THE ONLINE SOLUTION

The benefits of this form of staff training are beginning to come to the fore.

By Bill Battikha, P.Eng., P.E.

MOST MANAGERS RECOGNIZE the need for staff training and professional development. However, when budgets are tight and companies are operating with a skeleton staff, how can a manager justify sending an employee to a course? Where will the money come from? Who will take over this person's responsibility while the employee is away on training?

I have successfully instructed face-to-face courses for over 10 years in many industrial plants, at technical organizations, and at such universities as the University of Wisconsin, the University of Kansas, the University of Toronto and Dalhousie University. Recently, I started teaching through online training at Kansas and Dalhousie. At the beginning, I was hesitant about the potential effectiveness and success of online training. However, I have now changed my mind and, in addition to avoiding the high costs of face-to-face courses and time lost away from work, online training has proven to be effective for the students and enabled many to acquire knowledge in a more flexible and convenient environment.

Online training, when accompanied by high-quality course notes, quizzes and exams, can provide students with the knowledge and confidence they need to grasp a field of technology, assuming the participants come from a setting where they can apply the knowledge received.

Online learning can replace a large number of face-to-face courses–but not all. For example, it cannot provide hands-on training, such as equipment maintenance. Dedicated training facilities provide such training, often at a vendor facility.

BENEFITS OF ONLINE TRAINING
The two main benefits of an online, university-based certificate program are:
1. Employers avoid time lost by their employees when the employees are away on a face-to-face course and save budget funds. They also improve the knowledge level of their employees for better job performance, benefitting the company's bottom line.

2. Employees acquire at their own pace the knowledge to successfully implement and operate systems and components. At the same time, they earn a university certificate that confirms their acquired knowledge, meets any continuing professional development requirements and opens up possibilities for advancement.

FORMS OF ONLINE TRAINING
E-learning can be provided in different formats. The two most common are:
1. **DVDs, or material downloaded from the Internet.** These are typically self-guided, self-study programs, generally without an instructor available to answer questions. They are often geared toward individuals who need training in a specific area and have the self-discipline to complete the course. At the end, many such programs do not provide a certificate.
2. **Online courses.** These generally include an instructor, who is available to answer questions submitted by the students through email or through a virtual classroom on a weekly basis, often in the evening hours. Such courses often provide an incentive to finish the study program (since it is generally followed by a certificate), and are relatively low in cost while keeping the student available for work during daytime working hours.

Online courses offered at the university level are becoming more widely available. They provide the advantages of online learning while at the same time ensuring quality of education. When completed successfully, such programs are typically followed by a certificate and continuing education units (CEUs) from the university.

CONTENT OF A TYPICAL ONLINE COURSE
A typical and complete online course is presented in a series of modules spread over a year or so, which allows the students to gradually apply and practise some of the information learned.

Each module typically consists of five to seven online sessions. The students are expected to read assigned material (from a reference book or online notes) before joining the online session, as this session's purpose is to discuss issues and for the instructor to answer student questions.

I have found a three-module course timeline balances time and learned information. Each of the three modules I teach takes about two months to complete and includes its own online quizzes, followed by an online exam. Module 1 starts in the fall (typically early October) to follow summer vacation. Module 2 starts in January of the following year. Module 3 starts in May (avoiding the March Break period), finishing before the July vacation time.

Based on my experience, the three modules should be taken by students in sequence covering the topic to be learned (i.e. module 1, then 2, then 3). However, some students, due to their prior knowledge, have taken the modules in a different order and have successfully passed all quizzes and exams. Typically, three modules of these certificate programs amount to approximately 150 classroom hours. Σ

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