

## **Safety Training: Compliance or Excellence?**

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### **Introduction**

Training is a primary component of a comprehensive health and safety management system. Safety professionals face the challenge of not only identifying what regulatory issues and risks impact a business, but also how to translate that information into usable knowledge and skills for employees and management.

Dan Petersen once stated, “It is true that when you train you not only provide knowledge and skill but also motivation.” (Petersen 1988) This comment balances the legal compliance issues of educating adults in the workplace with the pure need to equip employees with the tools that will motivate them toward health and safety excellence. Legal compliance is a driving factor in why many employers execute certain behaviors related to employee safety, but instead of focusing solely on compliance employers must realize that a decision made in selecting training curriculum is not simply a decision of compliance and cost, but one of having a true impact on employee learning.

### **Cheap and Short**

As safety professionals we may often find ourselves caught between having the knowledge of what we need to do in the area of training and meeting the financial needs of our business. A training avenue that we may see as being the best for our situation may be deemed as requiring too much time for employees to be away from their work or as being too expensive, such as in the purchase of training materials or services. We may feel pressure to make it as cheap and short as possible to accommodate the needs of the business.

The reality is that training does require the dedication of resources. All of these resources have a price. Training material has a sticker price while time spent in a training session costs an organization in payroll. The key in the midst of the pressure we feel is to stay focused on principles of adult learning. This will help us stay on course and achieve the level of training excellence that we hope to reach.

A question we must ask ourselves is whether our goal in establishing a safety training program is to achieve compliance or to truly reach a level of excellence. The issue of compliance enters the picture when we think of the pressure to keep training cheap and short. Legal compliance can be achieved through very cost-effective avenues. We can produce Power Point training presentations, training documentation and tests. A 30-minute classroom session can be conducted and we can file all of the paperwork away proving that we “trained” our employees. But was the training effective? Did we take into account how adults learn and provide an experience for them that was beneficial and gave them tools to go back to their job and actually apply? Maybe we did. Maybe we didn’t.

A paradox exists in that cheap and short is not always best in achieving the goals of management. But long and expensive is not always best in achieving our goals in safety. By considering principles of adult learning, we can take any training tool and adapt it to the needs of our target audience. In a day when technology is an explosive force around us, we may feel compelled to buy the most recent web-based or “cutting edge” training products on the market. Just as we should not get caught up in training being cheap and short, we should also not fall victim to the thought that bigger or more expensive is better.

## **Tech Tools and Simple Rules**

To aid in the safety training process OSHA has provided a number of “eTools” on their web site. OSHA has created eTools in an effort to provide employers with an avenue to inform employees how to work safely. One appealing aspect of these tools is that they are free to the user. Throughout the remainder of our discussion on developing excellence in training, we will utilize the eTool online learning experience as a touchstone for determining whether we are reaching compliance or excellence in our safety training efforts.

The OSHA web site states “eTools are “stand-alone”, interactive, Web-based training tools on occupational safety and health topics” (OSHA 2007). This confirms OSHA’s intention of these tools is to be used as an independent training mechanism. In light of this statement we can view the eTool as an independent tool to be used as it is posted on the web in achieving compliance.

Though many best practice lists exist for the content of effective adult education, for the purposes of this paper we will utilize the list of seven principles created by Chickering and Ehrmann to illustrate the content and mechanical criteria by which online adult education can be measured (Chickering & Ehrmann 1996). These principles will help us to develop excellence in safety training by building on the free eTool as a compliance mechanism.

Computer Workstations (OSHA 2003) will be the specific eTool used throughout this paper in conjunction with Chickering and Ehrmann’s principles of adult learning. This eTool focuses on an issue that is of great importance to virtually every workplace in the U.S. The issue is ergonomics. In general, ergonomics is the science of how the human body interacts with the work environment. For example, an employee who has to repetitively reach above their head to retrieve a part to install on an assembly line throughout their shift is at risk of suffering a pulled shoulder muscle, or worse a torn rotator cuff. Such injuries can be debilitating to the employee and costly to the employer. In the example of our eTool, ergonomics also focuses a great deal on computer work stations. If improperly set up, such work environments can result in the following:

1. Eye Strain – the eyes can become strained from prolonged work of reading text or graphics on a computer screen or from the screen being placed at an improper distance from the eyes
2. Neck Strain – muscles in the neck can become strained from having to look to the side, up or down frequently or on a permanent basis
3. Shoulder Strain – improper posture can result in shoulder strain as the employee sits in a task chair in front of a computer throughout a shift
4. Back Pain – back pain can result from improper posture, such as slumping in a chair or by having a task chair improperly positioned in front of a computer screen or in proximity to task space on a desk
5. Serious Injuries/Illnesses – employees may develop serious injuries/illnesses, such as carpal tunnel syndrome, if poor ergonomic design remains unaddressed causing cumulative stress on the employee over a period of time

The OSHA eTool “Computer Work Stations” is designed to educate adults on how to effectively protect themselves in such a work environment.

With this information in mind, we will now proceed to integrating the seven principles of adult online learning with the OSHA’s eTool system. Each section will identify the best practice for online learning and how the OSHA eTool can be used to achieve excellence in safety training.

#### Instructor and Learner Interaction

Online learning by definition may appear to be a solo effort by the learner sitting in front of a computer screen and absorbing material as it is presented in written, picture, video or audible formats. The learner may spend much time reading text, clicking on links and watching or listening to tools that have been provided to foster the learning process.

An additional issue is the instructor behind the scenes who may have developed, posted and manages the material as participants navigate the course. The relationship between the instructor and learner can be pivotal in the learning process. How the learner views the instructor can greatly influence the learner’s attitude toward the material as well as the level of credibility that the process is given. The instructor can also serve to foster learning through being available for questions or to discuss key issues related to the topic.

Upon accessing the eTool the learner is greeted with a web page of quality design. The learner must then begin reading through various pieces of information. Six primary categories of information are provided in the left margin:

1. eTool Home
2. Good Working Positions
3. Workstation Components
4. Checklist
5. Work Process
6. Work Station Environment



**Exhibit 1. This is a screen print of the Computer Workstation OSHA eTool home page.**

In this format there is no instructor on which the learner can depend. The learner must simply read and absorb the material as he/she navigates the tool. In a traditional sense, the online instructor may be viewed as the individual who created and manages the online educational tool. In this case that would be a representative of the Occupational Safety and Health Administration. OSHA does not provide direct support for the learner who is using this tool. OSHA has simply posted the material and allows the learner to absorb the information.

Employers may augment training efforts by establishing a hybrid system in which the OSHA eTool is used for training and onsite safety personnel with professional expertise can be utilized as the instructor. The learner could contact this individual locally within their facility via e-mail, telephone or face-to-face for questions and guidance. This would allow interaction to occur between the learner and the instructor, though the word “instructor” has now evolved into a non-traditional sense.

### Peer Interaction

Growth occurs when two people of different thoughts, perspectives and backgrounds come together and interact. Interaction with fellow learners fosters the learning process through the exchange of thoughts and ideas on the topic matter. Learners can discuss the topic, debate issues and present new and challenging ideas. In a distance electronic environment this interaction can occur via message boards, e-mail, chat rooms or voice.

The OSHA eTool as a stand-alone resource does not provide for peer interaction. Due to the material simply being posted on the web with free access by all, there is no semblance of a group dynamic with the tool. Learners simply access the site and begin navigating the material on an individual basis. In some situations this may be supplemented through an employer utilizing the

eTool as a training resource for a group of employees. The peer interaction could then take place in the form of co-workers interacting with each other on the topic matter after having gone through the system on the web.

### Active Learning

Adult learning is facilitated when participants can do something with the information throughout the process. In traditional training this can be achieved through appropriately designed hands-on activities. The learner becomes an active participant rather than a sponge absorbing material as it is presented. This can be a challenge in an electronic environment. However, learners can do things on the web that will meet this objective. They can write perspectives on an issue. They can solve problems through a nicely designed point-and-click process.

The Computer Workstations eTool offers one opportunity for active learning to take place. An Evaluation Checklist is provided for the learner that can be used to apply the information learned from the eTool in their work area. The checklist includes a comprehensive list of categories to work through in evaluating their work environment:

1. Working Postures
2. Seating
3. Keyboard/Input Device
4. Monitor
5. Work Area
6. Accessories
7. General

The description at the top of the Evaluation Checklist states that a “no” response indicates that there may be a problem. This provides an avenue for the activity of conducting a work station evaluation to arrive at usable information. The learner is prompted with a question that they can easily answer based on an observation of their own work environment. If they answer “no” to the question, then they know that they may need to alter their work environment. If they answer “yes”, then they know that their computer workstation is acceptable with regard to that line item and no changes are necessary. This process provides usable information in an active format with a limited amount of guidance to ensure that the learner arrives at the proper conclusions after performing the evaluation.

Beyond the use of the checklist, an employer can supplement the learning experience with other active learning opportunities. For example, a work station could be staged with defined ergonomic deficiencies and individuals or teams could be tasked with identifying the deficiencies and recommending corrective measures. In an effort to avoid focusing on the negative, participants can also be asked what aspects of the workstation are designed well from an ergonomic perspective.

### Immediate Feedback

Feedback to the learner provides an opportunity for them to understand if they are performing according to expectations throughout the learning experience. This may come in the form of a response by an instructor or by simply being told if they answered a given question correctly. In an electronic medium this may take the form of a pop up block that states whether a correct

response was selected. It may also come in the form of being told which questions were answered correctly on an online quiz.

Due to the OSHA eTool providing no feedback of any kind to the adult learner, on-site trainers will need to define how this can be accomplished. This can be done by a safety professional being available to monitor course progression and giving feedback to employees as they navigate the tool.

### Time Efficiency

Online learning can be an exceptional tool in workplace safety efforts due to time efficiency. It is adaptive in that there is no need to manage the logistics of coordinating target employees' work schedules for instructor lead courses. Online training allows an employee to be given a timeframe in which a session is to be completed and then empower the employee to complete the online module at a time that is convenient for their work/life schedule.

Online training is also time-efficient in that when properly designed it allows the learner to quickly and easily navigate through links provided on the screen. The learner should be able to easily understand how to navigate the program in order to obtain and absorb the needed information.

This criterion is strongly met by the OSHA eTool. It can be accessed at anytime from anywhere with an internet connection. No passwords or logon identification are needed making it very easy to access and begin the session. This makes it time efficient for an employer by allowing complete flexibility of times when employees can go to the site and complete the module. The web site is of quality design that allows the learner clear understanding of how to navigate the different sections of the material. Key learning categories are provided in the left margin with clearly defined subcategories under one of the topics. The site requires little navigation which makes it easier for the learner to follow one topic and then return to begin another topic.

### Expectation to Learn

Learners will rise to the challenge of high expectations placed on them for achieving a certain level of understanding or skill acquirement. The instructor has a great deal of power to encourage learners to reach beyond their current skill set and rise to a new level of personal performance. A great deal of opportunity lies in this area where workplace safety is concerned. Many employees begin working for an organization without having any previous knowledge of safe work behavior. In their personal lives they may mow their yard wearing open-toe shoes or may drive their car without wearing a seatbelt. Safe behavior is not always an innate value of employees. Often it must be taught. The instructor of health and safety issues has an opportunity to raise the bar for how individuals perceive their own behavior and its impact on their own wellness and that of their co-workers.

Though this criterion does not exist independently within the OSHA eTool due to their not being an identified instructor to set such expectations, an on-site instructor or supervisor can set such expectations for an employee. This hybrid approach allows the eTool to be used effectively while engaging site management in the adult learning process.

### Respect for Different Learning Styles

Adults learn information in different ways. Some learn more effectively by reading material and allowing it to digest while others may learn more effectively by having information explained to them. Due to the very lives of employees being at stake, health and safety training should be done in a manner that best suites the learning styles of the targeted employees. Information can then be packaged in a manner that accommodates learning styles of those involved with a given course.

The OSHA eTool achieves a number of avenues for learning through reading text on the screen, looking at pictures and practicing with a checklist. The text provided for learners who prefer reading and contemplating the written word is well done. Information is provided in a logical flow and is clearly communicated. The information is detailed enough to be comprehensive, yet is basic enough to be clearly understood. Accompanying pictures assist the visual learner in understanding what is being discussed. Diagrams and photographs illustrate material in a way that the learner can easily apply it to their work environment.

On-site training personnel can compliment this material by providing additional tools to assist individuals with different learning styles. For example, the eTool provides no avenue of learning for those who benefit from audible learning tools. Such tools and processes could be developed locally to supplement the eTool for these individuals.

## **Achieving Excellence**

The OSHA eTool is an example of one cost effective avenue of training that may not satisfy all key aspects of adult online learning as an independent tool, but can be used in conjunction with other components to reach a level of training excellence. By utilizing the criteria for effective online learning as defined by Chickering and Ehrmann it is clear that the Computer Workstation eTool has a lot to offer and can be complimented by additional local efforts.

Going through this exercise helps us to see that low cost can also result in a high level of quality in the delivery of safety training. Instead of seeing financial constraints as a detriment, as safety professionals we can turn the challenge of budget restrictions into an opportunity to deliver high quality training while remaining within fiscal parameters. Though we have evaluated this concept in relation to the eTool online environment, we can utilize the same principles presented in this paper when evaluating our other training formats. It may be found that significant increases in safety training quality can be achieved by easily altering an existing training program. These efforts may not always require additional time or money, but may actually save our organization resources in the process.

## **Bibliography**

Chickering, A. & Ehrmann, S. "Implementing the Seven Principles: Technology as Lever." *AAHE Bulletin*, Oct. 1996: 3-6.

OSHA. (2003). Computer Workstations. Accessed March 7, 2008 at <http://www.osha.gov/SLTC/etools/computerworkstations/index.html>

OSHA. Accessed March 7, 2008 at <http://www.osha.gov/dts/osta/oshasoft/index.html#eTools>

Petersen, D. *Safety Management: A Human Approach*. Aloray, Inc., 1988.