



Computers and the Electronic Age - article for December 1999 issue of Doors and Hardware Magazine

Life Long Learning with New Technologies:

Americans feel that the computer is one of this century's greatest achievements. Depending on your viewpoint this may or may not be true. However, technology is a science and computers are tools, both of which our industry uses on a daily basis. The fact is these tools are here to stay – we just need to look at these inventions as a means of accomplishing some of our daily responsibilities.

One of those responsibilities is learning and training others concerning the products that our industry makes, buys, applies, or specifies on our various projects. With the rapidity of the modern age, we can not learn enough, fast enough, and remain competitive without the use of proficient tools and new technologies, or the sometimes hated words, computers, CD-ROMs, Internet, e-mail, voice-mail, etc...

Perhaps the correct use of new technologies now available should be considered as value-added to our projects and clients, and not approached scornfully.

Employee Growth through Web Training Modules

A quick look at the *Amazon.com* web site listed 602 book entries for the subject of Adult Learning. Another inquiry under a keyword search for Computer Based Training provided 36,462 entries. There were four major topics: Aerospace Simulation, Workplace Training, Multimedia Training & Research, and Vocational Education.

In order to emphasize their position for the future, many corporations are recognizing that the crucial fault in progress lies with untrained employees who lack the basic knowledge or comfort level to advocate the services and / or products of their companies.

Work practices change more rapidly due to technology advancements. The changes require more skills, which requires more training. The seller's labor market also makes it difficult to attract new Employees.

A highly skilled work force performs a much better job. The only way to stay ahead of change is to provide training of available services, updated computer skills, and application of the products offered. Based on a recent Gartner Group survey, it takes an unskilled worker three to six times longer to accomplish a task as a skilled worker. This relates to enormous

additional expenses to a company over an annual basis, not to mention the disadvantage to the Customer and fellow co-workers.

Corporations are faced with difficult decisions when they must take workers off their stations for training, either in-house or off site. To answer this dilemma, many corporations are turning to Distance Learning, which may utilize the World Wide Web and Computer Based Training (CBT).

Depending on the type of provider a company selects, training directly to a desktop or laptop computer may be available both live or on demand, conveniently delivered in modules for self-paced learning. The employers benefit greatly by the little disruption that it causes to the work force, and the extensive type of training provided. There are assessment tools that provide information on the skills trained and the amount of detail that should be known. Employees may have access to bulletin boards to ask questions that may arise after a training module has been viewed. Quizzes can be used to assure both employee and employer the topics covered were actually learned. Many courses provide certificates of completion and some also provide Continuing Education Units (CEUs).

The business world is in a constant state of flux and it requires highly skilled personnel to make logical, intelligent decisions on a more rapidly responding scale than ever before.

Online Learning is the Future

The business of Computer Based Training is exploding. It is estimated that by 2002 American businesses will spend approximately \$10 Billion dollars annually for the technologies of online training. Internet usage in 1995 was established at 14 million users; by 2002 that family of user is estimated to grow to 320 million with Net access, in just seven short years. E-mail usage is not only a fact of business, it is used by sons and daughters away at school, grand parents that communicate with children in other states or countries, elementary school children that communicate with their peers across town.

One recent analyst report speculates that online education may be the Internet's most outstanding application of the future. The view of higher education is changing rapidly. Over 250 traditional universities and community colleges currently deliver curriculum through some type of distance learning. In some cases, the courses can be in the completion of a degree. The cry for life-long learning can be heard. It has arrived, and is changing the educational system, as we know it.

Our industry should not be left to follow along in a few years. We need to embrace this technology and grow with it.

I was recently asked the question: How do we attract new and young people into this industry? It is my belief that if we can show the bright, young, and intelligent people how advanced we are with our product offering and how well we can train them, we can attract the type of personnel that will carry this industry into the next few decades. Electronic security has been part of this industry for less than thirty years. We are only on the edge of technology and we have been advancing at a steady pace, this pace must be maintained. It can be, if we continue to train our people, young and more the mature of us, with the technologies of Computer Based Training (CBT) and Information Technologies (IT).

Selecting a Delivery Method

Factors to consider in selecting a delivery method include: the distance of Employees from the main office; will it be used; content; the abilities of the system; and the expected investment.

Distance Learning methods, using the Internet or an intranet for delivery, are better alternatives if the office staff or members to be trained are at distant locations. If the Company has a smaller number of Employees and are at a central location, the training programs can be stored at a central library or group of PCs.

A second question for any organization is, "will it be used?" The design of a good course, whether presented in-person or online, includes a significant time commitment. Courses should be designed based on need or the direction of the Company or organization, not because it sounds like a good idea.

The content of the courses is considered prior to the selection of a software program or vendor. When selecting a package for use in developing and/or administering a training module, the Company's current training programs should be reviewed. If a commitment will be made to delivering the training catalog online, existing programs will, at some time, be converted on the online learning format.

Courses may have been developed using PowerPoint presentations, photos, engineering drawings, video clips, written documents, etc. Before selecting a system, check to see if the system will be able to incorporate existing training courses. (You are encouraged to test the system using available training materials prior to selection.)

It is strongly encouraged for companies considering the purchase of software or a complete system for use in designing and monitoring online training programs to select the package based on the content currently being developed, or within reasonable use of development. While a more advanced system may incorporate both video and animations, is there a likely opportunity that either will be used in a future training course. A quick review of a nearby bookshelf can show programs purchased with good intent but were not used. If dust appears on the top of a 3-ring binder, you will have a good idea as to how applicable the content of the binder is your Company's work.

Online or web-based training programs are available from several vendors. Software and hardware are available as either a complete package or separate packages. A complete package will include an authoring station and software and a tracking and administration function, all in one machine or program. The abilities of the software design and administration vary among vendors.

Another way of achieving the same results is to purchase separate course authoring and training/tracking systems. Several software programs currently exist to aid in the "management" function of a corporate training program. The systems can register Employees for courses, track their records and create reports. The overall investment may be lower, but may require more time as the course Administrator/Instructor will be working with two software programs instead of one.

The output ability of the system is also important. If your Company intends to utilize CD-ROMs or written materials, check and test the system to ensure it can output the materials with few or no adjustments.

The expected investment among programs varies widely. The long-term investment of any package should be considered. Some distance learning packages are offered on a "license" basis. Separate licenses are given to the course authors and module users. The licenses may be issued and paid on an annual or monthly basis. Other packages can be purchased for a one-time fee. The Company may then use the program to design and administer training to an unlimited number of users.

A starting place for research may include: Trainer5 from Micromedium; Authorware from Macromedia; Training Manager from Allen Communications; Asymetrix Learning Systems; and Activated Multimedia. Many other programs are also available. The selection should be based on the company's needs and affordability.

The Importance of the User

It is not hard to get interested after reviewing the capabilities of the systems available. Electronic communication and computer-based training will reduce the amount of the standard communication methods of personal interaction and instructor-led training. The needs of the end-user should be kept in mind. An end-user wants a well-constructed course, delivered in an interesting manner, which will be beneficial to them. As with any training program or product, the needs of the end-user should serve as the starting point.

Closing

As said earlier, new tools and technologies, and the sometimes-hated words: computers, CD-ROMs, Internet, e-mail, voice-mail, etc... are here to stay.

DHI staff members are working with the volunteer instructor base to become familiar with the new technologies. Our classes have rapidly changed from hand-written and typed pages for overheads to animated PowerPoint presentations. This has happened in a matter of four to five short years. Progress continues as new software is reviewed, tested, and presented to the instructors and various task forces in place for the Institute to evaluate.

The environmental scanning process of the DHI Strategic Plan calls for investigation of new and future methods for development in our industry through technical and management education. Distance Learning and Computer Based Training meets or exceeds these requirements. Online training provides an excellent way to reach a large group of users (with different schedules). Online training provides a good avenue for organizations requiring certification or Continuing Education Units for its members, and will be beneficial for both for the Door and Hardware Institute and the membership of DHI.

With AIA, CSI, and many other industries working toward the highly educated service personnel for their fields, it only makes good business sense, that the members of DHI include themselves in becoming as proficient as possible by embracing in the theory and practice of Life Long Learning.

H. Matt Bouchard is a DHI instructor and Product Line Director for Architectural Products for Hager Companies, St. Louis, MO. Tom Harnetiaux is President of Vision Communications Group (VCG), a training and management consulting company. VCG is currently assisting Hager Hinge in the selection and design of an online learning system.