

The Promise of Internet-Based Training

TRAINERS, like many other professionals, are busy figuring out how to make the most of the Internet. Imagine combining the visual impact of television, the interactivity of the training room, and the content of three-ring binders into one "address." Want to find internal company information? Just type the company's Internet address, and training materials, marketing experts, inventory figures, sales history, and practically anything else one could imagine are at your fingertips.

Consider a more specific example: Instead of flying a salesforce to corporate headquarters for training on a new product, a computer-based training (CBT) program is placed on a company's Web site and downloaded to the sales representatives. Trainees get information on the new product when they need it, and they can study only what is important to them.

Curriculum development over the Internet has far-reaching implications. The idea of static, linear training programs has changed to a fluid and individualized learning model. Important information, once relegated to binders or a lecture hall, has become universally available through just-in-time training (training delivered when a trainee needs it, not when it's scheduled).

Internet-based training is modeled on a different learning method. Until recently, most training was linear: A trainee learned point A, and then point B. Nonlinear learning, enabling a trainee to jump from point A to point D to point B, is a hallmark of CBT and the Internet. Without the constraints of traditional classroom training, trainees can repeat difficult material or skip previously learned material.

This flexibility has very real applications. One *Fortune* 500 high-tech company reported that its private Web site (a compendium of sales, product, and training information; presentation materials; white papers; and executive interviews) is saving salespeople five hours a week by reducing the time required for researching, writing proposals, gath-

THE INTERNET COMES ALIVE

Here's a brief primer on some of the more promising applications for enlivening training via the Internet.

Java. If you've read anything about the Web lately, chances are you've run across a reference to this new technology, and with good reason. Most Web sites currently let users see only text and pictures. But Java lets users run mini-applications (applets) right off a Web site on their own computers.

This application adds a new dimension of interactivity to the Web. For example, a trainer can create a test for employees to download. Once they complete the test, they can send the answer sheet automatically to the trainer and have the results tallied instantly.

Another benefit of Java is that it runs on any compatible browser software, regardless of the computer. A CBT program authored in Java can operate on Macs, PCs, and UNIX workstations without requiring different versions for each platform. This feature saves

trainers time and money by doing away with the requirement to port software to different operating systems.

Shockwave. Created by Macromedia, this program lets Web developers place multimedia presentations, including video and audio, on their Web pages.

Shockwave has special relevance to trainers because CBT programs authored in Director or Authorware authoring program can be placed on the Web and viewed with any compatible browser. All that is needed is a Shockwave plug-in add-on, available free from Macromedia.

VRML. Virtual Reality Modeling Language, or VRML, lets Web developers create realistic 3D worlds. For example, VRML can be used to create a virtual model of your organization to give new employees a "walk-through" of all locations and products. New developments in VRML will soon bring us even closer to being immersed in new, Web-based worlds.

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ering information, handling difficult selling situations, and creating sales materials. The Web site is also saving the company \$10,000 per mailing per manual.

In another instance, a pharmaceutical company had been using CD-ROMs to disseminate training materials. But a quickly changing marketplace, pricing, contraindications, modifications in dosage, and

fast-moving competition required updating the CD-ROMs often—an expensive and time-consuming proposition. By putting this material on the Internet, the company could update information daily. This eliminated the need for producing CD-ROMs and enabled the training department to respond more quickly.

Here are some of the broad benefits of using the Internet as part of your training initiative:

- ▶ A curriculum can be modified and distributed quickly and easily.
- ▶ Training travel expenses can be cut or eliminated.
- ▶ Trainees from worldwide locations can share information and ideas, as well as collaborate on projects.
- ▶ CD-ROMs and manuals become unnecessary, as do such mailing costs as postage, packaging, and delivery.

- ▶ Training materials can be sent to participants for the price of a phone call.
- ▶ Employees and associates can access the information 24 hours a day, 365 days a year. So they can learn during nonwork hours or while traveling.
- ▶ Training conducted over the Internet or intranets (private, corporate Web sites) can be tailored and refined to meet the needs, knowledge bases, and interests of different learners.

The Internet also helps trainers and managers verify participants' retention of information, and simplifies how trainers obtain and analyze course work. For example, quizzes

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Security of information on the Internet and intranets is a concern for many trainers. Fortunately, there are several highly effective options that can help keep data private.

Firewalls.

Firewalls are hardware or software that sit between the Internet and your company's private network to form a barrier between your organization and the outside world. Firewalls keep track of everyone who tries to access your site, and they prevent unauthorized entries.

Encryption.

Before a user sends or receives confidential information, it is encoded so that if others see the message in transit, they can't decipher it. Most browsers support several types of encryption. Contrary to popular perception, information stored on the Internet can be made safe.

Passwords.

Passwords are issued to employees so that when they access their company's Web site, only they can look at specific information that is not open to the public.

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can be placed on the Internet, completed by participants, analyzed by computers and downloaded to managers to ensure that the participants have mastered the material. This feedback system can be fully automated—no paperwork, no crunching of data by the IS department, and an assurance that the appropriate people receive the results.

Start-up costs

Setting up your training department on the Internet can be surprisingly inexpensive and manageable. A server and modems for users represent the bulk of the hardware purchases. A low-cost Internet browser, such as Netscape's Navigator or Microsoft's Explorer, can serve as the communications software.

The cost could be as little as \$25,000, depending on how fast a connection you need, how many people will be viewing the site, how many employees will be using the connection to get on the Internet, and how much material you place on the Web. Setting up each employee is also inexpensive—about \$200 for a modem and up to \$30 a month for an account with an Internet service provider (ISP).

Brave new technologies

New technologies such as Java, VMRL, and Shockwave are transforming the Internet from a static repository of information into a truly interactive medium. (See the sidebar "The Internet Comes Alive.") Many Web sites and downloaded CBT programs already feature animation, audio, and video. Real-time training over the Internet, including group collaboration from remote locations, is also quickly becoming feasible.

Of course, some significant hurdles must be overcome before users can take advantage of the full multimedia potential of the Internet. For example, the current state-of-the-art modem speed is 28,000 bits per second—too slow to show full-screen color video with sound. But new communications standards and media, such as ISDN and cable modems, and the next generation of TCP/IP (the language computers use to "talk" to each other over the Internet) will make fast multimedia delivery on the Internet a reality.

Just as few imagined how personal computers would change the workplace, it is equally difficult to envision how the Internet and its new technologies will eventually change training. Yet, one thing is clear. Training will become much more dynamic, vivid, personalized, and interactive. Training will also be available on demand and delivered remotely. And training will be able to keep up with the pace of change.

Trainers who think that the Internet is better left to techies and IS departments should think twice. In the current highly competitive, global business environment, training on the Internet is rapidly becoming a critical survival tool. Those who know how to use it will benefit most.

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