The Impact of E-learning on Workforce Training
By Thomas P. Burke

Ease of development, delivery, and management has merged with increased demand for workforce training to produce a tidal wave of change. To cut cost, reach a scattered audience, and deliver both regulatory and technical training, companies are using learning portals to deliver and manage workforce training from their web sites.

South Carolina technical colleges do a great job of collaborating with manufacturers to prepare students for jobs in the manufacturing sector. But, even trained workers need to learn the specific responsibilities of their jobs. Safety and compliance training, along with courses such as sexual harassment and diversity training, add to the annual training load.

Executives might recognize the need for training, but may balk at the cost of maintaining a professional training staff. Fortunately, there are instructional design/development contractors with the education, experience, and technical know-how needed to implement a web-based e-learning program.

To justify the expense of training, managers must be able to see the underlying business need. There are two clear reasons for instituting an industrial training program: preventing something bad from happening, or causing something good to happen. On the preventative side, training can be used to prevent lost-time accidents and their attendant penalties. Also in this category is remedial training to eliminate behaviors that have resulted in injuries, damaged equipment, or process downtime. On the "good" side of the ledger is training that adds or enhances job skills. Many companies, including those cited in this article, have realized gains in productivity and performance by implementing job skills training programs.

In many ways, on-line learning -- known as e-learning -- has made it much easier to cope with the delivery and management of workforce training. Employees can take courses independently, and in some cases, on their own time. One factor that has made web-based training more effective is the emergence of inexpensive learning management software that allows employers to deliver and manage courses from their own web sites. These LMS applications are designed to register students, track and report on their progress, signal when employees need refresher training, and even deliver certificates of completion.

Many South Carolina manufacturers have already implemented e-learning, some in a big way. Jess Galloway is ISO Quality Manager and LMS Administrator for SEW-EURODRIVE in Lyman, a manufacturer of precision motor drive equipment. Galloway arrived at SEW in 2004 with a background in instructional design and development. This background helped him and his colleagues in SEW's training department meet management's goal to design and implement a state-of-the-art training program for their U.S. facilities. At that time, training for manufacturing and assembly workers was largely one-on-one OJT. Today, these workers receive job-related training at computer stations

located in dedicated learning centers just off the factory floor. A mentor is available in the room to assist the trainees, guide them through the hands-on elements of the training, and verify their competence. The training covers a range from basic hand tool use to motor control programming. The Lyman facility now serves as the training center for SEW employees and distributors all over the U.S.. In addition to courses purchased or licensed from third party sources, specialized product-related e-learning courses have been developed in-house for assembly and manufacturing workers, technicians, engineers, sales personnel, and distributors. All training courses, including an OSHA-certified 10-hour safety training course, are scheduled and managed through the LMS.

David Brady, Site Engineering Manager for 3M's Greenville manufacturing facilities, implemented an e-learning program for plant maintenance mechanics and electricians several years ago. The program covers a blend of electrical and mechanical instruction, so graduates of the course are able to work in both disciplines. Before this plan was implemented, it was necessary to employ both electricians and mechanics. The knowledge-based portion of the program is administered through an LMS maintained by a third party. At the plant, trainees have access to computer workstations where they can do the coursework. Space is set aside to practice hands-on skills. A small training staff is maintained to assist trainees, schedule and coordinate the training, and proctor exams and performance tests. Through an agreement with Greenville Technical College, the trainees do all their lab work at labs established and staffed by the college. These labs cover such subjects as basic electricity, motor maintenance and alignment, pump repair, gear box maintenance, welding, programmable logic controllers, and other maintenance-related topics. Brady cited several benefits that have resulted from this e-learning initiative, one of which has been a significant reduction in process downtime. Because maintenance workers are better trained and able to work on all types of equipment, the plants have been able to function with fewer people. Safety and compliance training are delivered and managed through an LMS hosted on the corporate web site.

Nuvox is another South Carolina company that is strongly committed to e-learning delivered through an LMS. According to Nuvox Education Manager Sonja Cantrell, the advantage of e-learning is that it affords the opportunity to train anytime, anyplace. With a geographically scattered workforce, Nuvox has found e-learning very cost-effective because of reduced travel costs and reduced employee downtime.

Authoring tools for developing computer-based training were once complex and expensive. Today, e-learning authoring tools have been simplified to make them more user-friendly. Some are as simple as drag-and-drop repositories for chunks of learning media that allow courses to be rapidly and inexpensively assembled. However, developing e-learning programs is more than just populating an authoring program with chunks of text, video, artwork, and other content. An instructional design process is still needed to identify the knowledge and skills to be acquired, along with the method of assessing the outcomes. Moreover, some students just won't succeed as independent learners. Those trainees need resources that will help them succeed, including access to reference materials, access to experts who can answer questions via email or phone, and

facilities to practice motor skills. That's why a blended learning approach is more often successful when training machine operators, craft workers, and technicians.

In the past, the cost of traditional classroom training acted as a deterrent. Taking a substantial group of workers off line to attend training could mean either the shutdown of a production line or overtime costs. Add to that the cost of the instructor and facilities, and you could have a substantial overhead burden. Today, e-learning offers a cost-effective approach to technical training that allows businesses to overcome these obstacles and at the same time experience the benefits of enhanced safety, efficiency and performance. The key to developing a successful learning environment is to rely on training professionals to design and implement the training. However, it's up to management to identify and target specific training needs that will measurably benefit the business.

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