



White Paper

# Blended Learning Leads to Effective Training

In today's challenging business environment, successful companies are looking for ways to enhance their competitive advantages while reducing costs. Initiatives that improve production line performance and plant-wide operations can achieve these often-conflicting goals simultaneously and produce positive results. Expanding the knowledgeability of employees to better operate and maintain equipment and consistently comply with both company procedures and industry regulations is one such initiative. The question then becomes, how do you provide this training while minimizing costs?

In this white paper, we will explore the benefits of effective training and outline various ways to provide that training. The objective is to help processors and manufacturers understand the tools that can be leveraged to maximize the value of their training program.

### Opportunities

During harsh economic times, the pressure to reduce expenses skyrockets. At the same time, product quality and safety, regulatory compliance and a host of other considerations from "green" initiatives to employee retention and production line performance must be addressed. In times of stress, successful businesses find new opportunities.

A recent survey by Food Processing ([www.foodprocessing.com/articles/2009/januarycoverstory.html](http://www.foodprocessing.com/articles/2009/januarycoverstory.html)) shows that food safety is the number one concern of food processors and that most of these processors understand the way to ensure food safety is through employee training. Of course, training can achieve a multitude of various business and operational objectives – far beyond food safety in the food processing industry.

Successful companies make employee training a high priority because it helps achieve a wide variety of objectives, including the following:

- assuring the highest food safety and optimal product quality
- maximizing productivity
- increasing process efficiency
- complying with laws and regulations
- improving job satisfaction and loyalty
- increasing employee motivation
- reducing employee turnover
- enhancing company image

Processors and manufacturers that measure line performance can usually tell when a new employee comes onto a production line whether that employee is a new operator, maintenance technician or even a new line manager. Likewise, there is often a negative effect when an experienced employee changes something that they are not 100 percent familiar with.

To ensure the right people have the right skills and knowledge to maximize line performance and produce a quality product while meeting other corporate goals, a company must be committed to properly training its employees.

Despite the pressure to reduce costs, cutting training is a shortsighted and potentially costly response that can sometimes lead to disastrous results. Looking to improve the effectiveness of the training program, with an eye on costs, can produce positive measurable results in the short run as well as long-term.

Just as each person is unique, so are the ways in which we best learn. Whether we call this learning, education or training, it is important to provide the tools that help make individuals successful because successful employees help create successful businesses. Offering a blended learning methodology that combines job shadowing, instructor-led training and online training is the most successful way to ensure the transfer of knowledge to those that need it. By offering such a combination, the company benefits from the unique advantages of each training method and doesn't limit its program and people by the constraints inherent in any one training method.

### Job Shadowing

One of the most common methods for teaching new employees the job skills they need is job shadowing. While this is a great way for someone to gain hands-on experience, it has limitations.

Let's start with the benefits:

- Job shadowing provides a view into job characteristics and responsibilities.
- Knowledge is transferred from an experienced or senior team member.
- Answers to questions can be provided immediately, as they arise.
- First-hand experience is gained while practicing with a mentor.
- Costs appear to be nil (in reality there are costs).

Cons:

- The "expert" is not always an expert – more than likely it is just the last person to hold the position.



## Blended Learning Leads to Effective Training

- Sequential knowledge-transfer from one to another to another can lead to the loss or degradation of information over time.
- Consistency of training suffers as it relies on variables such as changing mentors
- It takes a significant amount of time to learn everything.
- It is hard to measure student progress or assess student knowledge.
- Long-term consequences include poor product quality or line performance due to insufficient training/knowledge.



### Instructor-Led Training

Traditionally, most companies associate training with in-person instructor-led courses, either located on-site at the processor's plant or off-site at an equipment supplier's facility. More recently, online instructor-led courses have become available via web-based conferencing. Typically, instructor-led programs are a great way to learn. However, they too have pitfalls.

Pros:

- A true "expert" teaches students.
- The trainer provides prepared materials to augment the learning experience.
- A structured learning environment and curriculum provides consistency.
- Validation/Testing makes measuring progress easy and ensures learning is taking place.
- Depending on the environment, some hands-on experience is gained.
- Experienced employees can be trained on new or refreshed material.

### Cons:

- It is expensive to hire an expert.
- Training at a supplier's site adds to the expense.
- Employees are pulled from production line, creating non-productive time.
- Training is a one-time session, not continuous.
- Multiple job positions often receive the same training so content may not be relevant to all.
- The consistency of trainers varies based on their passion and enthusiasm.

### Online Training

As technology progresses, online training is becoming a more reliable and effective delivery mechanism. Online courses are more robust, relevant and engaging than ever before, ensuring an environment that promotes learning.

### Pros:

- With various training modules available, processors can pick and choose to create the most suitable combination for each job position.
- It offers on-demand, just-in-time learning with anytime-anywhere access.
- Structured learning improves consistency.
- Validation/Testing ensures learning is taking place.
- Simulations can provide a virtual hands-on experience.
- Product experts developed the training.
- Prepared materials are available for download.
- Courses can be taken precisely as needs arise.
- Allows for continuous learning over time.
- Costs per student are typically less than instructor-led training.
- Training time is typically reduced by 40 to 60 percent.
- Retention typically improves by 25 to 50 percent.

### Cons:

- Immediate answers to questions are not always available.
- Employees are pulled from the production line, creating non-productive time.
- Some students learn better with an instructor.

## Blended Learning Leads to Effective Training

- Some workers are not comfortable using a computer.
- Students still need some hands on-time in production environment.



### Blended Training

Many studies ([www.karlkapp.com/materials/elearningadvantages.pdf](http://www.karlkapp.com/materials/elearningadvantages.pdf)) have been conducted that compare technology-based (online) training to instructor-led training. Overall, the results show that online training has advantages with regard to reduced time and improved knowledge-retention. Online training has proven to be the most economical method for training. That said, the benefits of the hands-on experience gained with job shadowing and instructor-led programs cannot be perfectly reproduced online. By blending job shadowing, instructor-led instruction and online training into one comprehensive program, you get the best of each method.

To provide effective training while getting the most of limited resources and keeping productivity at the highest possible levels, many successful companies:

- Take advantage of production line downtime to train and validate job skills.
- Purchase training that can be utilized by more than one person over a long period of time.
- Look for online alternatives to safety and health training that are repeatable and on-demand.
- Develop a blended program that gives employees a clear path from new hire to other positions such as operator or line manager.
- Create roundtable discussions where knowledge can be shared.
- Purchase online training and enhance it by hiring the product expert for one day sessions.
- Create an internal communication program focused on training topics.

### Comparative Costs

Online training provides the most affordable method for keeping employee skills at the necessary levels. As the number of students increase, online training costs per student

decrease. Yet in traditional instructor-led programs, per student costs increase as the number of students increase.

Typical costs of equipment supplier-provided product training:

- Instructor-led at your plant – \$1,500 to \$2,500 per day plus travel expenses to hire the equipment supplier’s instructor.
- Instructor-led at the supplier’s site – \$1,500 to \$4,500 plus travel expenses per employee.
- Online Training – \$25 per student, per course to \$2,500 per student for a series of courses with limited-time access.

### Conclusion

Good online training programs provide a learning platform that is flexible, self-paced, and available anytime, on-demand to conveniently train personnel as needed, just in time – before equipment is installed or when certification or re-certification is essential. This structured learning method achieves consistency over time and across a company because all employees, regardless of plant location, receive the same training. Strong online training programs offer full reporting to facilitate record keeping and proof of compliance. Compared to other learning methods, online programs often reduce training time by 40 to 60 percent and improve retention by 25 to 50 percent. And costs are significantly less than instructor-led training. When a good online training program is blended with job shadowing and short instructor-led courses into a comprehensive program, the effectiveness of the training is maximized and the costs are minimized.

As a leading provider of process automation systems for the food processing, pharmaceutical manufacturing and industrial markets, Key Technology has embraced a blended training methodology by developing online course offerings. By collaborating with Vivid Learning Systems, Key has built a solution for not only its products but also training that includes HACCP and occupational safety and health. In addition to its online training program, Key offers training via instructor-led web conferencing and in-person, on-site, as needed.

Successful companies understand that training is an investment, not a cost, which pays off through skilled employees adding value to the business. To quote Zig Ziglar **“The only thing worse than training an employee and having him leave, is not training him and having him stay.”**

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