friendly. Faculty members should need only basic computer skills and focus largely on the content, not the technology.

Creating Course Content and Materials

Creating course materials is the most time consuming, resource-intensive portion of faculty workflow and there are a variety of shrink-wrap products for authoring. However, nearly all of the PC-based authoring programs require a fairly robust technology skill set to get beyond on-line page turning; few provide development assistance and none integrate or interface with the institution's back office administrative information systems. A good authoring tool

should provide step-by-step creation methods, templates, sample Web pages that can be adapted for individual use, automatic generation of CGI scripts, and basic instruction for creating standard components [Hansen and Frick, 1997]. But the authoring tool should also be flexible enough to provide the functionality and the benefits of multimedia tools and integrate seamlessly into whatever course management system the institution has selected.

Faculty members should take stock of the materials they currently have. While digitizing dog-eared lecture notes and putting them out on the web is certainly not the best approach, we need not throw the baby out with the bath water. Ideally, faculty would like to be able to gather their materials and place them in a "treasure chest" of resources that could be organized dynamically for use in web-based teaching and learning. Microcosm, a windows-based authoring software program, allows faculty to do exactly that [HREF2]. Created by a university consortium in the United Kingdom and winner of several international awards, Microcosm offers a repository from which a faculty member can create the same kind of multimedia, interactive courseware that a professional developer produces, but without the developer. The software allows faculty to integrate information and create courseware from virtually any resource, without having to learn programming. Instead of having to translate resources to suit the proprietary formats that most authoring tools use, Microcosm uses a series of built-in viewers to access the resource files. For example, there are viewers for each of the MS Office applications, for GIF and JPEG files, etc. When an instructor creates hypertext links, the links are stored separately from the data in their own link database. This means that the resource materials can remain in their native formats and in their native locations. Moreover, the courseware can be created and utilized in a non-linear fashion. Instead of page-turning, linear instruction, the course design is interactive and learner-centered. Task cards and wizards in plain English step the faculty through the process, with lots of positive reinforcement along the way. The structured "treasure chest" can then be "dropped" into the institution internet course management system via a Publish-&-Go wizard. At the moment, Microcosm is being evaluated by a group of colleges and universities in the United States.

Summary

To navigate the maze of products and ideas about tools for web-based course development, faculty members should keep their options open. Experimentation often reveals unexpected results, not the least of which is the lessons learned about a particular product or approach. Listservs such as ITFORUM and WWWDEV welcome all those interested in sharing ideas or simply seeing help in coping with the dynamics of education and technology. Importantly, students are an excellent resource. Computer Science faculty members have long known that getting students involved in the design of their own web-based courses is a win-win situation for both parties. Finally, to be called a technology novice is not an insult. The novice's open mind and freshness have traditionally been the engine behind the evolution of approaches discovered by the innovators and developed by the early adopters. The novice approaches the chalkboard and the chatroom in a positive fashion.

References

[Spear 98a] Spear, Mary Helen (1998). Pedagogical Standards of Good Practice in Distance Education, 1998, 9th International Conference on College Teaching and Learning, Jacksonville, FL.

[Hansen and Frick 1997] Hansen, L. & Frick, T.W. (1997). Evaluation Guidelines for Web-Based Course Authoring Systems. *Web-Based Instruction*. Englewood Cliffs, NJ: Educational Technology Publications, Inc.

[HREF1] MHEC Home Page
URL: http://www.umn.edu/mhec/ici/framework.html

[HREF2] Multicosm, Ltd. Home Page
URL: http://www.multicosm.com/microcosm/index.html