

# Blended Learning for Compliance Training Success

By Karl M. Kapp, Ed.D., CFPIM, CIRM  
Bloomsburg University

Carrie McKeague, Ph.D.  
EduNeering, Inc.

TECHNOLOGY



LEARNING

**EDU**  **NEERING**

AT THE INTERSECTION OF TECHNOLOGY AND LEARNING

## Introduction

In today's competitive business environment with slim profit margins, hungry competitors, and complex governmental regulations, manufacturers cannot afford to ignore training and education. Organizations that continually educate their employees grow, mature and stay competitive; those that don't, disappear.

Education and training has become so important that Michael Moe, Director of Global Growth Research at Merrill Lynch, called an enterprise-wide approach to training the "number one source of competitive advantage in today's economy."<sup>1</sup> Moe's assertion is supported by a recent study of 575 U.S.-based publicly traded firms. The study determined that companies investing the most in training experienced higher gross profit margins and higher income per employee than companies that did not significantly invest in educational initiatives<sup>2</sup>. In fact, many experts believe that the ability to learn faster than one's competitors is an organization's only sustainable competitive advantage.

Today's sophisticated organizations have an unprecedented imperative for organizational learning; nowhere is that imperative greater than in the chemical, pharmaceutical, medical device and food industries.

## Compliance Learning Imperative

Several forces compel these industries to focus on training and education. One of the most powerful is the shrinking half-life of knowledge. The "half-life of knowledge" is the time span from when knowledge is gained to when it becomes obsolete. Half of what is known today was not known 10 years ago. The amount of knowledge in the world has doubled in the past 10 years and is said to be doubling every 18 months<sup>5</sup>. This means that half of what you know today will be obsolete in 18 months and half of what you need to know in 18 months, you don't know today. To combat the shrinking half-life of knowledge, organizations must develop new methods of deploying instruction.

A second force is the increased pressure by the federal government to conduct training on new regulations. The effort to keep current with new and changing regulations is often a full-time job. Each new government regulation seems to require a new educational initiative. In addition, each new initiative seems to be more specific and specialized. It is increasingly difficult for a single compliance officer to develop effective training to meet the needs of all employees. A movement toward certifying internal training programs as educationally effective is also driving the learning imperative. In the old paradigm, organizations could point to the number of hours of employee training and hold that up as effective training—the more hours, the more effective the training. No more. The new measure of training effectiveness is performance. An indicator of this new emphasis is that the International Standards Organization (ISO) has updated its ISO 9000 standard to include the requirement for organizations to evaluate the *effectiveness of training*. Organizations can't obtain ISO 9000 certification simply by conducting training and education programs. Instead, organizations must develop a method to evaluate the effectiveness of internal training efforts. They must certify their instruction as effective. As if those forces weren't enough, the federal government has begun to heavily prosecute companies for failures to comply with regulations and to properly conduct training. A couple of examples illustrate the point. An Allentown, Pennsylvania company paid a \$250,000 fine to settle allegations of labor law violations in connection with an explosion that killed five people. OSHA claimed that the company *failed to train workers* about the hazards of the volatile and explosive chemical they were distilling<sup>7</sup>. Another example involves a nutritional supplement manufacturer in New York that was cited over \$145,000 for alleged failures to abate previously cited violations of OSHA standards including<sup>7</sup> failure to provide training to employees required to use portable fire extinguishers; failure to provide training to employees who operate powered industrial trucks; and failure to provide information and training on the hazardous chemicals in work areas.

Alone, each of these forces offers a convincing argument for an enterprise-wide compliance training and education program. Combined, the argument becomes overpowering. Chemical, pharmaceutical, medical device and food companies are faced with an unparalleled learning imperative that must be met quickly and effectively. The challenge for these companies is to develop comprehensive compliance training and education programs that rapidly deploy accurate

instruction to geographically dispersed workers while tracking their performance and keeping accurate records for potential audits.

As a result, many manufacturers are creating enterprise-wide compliance training programs by hiring additional trainers, recruiting supervisors to teach classes, extending shifts to provide additional training and constructing classrooms within the plant. Organizations are doubling their instructor-led training efforts to ensure that employees are receiving more hours of training. The strategy is to provide as much classroom training to employees as possible.

## **Advantages of Instructor-Led Training**

While becoming more and more expensive and time consuming, the strategy of increasing the amount of instructor-led compliance training does have a number of benefits. These include the face-to-face exchange of information, ideas and concepts between the trainer and students and among the students themselves. It also allows students to be taught by credible company and industry experts. Instructor-led training allows individual questions to be answered and encourages impromptu discussions about rules and regulations. Questions like, “If the MSDS is not immediately available but locked in a nearby cabinet, is that acceptable?” or “Does this regulation impact my ability to ship expedited product? And if so, are what are the alternatives?” or “What exactly does that phrase in paragraph four mean?” can be answered and further explained by an instructor.

Instructor-led training is also an effective method for teaching problem-solving. One of the goals of training is to more effectively and quickly solve those problems or, better yet, prevent the problems in the first place. One of the best methods of teaching problem-solving is to discuss the problem and its different variables in a group situation such as a classroom.

## Disadvantages of Instructor-Led Training

Unfortunately, the strategy of exclusive reliance on instructor-led training to address the overwhelming learning imperative faced by industry has a number of shortcomings that can adversely impact the training effort.

One disadvantage is that not all the time spent in an instructor-led compliance training session is devoted to instruction. During any classroom situation, interruptions occur. One or two students arriving late from a break can slow down a class, or one participant asking a lot of questions can halt everyone else's learning. Interruptions occur due to one student not understanding the instruction or because of an emergency meeting or phone call. In some classroom environments, up to 40% of the instructional time is spent on non-instructional tasks.

Delays in the training of new employees can also be a problem. At one pharmaceutical manufacturer, it took an average of 28 days from the time a new person was hired until the new employee could attend basic Industrial Pharmacy training, despite the company's SOP, which stated that a new employee should have received the training within the first seven days of employment. Over a six-month period, only seven out of sixteen new employees received the instruction in the designated time; in fact, four employees didn't receive training until 39, 42 or even 45 days later<sup>8</sup>. The main cause of the delay was scheduling conflicts between the manufacturing departments and the trainers.

Still another problem is finding the appropriate level of instruction for every member of the class. Each employee within an organization has a slightly different role and, therefore, different training needs. Employees would like the time spent in training to be directly related to what they are going to be doing on the job and not the one-size-fits-all training that occurs in a classroom. The pace of classroom instruction is only appropriate for a few. Some trainees are bored because they have already “gotten” a concept, while others lag behind and are unable to catch up.

Another problem is that when a student arrives late for class or steps out to solve a “crisis”, the instructor is rarely able to stop the class and repeat the instruction when the students return. He or she simply misses part of the training class. One time an instructor at a chemical manufacturing plant was conducting stand up training and started the class with five people and ended with three people...who weren't even part of the original five. This is not acceptable in compliance training; everyone has to understand a concept or procedure for the sake of safety. Instruction needs to be repeated until each student in the classroom understands what he or she needs to know.

Lack of instructional consistency is another problem with instructor-led training.

The instructor on first shift may not be providing the same information as the instructor on third shift, even though the subject is the same. In fact, one instructor teaching the same topic on Monday and again on Thursday may not cover the same instruction or give the same examples each time. When teaching topics relate to governmental regulations, it is important that all employees receive consistent instruction. Consistency increases retention and ensures that all employees have the same level of understanding regarding rules and regulations.

Tracking employee performance is difficult with instructor-led training. Typically, classroom instruction does not involve testing students and, when it does, it becomes an administrative nightmare for the training department who has to record each employee's score and then keep those records for auditing purposes. On the other hand, not evaluating the effectiveness of the training and the employees' understanding of the instruction means that the organization has no idea whether or not the training is having any impact.

Finally, providing instructor-led training to all employees on rules and regulations that are constantly changing is expensive. Hiring an army of trainers and/or converting supervisors into part-time trainers is a costly endeavor. If the supervisor is not a good trainer, there is no assurance that any learning has actually taken place. If such a situation exists, the trainees and the supervisor are wasting time.

## **Addressing the Shortcomings**

While these shortcomings are well known, until recently there was no real alternative to instructor-led compliance training. Other delivery methods were unacceptable as effective substitutes for an instructor. Videotapes are passive, one-way delivery vehicles that require a VCR wherever training is to be conducted and can easily bore learners after only a short period of time. CD-ROMs are problematic because it is difficult to keep up with constant revisions to the material. As soon as a CD-ROM was distributed to the field, it effectively is obsolete.

Additionally, CD-ROM and videotapes cannot offer “just-in-time” training. If an employee has a question about a regulation and has access to web-based training, he or she can simply open a web browser and navigate to the exact piece of information they need. The employee can then review the training and continue on with his or her job without ever leaving his or her desk. Contrast just-in-time, web-based training with waiting for a training class or finding the correct CD-ROM or attempting to locate a VCR, loading a tape and fast-forwarding to the correct spot.

Until now, the only choice left for interactive, up-to-date training was instructor-led classroom training. However, there is now a new choice—e-learning.

## **What is E-learning?**

E-learning is the presentation of training materials and content via the Internet or through an intranet with a focus on changing behavior and not merely delivering information. More specifically, e-learning has been defined as “any purposeful, considered application of web

technologies to the task of educating a fellow human being<sup>9</sup>.” This type of learning starts with well-designed instruction delivered through web-browser technology right to an employee’s desktop computer. The web technology allows for interactivity, embedded learner assessments and immediate learner feedback. Instruction on the web can be updated in one location (the server) and then be instantly seen by all learners. E-learning is a powerful tool in any compliance training program.

## **Advantages of E-learning**

E-learning has a number of advantages over traditional instructor-led training. First, e-learning delivers consistent instruction. Each time a web-based class is delivered, the class has the same instruction presented in the same manner with the same examples. Each employee on first, second or third shift receives the same quality instruction. No question about what was covered in class; a simple review of the e-learning module lets auditors, supervisors, and trainees know what was covered.

No lag time between hiring and training is a second advantage. E-learning can be delivered 24/7. There is no need to wait for a critical mass of students so the trainer’s expenses are “covered.” An employee on any shift can begin his or her training as soon as a computer terminal is available. Critical information is delivered to new employees as soon as they start work. In addition, re-training or refresher training is not constrained by classroom space or instructor availability.

Third, e-learning allows employees to learn at their own pace. Employees can repeat an on-line instructional course as many times as they desire. They can proceed through the information at a rate that is comfortable for them, not the instructor. E-learning provides numerous branches to additional instruction. One e-learning student may take advantage of a particular branch of instruction pertaining to chemical safety while another may pursue information on biohazards. Another student may by-pass a particular instructional branch entirely and take the assessment quiz because he or she already knows the information.

A fourth advantage: On-line learning takes advantage of an expert's limited time by capturing his or her knowledge in an e-learning module. E-learning can utilize renowned industry experts who are located throughout the country to present instruction to employees. Industry experts provide for a high level of instructional credibility and let the employees know they are receiving the best instruction possible.

Yet another benefit is the documented effectiveness of e-learning. Studies of major companies comparing e-learning to classroom instruction show that learning gains are up to 56 percent greater, "consistency of learning" (variance in learning across learners) is up to 50 to 60 percent better, and "content retention" is 25 to 50 percent higher<sup>10</sup>. Office Depot used e-learning to simultaneously train students in Florida, California, and Texas, thus increasing enrollment by a factor of three, increasing student satisfaction by 30% and knowledge retention by 25%, and simultaneously decreasing costs by 80%<sup>11</sup>.

Finally, e-learning offers cost and time savings. In 2000, IBM trained some 200,000 employees via e-learning and cut the training bill by \$350 million simply because online courses don't require travel<sup>12</sup>. Added savings were achieved because of the employee time saved by the shortened hours of instruction. In fact, there is very strong evidence that computer-based training requires less time than instructor-led training. The reduction ranges from 20-80 percent, with 40-60 percent being the most common<sup>13</sup>.

## **Disadvantages of E-learning**

E-learning is not a panacea. It has a number of disadvantages to consider. For example, e-learning has no personal touch, does not promote problem-solving or network building by students, and is expensive to develop.

In fact, according to U.S. News & World Report, creating just one customized e-learning course can cost anywhere from \$25,000 to \$50,000<sup>14</sup>. In addition, few manufacturing organizations

have the instructional designer, graphic artist, web designer and project manager on staff to continually develop effective customized compliance training programs.

## **Blended Learning: Solution to the Learning Imperative**

E-learning is a tool; like all tools, it has advantages and disadvantages. Instructor-led training is also tool. It too has advantages and disadvantages. Just as organizations would not deliver their entire employee training program via e-learning, they should not deliver all training via an instructor. No single delivery method is ideal for all types of training.

The answer to developing an effective compliance training and education program is to create compliance education programs that combine e-learning and instructor-led training.

Sophisticated compliance training officers are doing just that and calling it *Blended Learning*.

With a Blended Learning approach, an organization utilizes e-learning and instructor-led training to address the diverse learning needs of all its trainees on a 24/7 basis.

Manufacturing organizations are not the only organizations to embrace Blended Learning. The US Food and Drug Administration (FDA), for example, has already initiated a Blended Learning approach for its auditors and is inviting industry leaders to take part in this new paradigm of compliance training.

The Blended Learning approach has a number of significant advantages over either of the other two types of training alone. A truly enterprise-wide approach to education combines the best aspects of on-line education with the best of instructor-led training. One example is teaching basic fundamentals with e-learning and then teaching advanced skills in the classroom. This approach means that face-to-face learning becomes more effective because the mundane aspects of basic instruction are moved to an e-learning environment, which can be more engaging and interactive<sup>15</sup>.

Blended Learning means that an organization can have a common on-line orientation program for any number of trainees at any time, allowing all trainees to have the same basic knowledge

of concepts, vocabulary and terminology. When trainees do meet in the classroom with an instructor, the face-to-face class can now focus on higher-level skills since the basics are known by all trainees and were tested by the e-learning orientation module. Now, instructor-led orientation sessions can focus on knowledge transfer and behavioral changes and not simply the memorization of acronyms or company jargon.

Still another advantage of Blended Learning is that instruction can be tailored to meet the needs of each individual job function. An instructor presents general instructions that every employee needs to know in a classroom to all employees. Then, the details related to each specific job are presented via e-learning. This Blended Learning approach maximizes both employee time and the trainer's time. It allows the maximum impact for the least cost. Students can attend the initial training in a classroom and subsequent or re-fresher sessions via e-learning.

The combination of e-learning and instructor-led training provides the flexibility organizations need to address the learning imperative caused by the shrinking half-life of knowledge, the need for a faster deployment of information, increased federal government pressure to conduct training on new regulations, the movement toward certifying internal training programs, and the recent increase in government enforcement of organizations that fail to conduct proper training.

In today's environment, it is not enough to merely have an on-line library of compliance training programs, nor is it enough to have only instructor-led compliance training. Smart organizations are developing a Blended Learning approach to their training needs. These organizations understand that one type of training is not the answer to all the training needs they face. These organizations are taking advantage of the best instructor-led training has to offer and combining it with the best of e-learning. Trainers, managers and executives are now using e-learning as a powerful new tool in their efforts to ensure safe, healthy work environments for employees and safe products for consumers.

## **References**

- [1] Moe, Michael, CFA, (September 1999) is co- author of Merrill Lynch's in-depth report, *The Book of Knowledge: Investing in the Growing Education and Training Industry*.
- [2] ASTD Web Site (2001) "Investing in Workforce Training Improves Financial Success" [www.astd.org](http://www.astd.org).
- [3] [www.OSHA.gov](http://www.OSHA.gov)
- [4] [www.FDA.gov](http://www.FDA.gov)
- [5] Wetmore, D., (September 2000) *Time's a Wastin'* Training and Development Magazine, ASTD, pg. 67.
- [6] Wetmore, D., (September 2000) *Time's a Wastin'* Training and Development Magazine, ASTD, pg. 67.
- [7] [www.OSHA.gov](http://www.OSHA.gov)
- [8] Thomas, D. (1999) *unpublished master's thesis*, "Computer-based Instruction for Basic Pharmaceutical Manufacturing." Bloomsburg University.
- [9] Horton, W., (2000) *Designing Web-Based Training*. John Wiley & Sons, New York. Chap. 1.
- [10] *ROI With Blended E-Learning, White Paper Report*, <http://www.mentergy.com/blended/roi.html>, 2001.
- [11] Horton, W., (2000) *Designing Web-Based Training*, Wiley, New York, pg. 26.
- [12] *Giving it the Old Online Try*, BusinessWeek, December 3, 2001, pg. 80.
- [13] Hall, B., (1997) *Web-Based Training Cookbook*, Wiley Computer Publishing, New York, pg. 108
- [14] Lord, M. (October 20001) "They're Online and On the Job. US World & News Report
- [15] Van Dam, N., November 2001) "Where is the Future of Learning?" e-learning magazine. pg 160.