Web-Supported and Web-Delivered Instruction on a Budget

Robert A. Fleck, Jr., Distinguished Professor of Computer Information Systems and
Tena F. McQueen, Associate Professor of Computer Science,
Columbus State University

Introduction: The use of the Web (or WWW) for support of classroom instruction has become common on many campuses. While many debate issues relating to Web-based instruction such as appropriateness, learning impacts, student retention and enrollment, and faculty effort, one issue underlying some of the debates is the cost of delivering an effective product.

Delivering an effective Web class requires faculty expertise and time. Concomitant requirements include server space and Internet access costs for faculty and students. Because of these costs, some institutions and faculty may be unable to deliver, or students able to access, effective Web classes.

The authors have found many free resources on the Internet that support asynchronous instruction. These resources are listed and evaluated. These free resources include dial-in access, Web-managed testing, e-mail, Web development tools and tutorials, and free Web space and course templates. We begin with dial-in access.

Free Dial-in Access: Web-delivered and supported courses require faculty and students to have the necessary hardware and software to access the Internet. While it may be possible to obtain "free" computer hardware via rebates provided by some ISPs, we assume that the basic hardware is available to either a faculty member or potential student. While low-cost connections from ISPs such as MindSpring can be obtained for as low as $6/month, the maximum allowed connect time for such plans is not likely to be sufficient to support the requisite connect time for Web courses.

A number of "free" ISP services provide "unlimited" connect time. A potential user is required to complete an online form supplying demographics and other information about purchasing habits. When the form has been completed, the user is provided with a dialup account. One such provider is freei.net at http://go.freei.net/www/. This company has local access numbers in many metropolitan areas.[1]

Free Internet Delivered Testing: Internet-delivered testing allows the course creator to provide testing in the same environment as the course content. Digital Solutions at http://www.digitalsolutionsinc.com/ provides limited testing features at no charge. The site provides clear directions on how to create online exams and it is possible to learn the system and begin to create an objective, multiple-choice exam, in less than thirty minutes. Advanced features are available for a fee.

Free e-mail: Communication between an instructor and students or among students is required to build an effective learning community, provide feedback, and to share files. Some of the Web services discussed below provide internal communication procedures, but it may be necessary to first communicate access codes for the course site prior to student use. In addition, a course objective may include the development of effective e-mail skills that cannot be developed or continued within the confines of a course site.

Microsoft (www.msn.com), Netscape (www.netscape.com) and Excite (www.excite.com) are just some of the companies that provide free e-mail services. Most also provide another free service to notify a user when colleagues are connected to the Internet. For example, Microsoft uses a feature called "Instant Messenger" to notify a user when a colleague is on line. Connection via Instant Messenger allows multiple users to "chat" and discuss issues.

Free Tools and Tutorials: Some sites that provide free Web space require the user to participate in the development of the site. The level of participation required varies by site. Fortunately, there are a number of sites that provide tutorials and related tools. Only a few of the sites are listed since numerous others can be found by using search engines.

A good site for graphics to include Web site is http://www.free-backgrounds.com/. Additional sites were easily found by using the word "graphics" or the phrase "free graphics." Some sites may either require the developer to code in HTML or to upload HTML files. For a novice this can be intimidating. While many word processors can generate adequate HTML code, those word processors are not free. However, Netscape, via its "Composer" function supports WYSIWYG page generation. If the free site supports HTML but does not permit uploads, the HTML source code in Netscape Composer can be viewed, copied, and often pasted into the appropriate site window.

A good site to visit on a regular basis is www.download.com. This site often has trial versions or shareware versions of HTML generators. Other sites to visit include www.microsoft.com and www.adobe.com. Both of these companies (Microsoft and Adobe) have had trial versions of HTML generators. Occasionally search engines have found trial versions of HTML generators.

More sophisticated course sites may require special effects. Learning how to create and code these features may be a daunting task at first. Try http://www.bergen.org/AAAST/ComputerAnimation/ for assistance on site development.

Free Web Space: Excellent graphics, free dial up services, and free e-mail are support items to the course Web site. Various organizations supply free Web space.

Some of the sites are supported by commercial operators who require you to adopt their text before server space is provided. Some of the commercial sites hope that you will eventually need more features and then migrate to a fee-supported site. Other sites are supported by non-profit organizations with the goal of furthering asynchronous education. You will find that all the sites have limitations.

Even when a faculty member has access to a campus site for course development, there may be reasons, such as intellectual property rights, to isolate part of the site from campus resources. Free sites can thus be used in combination with other resources to develop an effective course.

Some commercial sites are http://geocites.yahoo.com/home/ and http://homepages.msn.com/. A good source for finding free Web space is the home page of many of the search engines. Commercial sites usually include some form of advertising agreement. These sites do not provide many of the features that a faculty member may wish to use in support of a class. However, they may be useful sites for students who are required to demonstrate creative Web skills when they do not have access to campus resources.

Academic sites may be supported by textbook publishers, non-profit organizations, or commercial ventures. If you are in the process of adopting a text, you should check with the publisher on the extent that the publisher supplies Web tools and space. For example, Course Technology provides course templates and Web space with the adoption of some of its texts. Interested faculty should visit www.course.com and related sites at http://www.einstruction.com/estart/new/cyberclass.htm and http://www.einstruction.com/.

Nicenet (www.nicenet.org) is an example of free server space supported by an academic institution and a non-profit group. This site provides easy class creation and access control, document posting, and link sharing. Since nicenet does not permit file uploads, course developers must either be satisfied with plain appearing text or create HTML code and paste the code to the appropriate window. Documents such as a course syllabus must either be typed in situ or uploaded via copy and paste. Documents can use HTML code fragments. Testing is not a feature included with the site. Student-use logs and chats are not provided.

A faculty member who has rudimentary knowledge of HTML or who is satisfied with plain text can learn how to use nicenet in several hours. It is possible to create a rich site that will support a Web-enhanced class in less than a day if course materials such as a syllabus are already in electronic form.

Blackboard.com (www.blackboard.com) has richer features than nicenet, but these features require more time to master. A faculty member wishing to gain some experience in enhancing a course may wish to try nicenet first.

Blackboard.com allows instructors to enhance their traditional classes with Web based components. It is robust enough to delivery an entire course over the Web and has often been favorably compared to WebCT. Instructors can write or upload course materials, create online tests, engage the class in online discussions, and provide a grade book. Getting started requires the completion of a few simple screens. Course development does not require programming knowledge nor learning HTML. This is one feature which facilitates the ease of course development. Once the course is created, those accessing the course are required to enter an access code, which prevents non-registered individuals from accessing the site. The Control Panel displays course development areas: page editors, user management, communication center, site management, assessment and assistance.

The course syllabus, materials and grading policies are entered using the page editor. Items can also be modified or removed easily and quickly. Notations appear showing the last date changes were made. Test questions, with the assigned point value, can be generated. In addition to text, questions can include graphics. Feedback regarding correct and incorrect student responses can be inserted for each question. Statistical information such as frequency of student visits, links visited, time of day, and days of the week are indicated. Backups are performed daily by Blackboard.com, giving instructors an added level of assurance.

The communication center allows e-mail between individual class members, to the entire class, all teaching assistants, and all instructors. It provides both asynchronous and synchronous chat as well as sections for group Web pages. Discussion areas can be restricted and students can be assigned to specific groups. Students can check their grades, display the course calendar, access the Blackboard.com manual, and develop a personal homepage. Instructors can make comments and return student assignments which students submit by placing in the "drop box."

Institutions may charge students a fee for this service, but it is then necessary to register the course. Registered CourseSites are available for a small fee, which may be passed along to students. Registered courses provide 10MB of storage space for course materials as opposed to 5MB for the free service. Notices are sent when the 10 or 5MB limit is near.

Another free set of tools, eToolkit, is available to instructors or institutions. Course materials can be posted, an address book is automatically created when students register for the course, and the chat sessions

are archived for later review. More than one chat area can be created for multiple chat sessions. Students have 24 x 7 access to the grade book to view posted grades. An Internet search tool is available which is a unique feature to eToolkit. Help is available for both instructors and students. One nice feature provided by eToolkit is the automatic creation of a calendar based upon the course syllabus.

Conclusion: Instructors who wish to develop Web-enhanced or Web-delivered courses have a variety of free and effective tools to support their effort. These online course management tools are easy to employ and the many features available make the course comprehensive and engaging. -The tools make it easy for faculty and students to utilize the power of the World Wide Web without having to learn a programming language or expend institutional funds.

[1] *The "Catch 22" problem is that you must have Internet access to sign up for the service. This may encourage potential users to take advantage of offers from AOL or Prodigy for limited free services just to get access to services such as Freei.net.*

Continuing as Colleagues

Carla Moldavan, Associate Professor of Mathematics Education,
Berry College

In 1980, Florida became the first state to mandate a teacher induction program. By 1997, about half the states had induction programs, although they varied widely in intensity and content (Moskowitz & Stephens, 1997). Some are highly structured with trained mentors giving continuous daily support (Runyan *et al.*, 1998). Others operate in a culture of shared responsibility, an environment where all professionals take active roles in a new teacher's acculturation and transition (Moskowitz & Stephens, 1997).

Why is there a need for teacher induction? "The environment of the first year of teaching creates an emotional mind game in beginners, played not with others, but within themselves. Whether or not a new teacher successfully copes with the job may be judged by others, but the critical determination takes place in the beginner's own mind. The decision is based on a self assessment of how well he/she is contending with those issues most important to the individual, not someone else's definition of what is significant." (Zetler & Spuhler, 1997, p. 9).

What the individual teacher may need ranges from provision of resources/materials and information about the system to instructional information and demonstration teaching. Other categories of support are in the management of the classroom and in the creation of an effective learning environment. Emotional support is provided by empathetic listening and sharing of experiences. (Odell, 1986).

"Mentoring is a person-to-person program. Whether you want to call it communication, interaction, or use the terms interchangeably, the mentor-mentee relationship that arises from it is the essence of the whole process. No amount of district organization, incentives, and good intentions will substitute for a relationship built on trust, respect, communication, and confidentiality." (Zetler & Spuhler, 1997, p. 50).

While most mentor-mentee relationships are between a first-year public school teacher and a more experienced teacher, this article describes teacher induction in the form of a continuing relationship between a teacher educator and her former student.

The story begins ten years ago at Kennesaw State University. It happened to be my first quarter there, and June happened to be a student in my very first class. The class was the lowest level of developmental studies math, beginning with an introduction to signed numbers. June had been out of school for a few years and she had never had an algebra course. In that regard she was my least prepared student, and so I often teased her after completing the course that she had been my "least likely to succeed."

However, June did succeed. She was "turned on" to mathematics and decided to pursue a middle grades education major with a concentration in mathematics. When she ran into difficulty with areas she had never encountered, such as trigonometry and calculus, she persevered.

Throughout her program, I saw June regularly. Whether she was on her way to get help in the math lab or coming by for advice or just to say, "Hi," it was always refreshing to see her. I particularly enjoyed her stories about how in the afternoons after her own day at college she not only had her own two children but also the neighborhood children in her house getting her to help with mathematics.