

## *E-learning in the process industries—presenting the business case*

### **Executive Summary**

Today's business depends heavily on employees who are trained in the right skills that they need to run the business. It is not for nothing that an ideal business organization is also called *The Learning Organization*. With shortage of staff due to competitive pressures like downsizing and outsourcing, it is highly critical for any business to ensure that all of its employees are trained regularly. This is especially so, for businesses like the process industry (chemical processing, oil & gas production, refining, etc) who are heavily involved in engineering and technology, because of the rapid changes and advancements (and equally rapid obsolescence) in technology today. Training employees and other stake-holders in your business regularly is a daunting task if attempted to do with the traditional instructor led training. In this White Paper, we examine the issues involved and see how e-learning can offer a better solution.

### **The challenge of learning in the traditional way**

In current times, in the process industries, there are several problems and issues related to learning in the traditional way. By traditional way, we mean attending a live class, or training workshop, or information seminar, where the expert teacher or instructor teaches a group of learners on the subject matter.

The problems and issues include the following

- Not all employees can be spared for such training at the same time.
- Costs of travel and stay, if learners are coming from different locations to study.
- Different employees may have different levels of grasping, hence even after undergoing the same course, each learner's level of understanding will be different.
- Pressure on Instructor to complete the course in shortest possible time.
- No scope for learners to revise the course concepts or re-take the course again and again, unless the company has a policy of regular refresher training. However, typically this is done only for essential training like mandatory safety training, fire-fighting, etc.
- Learning is a *continuous* process but instructor led training makes it a *one shot event*.

Let us see now how this situation can be improved.

## **The case for e-learning**

Hence all over the world businesses, big or small, local or global are turning to e-learning as a means of imparting effective learning.

The advantages of e-learning are:

- No need to spare all employees at the same time. The employee can choose time and place of learning.
- It will be self paced and if need be can be run again and again till employee is confidently well versed in the subject.
- No time constraints. Learning can be in bite sized chunks or all at once-totally as per the learner's need-rather than the instructor's comfort.
- Large number of courses can be managed through suitable LMS (Learning Management Systems) by a very small number of training administrators. The LMS can also document and log number of courses taken, test scores, time taken, etc for each learner which can provide intelligent data for developing your employee's skills.
- It results in *measurable* learning. Due to score tracking, progress tracking and time tracking, the performance of each employee undergoing the training becomes measurable. In earlier days with traditional training, this was typically not done.
- Flexible course deployment---either through stand alone CD ROMs, Internet or a company wide Intranet. Hence no travel and stay expenses, which can be a substantial cost today.

*Geography is history. Learning can be anywhere, anytime at your convenience.*

## **The types of solutions**

An e- learning solution can be either off the shelf courses or a custom designed course. While off the shelf courses may be good for subject related topics like engineering, technology and computer skills, if you would like to train YOUR people in YOUR business processes / YOUR manufacturing plant or similar topics then a custom designed e-learning solution is what you should be having.

### **Off the shelf courses**

You can find several excellently designed off-the-shelf courses in several topic areas all over the world. These include a variety of topics from Pump maintenance to Hazardous Area Instrumentation.

### **Custom Designed courses**

A custom designed course has to be designed keeping in mind the audience, goals of the course, time allotted to the course and testing requirements.

You should ensure that a custom designed course provider can provide to you all these resources at competitive costs.

### **Use the right tools**

There are two ways to produce an e-learning course. One way (the older way) is make a course which is a hard-coded in software which typically runs like a movie. Once produced it is difficult (and expensive) to make changes or to upgrade a course.

The second way is to use an authoring tool for production of the course. Usage of authoring tools makes it easier to make changes and modifications in the course with the passage of time (to produce better or newer versions of same course). Ensure that your custom e-learning service provider uses the right authoring tools.

### **Going beyond traditional courses-Electronic Learning Manuals ( Not just e-books)**

One should think of going beyond just traditional courses and putting all of your company's user manuals, procedures, maintenance manuals and installation guides into e-learning modules. This is especially useful for companies who sell capital equipment and need to train their customers thoroughly. Instead of supplying a staid user manual (with perhaps a three day course thrown in for good measure) it would be a better option to convert all this knowledge into an e- learning module which can then be used teach everybody who needs to know it anytime. Say, your company makes an oil fired heater and needs to train the customers in its operation. What better way to train than do it through an e-learning course which through the right combination of text matter, graphics , animation and sound can create quite a lasting impact. This kind of audio-visual training has better retention amongst plant operators than going though a dull manual.

( Please note that we are not talking here of e-books or e-manuals, which are nothing but soft copies of the same dull manuals! )

These kind of modules can be hosted on the company's website and used to impart very effective training to even faraway customers in a cost effective manner.

Does your e-learning service provider have this kind of service?

### **Deployment**

Ideally courses which are organization-specific should be able to be deployed immediately in a cost effective manner. The easiest way to do this is to host the course (say a 'Sales Force training' course) on your company's server and then ask all your salesmen (who are generally on the move) to view it either on your company's Intranet or through an Internet connection, in a simple browser like Internet Explorer. Thus no new software need be installed at your branch locations or on your salesmen's laptops. A browser is generally always present on any machine. Thus your course need not require any special "player" which needs to be installed on client machines.

Similarly, say you are an engineering consultancy organization with a large pool of engineers that you would like to train. *Then, a course hosted on your LMS can be taken by all your engineers in all your locations, on their desktops, laptops, PDAs, all over the globe , in different time zones, at their convenience. Can you compare any traditionally delivered course with this flexibility at a fraction of the cost?*

**Conclusion**

e-learning is a technology whose time has arrived and companies, especially those in the Process Industries now have compelling reasons to adopt it, which was not the case a few years back.

If you are not considering e-learning for your organization, then you are losing an excellent opportunity to sharpen skills, increase productivity and thus increase the general skill level of your organization, at a fraction of the cost of traditional learning.

If you have any comments or questions, or you would like to know something more about e-learning, please send us an email to [mail@abhisam.com](mailto:mail@abhisam.com)  
We will be glad to assist you!