

From Face-to-Face to Cyberspace

Using the Web to Enhance K-12 and Higher Education Courses

What does it mean to be an effective teacher? I like Harry Wong's definition: "The effective teacher is always thinking, dreaming, and planning. Your future happiness and career depends on your ability to implement techniques and your capacity to grow with new ideas."¹

One of the new ideas that has intrigued both K-12 and higher education teachers is the notion of putting a class (or portions of a class) on the World Wide Web. Many in the K-12 area like the idea of developing a Web site where course information is readily available. Many college and university teachers like the thought of designing and delivering complete classes for delivery over the Internet. And the access capabilities are there to support this. *USA Today* recently reported that more than 174 million people—55 percent of all U.S. households—now have Internet access at home.² The prospect of serving "any student, at any time, in any place" through Web enhancements or a fully online class offers exciting possibilities for Adventist educators.

By Jim Jeffery

Even though they see "education on the Net" as a good idea, many teachers worry about the amount of time required to follow this dream. Many doubt that they know enough about technology to undertake such a task, and some are quite frankly scared to death of the prospect. How does one actually teach online? What challenges must be overcome? In this article, I will show how to deal with some of the major technological challenges. Having taught students ranging from 18-year-olds to graduate school professors, I'm convinced that it's not that difficult for teachers to learn to design and develop material for online placement in a personal or class Web site. By developing a Web page, you can add a truly powerful teaching and motivational tool to your bag of pedagogical tricks. And you don't have to be a computer expert to do so! But first, let's look at why putting class material online is becoming so accepted and necessary in educational circles.

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The Growth of Online Courses

In 1999, the Merrill Lynch Global Growth Group projected that the on-line portion of K-12 education would grow from a \$1.3 billion to a \$6.9 billion business by 2003—a 54 percent growth rate.³ Many public and private K-12 schools are already offering individualized elementary and secondary instruction over the Internet. One of these is the AE21 program hosted by the Florida Conference, which started in 1997 by addressing the needs of students in grades 5 to 8 but has now expanded to include high school courses.⁴

Many U.S. states, including California, Florida, Hawaii, Michigan, Nebraska, Oregon, Utah, and Washington, have also set up “virtual high schools” that offer online secondary classes. “Cyber education” has many advantages because it permits students in small, rural, or cash-poor school districts to take specialized courses that would not ordinarily be available to them. It can provide home-schooled students with instruction in subjects their parents feel unable to teach. It can also make education accessible to hospital patients, expelled or handicapped students, single parents, and others who cannot meet in the traditional classroom.⁵

At the college level, more than 2.2 million college stu-

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dents were expected to enroll in online courses in 2002, up from 710,000 in 1998—a three-fold increase. Ninety-four percent of all colleges and universities are either currently offering (63 percent) or planning to offer (31 percent) online courses. State and national governments favor virtual universities because they recognize that distance learning can expand educational access and contribute to economic development.⁶

Paloff and Pratt point out that nontraditional students (working adults returning to college or students who are unable to attend classes on campus) represent a rapidly growing population in higher education.⁷ In fact, less than one-fifth of American

college students today fit the model of the traditional 18- to 22-year-old undergraduate living on campus. The vast majority of higher-education students are adults holding down full-time jobs. Many are working parents, people with disabilities, night workers, or folks who live in remote areas and are looking to online classes to help them enhance their job opportunities or enrich their personal lives.

Types of Online Enhancements or Delivery

Many types of online or “E-learning” are being offered

today. These include: correspondence course-style read-and-test programs; advanced-placement programs; entire high school programs and even entire K-12 curricula administered online; college-level distance learning and teleconferencing; anytime, anywhere professional development; self-paced learning with threaded discussions or interactive bulletin boards, and untold additional variations.⁸ Online delivery at all levels generally fits into one of three categories—Web-enhanced, “hybrid courses,” and those delivered completely online.⁹

Web-enhanced courses are taught in the traditional face-to-face setting but include enrichment activities and learning assistance online. Many face-to-face courses, from elementary through graduate level, routinely incorporate E-mail, Web links, chat rooms, electronic white boards, and self-grading quizzes. “Hybrid” is a popular term used to describe courses that combine traditional lecture, discussion, or lab sessions with online and other computer-based learning. Often, hybrid courses schedule approximately half of the normal classroom hours on campus, while students do the remainder of their work online using discussion lists, E-mail, and chat rooms.

A completely online course takes place entirely over the Internet. In a well-designed online course, students participate in many types of learning activities: class discussions, reading content material, taking tests, and engaging in small-group activities, student-to-student, and student-to-faculty interaction. In this mode, class members can access class syllabi, calendar information, and assignments anytime, anywhere.

For nearly all of these endeavors, a Web page provides the entry point. This is the common denominator used by K-12 and higher education teachers to enhance or teach classes. So let’s look at how a Web page can function in distance learning.

Why Develop a Web Page?

A personal or class Web site can enhance the most important aspects of teaching. It helps teachers function more effectively as guides for their students. The Internet offers limitless

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access to information and expertise. However, its resources can prove both overwhelming and faulty. A professor at Southern Colorado University found that only 27 percent of the sites middle school and high school students used for research were considered reliable sources of information.¹⁰

Teachers need to help students navigate the Web—to sort through huge amounts of data and to learn how to recognize reliable sources of information. In many school districts, a large percentage of students have access to a computer and the Internet. Thus, Web pages can be used to broadcast homework assignments as well as class goals and achievements to the class, school, or community.

When students are required to do Internet research, they can use Web sites that are listed

on the teacher’s personal Web page or a class Web page as a starting point. The teacher facilitates this by previewing Web resources, selecting the ones that are accurate and appropriate and making them easily accessible for students. For example, the teacher can assign elementary and secondary students to go on scavenger hunts and WebQuests. Scavenger hunts are lists of questions for students to research on the Web, using Internet links the teacher has provided. A WebQuest has students analyze a variety of resources, including ones on the World Wide Web, and use their creativity and critical-thinking skills to find solutions to a “real world” problem.¹¹ Web Inquiry Projects (WIPs) encourage higher-level thinking by having students use “uninterpreted sources of data” on the Web to answer relevant questions.¹²

Web sites can be used to post exemplary student work and encourage parents and students to communicate by E-mail.¹³ Many elementary teachers’ Web sites have home pages for each child in the class, where at least once a month they add the children’s stories, poems, or graphics. Many Web sites also have guest books for visitors’ comments. The site Class Website of the Month offers lots of ideas for elementary teachers on what to include in a creative and innovative Web page.¹⁴

High schools and colleges have hundreds of thousands of Web pages. Some provide basic information about a college/

department/program, while others may be designed to attract future students or provide a place to publish facts about student and faculty research. Some are mostly informational (calendar, news, upcoming events), while others seek to maintain contact with alumni.

Many Web sites, though, are used as educational tools. Most provide static course information (syllabus, instructor information), and dynamic information about courses (FAQ - Frequently Asked Questions, hints, announcements). They may disseminate assignments and worksheets or provide lesson notes (in part or in full). In many cases, Web sites provide class activities, including self-drills, online quizzes, and surveys as well as supplemental references (on site or remote). An important function of such Web sites is to facilitate class communications between individuals and groups, i.e., public or private discussions.¹⁵

What Do I Need to Know?

The right question to ask is not “Should I use technology and the Web in my class and teaching?” but “How much do I need to know to use the Web in a meaningful way in my teaching?” If you feel inadequate in this regard, don’t despair. Statistics released by the U.S. Department of Education in April 2000 found that less than 35 percent of teachers felt “well prepared” or “very well prepared” to use technology effectively.¹⁶

It’s not really that difficult to learn how to design and develop a personal or class Web site. It does take time, but it is well worth the effort.

How It Works

In essence, Web pages are simple text files that are read and interpreted by a Web browser such as Netscape Commu-

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nicator or Internet Explorer. The Web page is written using hypertext markup language (HTML), which is really a series of commands called tags. The Web browser interprets these

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tags and displays the text. The tags also tell the browser how to display text, how to divide the document into components, and where and how to insert images. Link tags, when clicked, command the browser to follow the information written in the link. A link might carry the reader to a new point on the same page, to a different page in the same site, or to an external site. Links can also lead to images, movies, or downloadable files such as Microsoft Word text files, PowerPoint slide shows, or PDF (Adobe Portable Document Format) files.¹⁷

In the early 1990s, the only reliable way to make a Web page was to learn HTML and create your pages using a text editor. Now, many affordable Web page development software programs are available, and most popular software products include a “convert to HTML” function. The two most popular Web page design tools are Macromedia’s Dreamweaver and Microsoft’s Front Page. It’s also helpful to talk to others who have designed a Web site or to form a small group and learn together. If you need help (and you will), the Internet is filled with sites that provide practical instruction. I recommend the following: A Beginner’s Guide to HTML,¹⁸ Bare Bones Guide to HTML,¹⁹ and one of the best, Dreamweaver—Tutorial Outline.²⁰

Here are just a few structuring thoughts as you work through the process of designing a Web page:

- Keep your Web page simple.
- Make sure that pages link back to the previous page, as well as to your home page.
- For documents longer than a page or two, create internal links and back-to-top buttons, as appropriate.
- Be sure to include E-mail links so people can contact you.

Many novice Web page designers like to fill their pages with graphic files. Although these may enhance the visual presentation, they can take a long time to load. If you can’t grab visitors to your site in three seconds and keep their attention for another five seconds, they’ll be off to another site with the click of a mouse. So resist adding too many graphics or fancy wallpaper, and don’t put type over busy backgrounds. For image formats, remember to use either GIF for lower-quality images or JPG for higher-quality photos. On this topic, see Holly M. Burns’ “The Top 15 Mistakes of First-Time Web Design.”²¹

Conclusion

Developing a Web page for teaching online may seem like a very daunting task. It will require a substantial investment of time and energy, but all good things come with a price. As noted earlier, effective teachers are always thinking, dreaming, and growing because they have been inspired with new ideas. The prospect of serving “any student, at any time, in any place” through Web enhancements or fully online classes

offer exciting new possibilities for Adventist educators at all levels. ✍



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