

A 3D rendered image of a manufacturing plant. In the foreground, a large, complex industrial machine with grey and yellow components is visible. In the background, two workers wearing orange safety vests and hard hats are standing on a yellow-railed platform, looking at the machinery. The scene is set in a dark industrial environment with various pipes and structural elements.

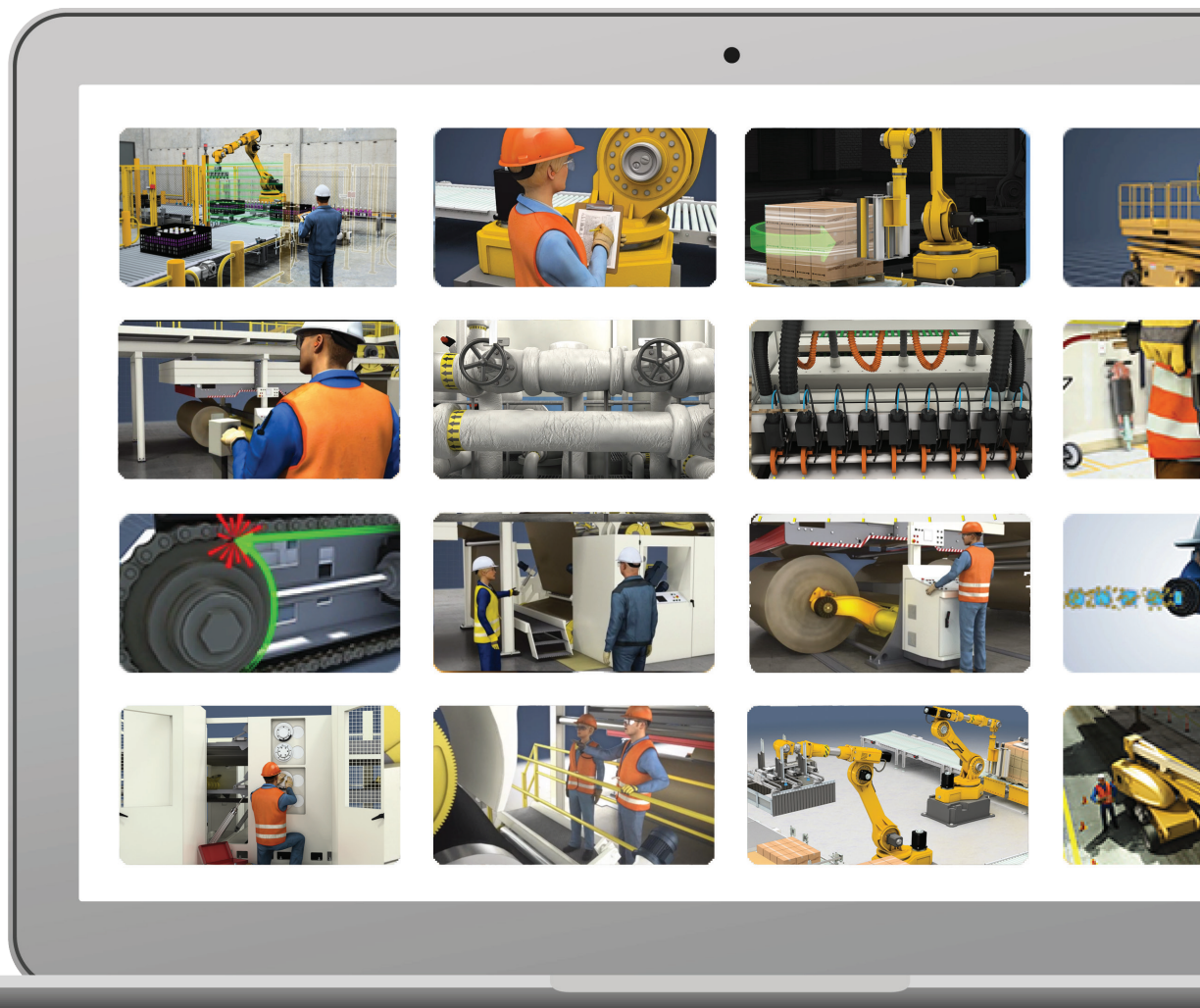
# SELECTING ONLINE MANUFACTURING TRAINING GUIDE

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# MANUFACTURING TRAINING COURSES

Our online manufacturing training courses cover many necessary training topics, including:

- Basic industrial skills
- Instrumentation & control
- Health & safety
- Environmental
- Quality & cGMP
- Lean manufacturing
- Maintenance & reliability
- Transportation
- Industrial power
- HR compliance & soft skills
- Industry-specific training topics
- And more...



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**What Is Online Manufacturing Training?, [Page 5](#)**

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**Criteria For Online Manufacturing Training Courses, [Page 18](#)**

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The background of the slide is a grayscale illustration of a manufacturing environment. It features large industrial machinery, including what appears to be a lathe or mill, with various gears, belts, and structural components. In the background, a worker wearing a hard hat and safety glasses is visible, pointing towards the machinery. The overall scene is industrial and technical.

PART I

# **WHAT IS ONLINE MANUFACTURING TRAINING?**

# WHAT IS ONLINE MANUFACTURING TRAINING?

Let's begin by defining our terms. We'll start by considering the phrase online manufacturing training and break it down into its two simplest components. We'll follow that up by throwing in some additional trends to keep an eye on in the future.

## Online Training Courses

The first part of the online manufacturing training is the courses--the actual training content.

Courses cover typical manufacturing training needs, including: onboarding, job tasks, safety, maintenance, quality, lean, HR, soft skills, digital skills, and more.



## 2 Types of Online Courses

Let's get back to the issue of online courses for a moment. What we want to call out is that these days, there are two many ways to get them:

- Streaming from an internet site
- As elearning courses within an LMS

### Streaming Courses from Internet

This is basically the Netflix model applied to manufacturing training. Go to a website, pay on a pay-per-view or subscription basis, and get access to a single course, a collection or courses, or a series/library of courses.

You'll get to view the course, it may include a test, and you may also get a completion certificate of some sort. It's possible that's all you'll get, which leads us to the additional benefits you get from the second option, elearning courses delivered from an LMS.

### eLearning Within an LMS

An elearning course has the same content that you'd see in a course streaming from a website. But it's been formatted in a way, and it communicates with the LMS it's been imported into, to provide a lot of additional benefits.

It's easier to assign; there's a whole host of notifications and due dates and expiration dates that can more easily be managed; managers can more easily access information about training time duration, test scores, and specific answers to specific questions, and a whole lot of other stuff you may find useful as a training manager.

### Learning Management System (LMS)

A learning management system, or LMS, is a web-based software application you can use to administer your online manufacturing training but ALSO instructor-led training (ILT), field-based training, mentoring programs, apprenticeship programs, and even things like sending workers to a conference or community college.

You can get an LMS installed on your own network server or use one that's on the cloud. The cloud-computing option for an LMS is becoming increasingly popular and has several key advantages. Read more about that in our [Benefits of a Cloud-Based LMS](#) article.

You can do a LOT with an LMS, including but not limited to:

- Importing your own training materials, including videos, PowerPoint presentations, PDFs, and eLearning courses you created yourself or got from an elearning provider
- Create online training materials, including things like online quizzes, checklists, surveys, elearning courses and more
- Assign training to employees
- Deliver the online portion of that training to employees via the web
- Credit completion of the training--both manually and automatically
- Store completion records
- Notify employees of assigned training, upcoming due dates, and training expiration dates
- Notify supervisors of all the above things re: employee training, plus training completion
- Run reports on training
- Much more

## Mobile Apps and Mobile Devices

We're not going to spend a lot of time discussing [mobile apps for learning and performance improvement](#) in this article, but it's important to know that you can now do this kind of stuff on mobile apps.

Any LMS you select should be mobile-compatible.

Likewise, you should be able to view your training courses on mobile devices as well.





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PART II

# **ALSO RELATED TO ONLINE MANUFACTURING TRAINING...**



# ALSO RELATED TO ONLINE MANUFACTURING TRAINING...

Although we're going to focus on elearning courses and learning management systems in our discussion of online manufacturing training, it's worth knowing about the following technologies as well and being aware that they too are already affecting workforce training and will continue to do so in the coming years.

## Mobile Learning

The world is going mobile. Stop and think of how often you are on mobile (either your phone or something like a tablet). Now compare that to how much you're on a desktop computer.

And what all do you do on your mobile device? Summon cars, online banking, social media, read the news? Why shouldn't you be using mobile devices and mobile apps for workplace L&D, including both training (m-learning) and performance support?

Read more about using [mobile apps for manufacturing training](#) here.

## Virtual Reality

You've probably seen virtual reality, also known as VR, somewhere. Maybe in a gaming context. But you may have already seen some applications of VR to job training and, if you haven't, you've probably at least wondered about it.

If you're not familiar with virtual reality, it's when you put on a pair of goggles and seem to be totally immersed in another, virtual world.

VR will be another nice addition to your overall training and learning toolkit, and it's becoming increasingly common and inexpensive. VR will allow employees to practice job skills in an immersive environment that mimics the real world.

This is great for repetitive training that builds competence and even expertise but would be difficult or costly to do in the real world or with real people--think of sales training or even maintenance troubleshooting.

VR can also be great for letting workers safely train on something that would be dangerous to let them work on in real life until they have the necessary skills. Think about things exploding and other safety-related issues.

VR is also a valuable tool for letting people train without having to shut down production lines, etc., as the downtime would be too expensive.

## Augmented Reality

Augmented reality, also known as AR, is another new technology coming to workplace learning and performance optimization.

If virtual reality immerses you completely in a virtual world, augmented reality keeps you in the real world, but that world is “augmented” with computer-generated overlays. Those overlays may highlight parts of machines or provide useful information, for example. These overlays can be generated by looking through smart glasses or a mobile device.

Augmented reality has potential for training, but it also has a lot of potential for job aids, providing necessary information to workers when and where they need it on the job.

## Chatbots

You’re probably familiar with chatbots from going to websites like Amazon or maybe even those run by companies like your health insurance providers. The idea is you can have conversations with, and ask questions of, the chatbot and get answers in return.

You may not have thought yet of the ways chatbots can be used in your manufacturing learning ecosystem, but there’s a lot of potential here. At the touch of a button (or the click of a mouse), workers can ask questions and get timely, accurate information: where can I find this form? What type of oil should I use to lubricate this machine?

Chatbots can also be used to further learning-related conversations after primary training, either to [reduce the forgetting curve](#), to increase learning, or to suggest additional learning materials in a personalized, adaptive manner.

## Artificial Intelligence

Artificial intelligence, also known as AI, will become increasingly common in the manufacturing workplace in general and in manufacturing training as well. In many cases, we’ll use AI to “power” things like chatbots, to help curate learning content, or to recommend more adaptive, personalized learning solutions.

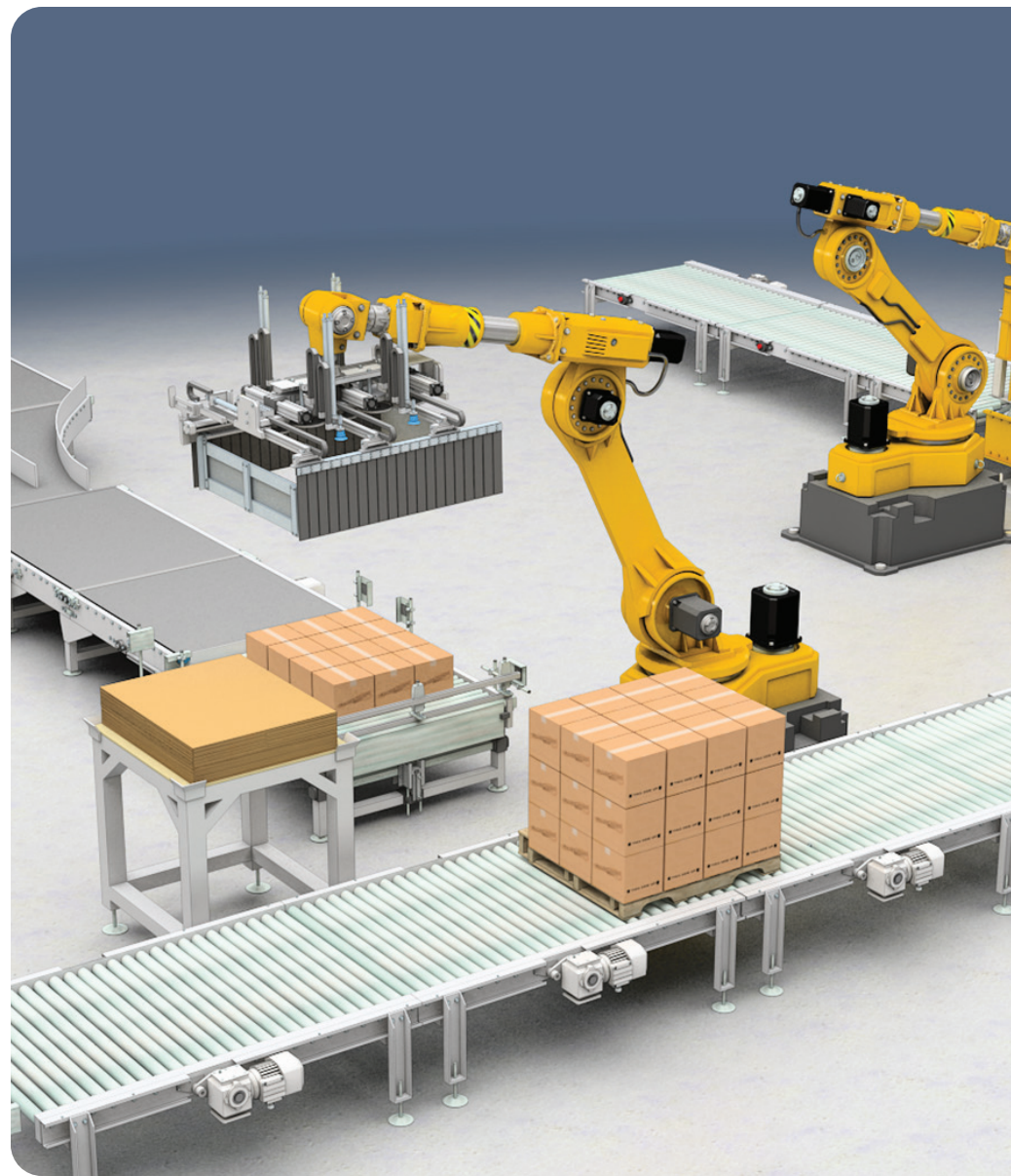
## Social Learning

This point isn't so much about technology (like mobile, VR, AR, and AI were). It's more about people sharing and distributing learning and knowledge, even if that sharing is at times facilitated by technology such as online wikis and bulletin boards and tools for uploading and sharing user-generated content.

This is part of what's known as social learning--when workers learn from one another--and having a strong social learning environment at work is a hallmark of being a [learning organization](#). We'll discuss social learning and the importance of facilitating it more in the section of this article covering the 70/20/10 learning model.

## Wrap-Up

For more on all these new technologies, including what they are, what they do, and how they may affect workforce learning and development in the future, check out our [Disruptive Technologies in L&D](#) article.



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PART III

# **BENEFITS OF ONLINE MANUFACTURING TRAINING**



# BENEFITS OF ONLINE MANUFACTURING TRAINING

Online training, including both the courses and the LMS, provide a number of benefits. In some cases, it benefits the employer and/or the person in charge of the managing the training. In other cases, it benefits the employees. In still other cases, the benefits are to both employer and employee.

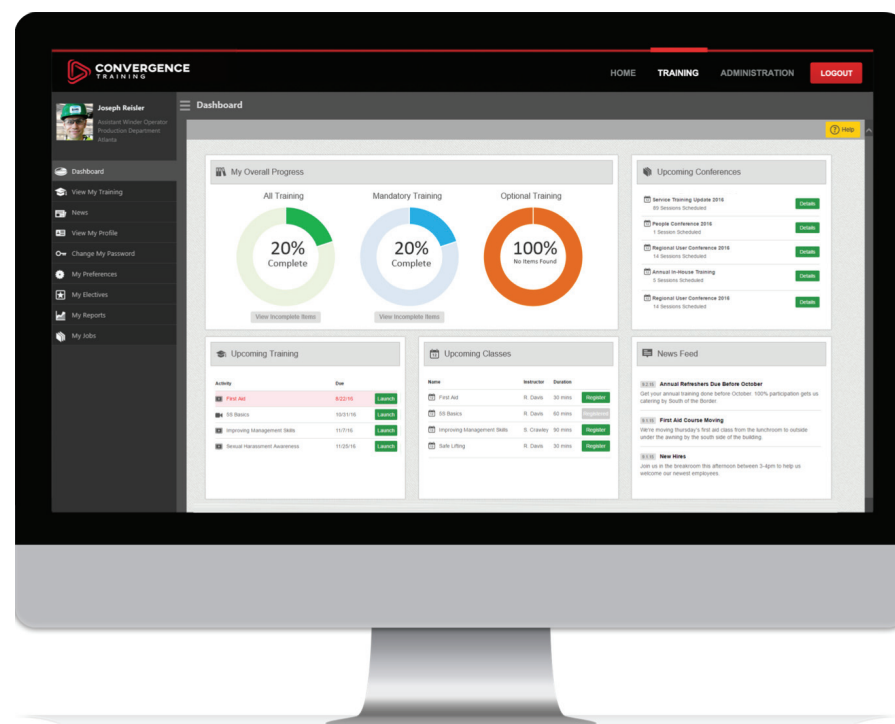
Let's take a look at a few benefits that online manufacturing training can offer.

## For the Organization/Admin

The organization, operations manager, and/or training manager will gain the following benefits from introducing online manufacturing training and using that training wisely:

- More topic expertise
- More instructional design expertise
- Scalable (more employees, shifts, locations, etc.)
- Consistency/standard training
- Saves time for other training

- Saves time for other safety tasks
- Lower costs
- Easier & faster to update
- Part of blended learning solution
- Use as performance support
- Reduce travel, carbon footprint
- Better new employee onboarding
- Competitive hiring and employee retention advantage—onboarding, career paths, etc.

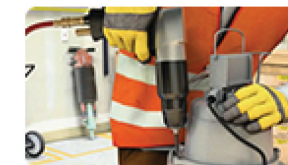
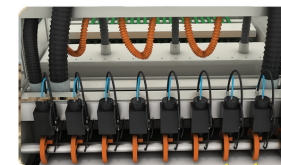
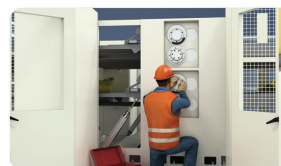
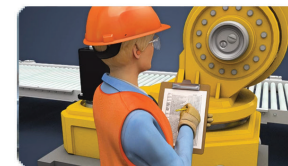


## For the Employee/Learner

Employees at a manufacturing facility will experience these benefits from online manufacturing training at their workplace:

- Complete training on own schedule
- Complete training at own pace
- “Safe place” to practice and get something wrong
- Leaves more one-on-one training time for skill development
- Presents opportunity for elective-based training
- Makes it easier for worker to “train up” for next job

Remember too that some benefits are shared--so, for examples, employees obviously benefit from improved new hire onboarding, defined career paths, and others listed under the “employer” section.



The background of the slide is a grayscale photograph of an industrial manufacturing environment. It features large, complex machinery with various gears, pipes, and structural components. In the mid-ground, two workers wearing hard hats and safety vests are visible; one is pointing towards the machinery. The overall scene conveys a sense of a busy, modern factory or manufacturing plant.

PART IV

# **STARTING YOUR SEARCH FOR ONLINE MANUFACTURING TRAINING**

# STARTING YOUR SEARCH FOR ONLINE MANUFACTURING TRAINING

You shouldn't just rush out and buy online manufacturing training without some planning. In fact, you shouldn't do it alone if you can avoid it. We'll give you a few tips about things to consider in-house before you begin your search.

## Internal Stakeholders

First, identify the stakeholders at your organization who will be interested in, will be affected by, and whose advice and buy-in you'd benefit from if you implement online training.



Consider the following people:

- Employees, including new hires and more experienced workers
- Upper management/C-suite
- HR
- L&D
- Operations
- Safety
- Quality
- Continuous Improvement
- IT

## Uses Cases

Once you've created that list of internal stakeholders and have an online manufacturing training search team assembled, you still don't want to rush out into the evaluation and buying phases.

Instead, take some time as a team, sit down, and discuss what you want this online training to do and how it fits into your overall [organizational learning strategy](#).

Write up some uses cases based on those discussions--then use those use cases to evaluate offerings out on the market.





PART V

# **CRITERIA FOR MANUFACTURING TRAINING COURSES**

# CRITERIA FOR MANUFACTURING TRAINING COURSES

Now let's list some criteria you should consider when evaluating online training courses to add to your manufacturing training program at work. Of course, add your own items to this list as well.

## Streaming or eLearning?

What format do you want--streaming courses ala Netflix, or elearning courses to take advantage of the benefits of an LMS?

## If eLearning, SCORM, AICC, xAPI?

If you're going with elearning, you need to:

- Know that elearning courses come in different "formats" or standards
- Know that you'll need to buy elearning courses that are compatible with your LMS

- Know that [SCORM](#) is currently the most common standard, that AICC is an older one that's still around but is less and less common, and the xAPI is the new kid on the block

## Topics Covered

Review the topics covered in the courses. Do they fit your training needs?

## Focus on Job Performance

Look for courses that teach people to perform job skills, if possible, and don't just convey pre-requisite information that helps workers prepare to learn those job skills.

## Instructional Design & Adult Learning Principles

Make sure the online courses follow [adult learning principles](#), [evidence-based training practices](#), and other aspects of [sound instructional design](#).

## Shorter = Better

In general, less is more in training. Look for training that's been reduced to the necessary [learning objectives for the job performances](#).

## Visuals

A significant part of our brains is dedicated to processing visual information, and you can get a lot of bang for your buck out of online training with effectively designed visuals.

Read our [graphic design tips for elearning](#) for more on this.

## Writing

Informal, casual, conversational language that matches the language employees use when they speak and write delivers the best training effectiveness.

Read more about this in our articles on [writing training materials](#) and [formatting written training materials](#).

## Practice Opportunities & Assessments

Online training courses should provide practice questions so employees can practice new knowledge and skills and self-assess their level of understanding and competence as well as course-ending assessments for knowledge and skill verification purposes.

Check out our [Workplace Testing Best Practices](#) article for more on this.

## New & Updated Courses

When might you get new courses? When are courses updated? Why are courses updated? New or updated, how do you get the courses and what does it cost?

## Fit within Your Organization's Overall Learning Strategy

How do the courses fit within your organization's overall learning strategy for employee development?

## Mobile Compatible Courses

Are the courses fully mobile compatible? Meaning:

- Can you view them on mobile devices?
- Are they designed to be viewed on mobile devices?



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PART VI

# **CRITERIA FOR A MANUFACTURING LMS**



# CRITERIA FOR A MANUFACTURING LMS

Now let's take a look at some criteria for evaluating your LMS.

## Network Installed or Cloud-Based?

Do you want the LMS installed on your own network or hosted on the cloud?

## Easy User Interface

One of the most critical aspects of LMS success is an easy user interface and intuitive design and operation. This is true for the admin experience as well as the employee experience.

## Reporting

Reporting is a key component of any LMS, and that's even more true when compliance is an issue.

## Integration with other Workplace Software Systems

This one may not occur to you immediately, but having an LMS that can integrate with and exchange information with other workplace software applications, such as your HRIS, CRM, ERP, [safety management system](#), and more is very valuable.

Read more here to learn about [integrating your LMS with other workplace software applications](#).

## Security Roles

Does the LMS you're looking at have different security roles that allow different levels of powers and privileges to different admins? If so, what are they? Can you create your own? How easy is it to assign the security roles?

## User Training

Does the LMS provider offer helpful training to help your company's LMS admins and employees get up and rolling with the LMS?

## Self-Guided Help Materials

What about help materials you can access 24/7, such as an online knowledge base or helpful self-guided videos?

## Customer Service

No matter how easy and intuitive an LMS is, you're going to want some customer service from time-to-time. Does the LMS provider offer it? If so, is it free or does it cost \$\$\$? How much do you get? What do you have to do to get it? Can you talk with someone on a phone or have them share a computer screen with you?

## Updates

When is the LMS updated? How does that happen? How often does it happen? Can you request new features be added to future updates? Is that free or is there a cost?

## Safety Training Uses

Since manufacturing training includes occupational safety and health training, you'll want to see how useful the LMS is for safety training purposes--things like due dates, expiration dates, notification dates, and so on.

Read this article to learn more about using an [LMS for safety training](#).

## Other Compliance Training Uses

The same basic argument we just made for safety training applies for other HR and compliance training as well.



## Integrated Mobile Apps

Look for mobile apps that allow you to use your LMS functionality from the palm of your hand.



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PART VII

# **CRITERIA FOR ONLINE MANUFACTURING TRAINING PROVIDERS**

# CRITERIA FOR ONLINE MANUFACTURING TRAINING PROVIDERS

Now let's consider some very important things about the company and people providing the online manufacturing training.

## **Are They Friendly?**

Are they friendly? Do you like them and like working with them? This could be a long partnership...

## **Are They Responsive?**

From the very first time you contact them, and every time since, have they been responsive?

## **Are They Helpful?**

And when you talk with them, are they helpful?

## **Are They Experienced and Knowledgeable?**

Are they experts about the industry, training needs, and their products? Do they know your problems and challenges already and have a good solution?

## **Do They Have a Wide Range of In-House Expertise?**

Do they have a wide-range of expertise in house, including instructional design, subject matter expertise in manufacturing, graphic design, writing, editing, computer programmers, audio talent, and more?

## **Do They Have a Proven Track Record in Manufacturing Training?**

How long have they been in the manufacturing training business? What's their track record?

## **Do They Have a Proven Track Record In Your Industry?**

In particular, do they have a proven track record creating training solutions for your industry?

## **How Much Do They Charge? And What Are the Billing Options?**

How much do they charge, and what are the payment options?



### What Can You Learn From Third-Party Referrals?

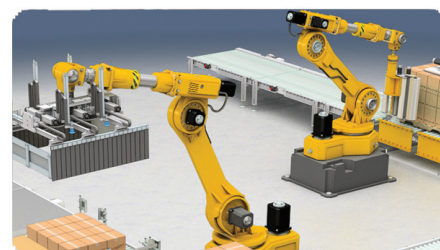
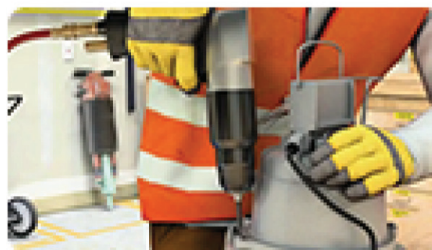
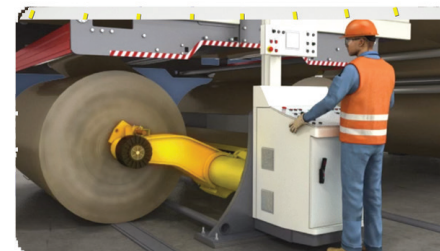
What do external third-parties, such as Capterra or Talented Learning, have to say about them? Industry magazines? Other sources?

### Can You Get Positive Referrals from Current Customers?

Will they let you talk with customers like you and, if so, do you hear good things?

### How Easy Is It To Reach Them?

When you want to contact them, is it easy to do so? Is it a form you fill out, an email you send, or can you call direct?





PART VII

# **SUGGESTED MANUFACTURING TRAINING TOPICS & TRAINING USES**

# SUGGESTED MANUFACTURING TRAINING TOPICS & TRAINING USES

Now let's take a look at the kind of training purposes and types of training topics that online training within a manufacturing environment can help with.

## **New Employee Onboarding**

Onboarding new employees is critical, and while onboarding includes more than training, training's a significant part of it.

If you're not currently providing a new employee onboarding experience, and/or if you're not doing much to onboard employees other than having them follow an experienced worker around and hope they learn the ropes, you're missing out.

Onboarding is a great way to help new hires more rapidly transition from novices to competent, and it also helps reduce churn as a result of new employees leaving the company shortly after being hired.

For more on this, [read our guide to onboarding new hires](#) and read [how an LMS can help onboard new employees in a manufacturing environment](#).

## **Safety Training**

Safety training is an obvious choice here. It's an [OSHA compliance requirement](#), for starters, but it's also important because statistics show that new workers are significantly more likely to be involved in a safety and health incident at work. Providing necessary safety and health training to those workers can have a significant, positive effect on the risk level.

Of course, it's not only new employees that need safety training, and you can use online training courses as part of your overall safety training program to great benefit.

## **HR & Other Compliance Training**

A well-designed risk management program at work will also quickly direct you to other training you should provide, including HR and other compliance training.

## Job Role Training

You're also going to want to provide training to each and every employee to help them learn the skills necessary for the job role they currently hold.

## Career Paths

In addition to providing training to workers for their current job role, it's essential that they know there's a formal career path for them to climb and to know the requirements of each job role in that path.

## Basic Workplace Skills

Many workers come to a workplace without some highly useful, seemingly basic skills that may not be as basic as they seem: basic math and science skills; basic office software skills; and more.

## Industrial & Workplace Digital Skills

In an Industry 4.0, [advanced manufacturing workplace](#), workers are going to need to up their digital skills. This includes data literacy, PLC interfaces, and more.

## Lean Manufacturing

It's wise for nearly any company to introduce at least some elements of lean manufacturing and continuous improvement to their workers.

See the following articles for more on this:

- [Teaching Employees Lean](#)
- [Continuous Improvement at Work](#)

## Quality

Quality is also an essential issue in manufacturing, and as a result training on quality may be an important addition as a manufacturing training topic.

Of course, if your organization produces food, beverage, or pharmaceuticals, you'll also be interested in cGMP training.

See our article on the [ISO 9001 quality management standard](#) for more on quality issues.

## Maintenance

Maintenance, along with its running partners Maintainability and Reliability, are essential considerations in a manufacturing environment.



Along with basic math, science, and computer skills, you'll want to provide training on maintenance topics such as electrical maintenance, mechanical maintenance, facilities maintenance, asset condition management, total productive maintenance, and more.

### **Problem-solving**

Problem-solving and troubleshooting, including classic methods like The 5 Whys and the Fishbone Diagram, should also be included in your manufacturing training program.

### **Communication & Team Work**

Communication and the ability to work together as a team has always been important at work. And it's suggested that doing so will be even more important in the advanced manufacturing workplaces of today and the future, when workers work alongside computers, robots, artificial intelligence, sensors, and the Industrial Internet of Things (IIoT).

One important element of this is known as [psychological safety](#).





PART IX

# **BLENDED LEARNING FOR MANUFACTURING TRAINING**

# BLENDED LEARNING FOR MANUFACTURING TRAINING

We just listed some great benefits of adding online manufacturing training at your worksite, but we want to make it clear we don't recommend using online training without other forms of training.

Instead, we follow nearly all training and L&D professionals in recommending a blended learning approach for the training at your manufacturing facility.

## What Is Blended Learning?

In short, blended learning means using different types of training delivery methods--things like instructor-led training (ILT), online training, field-based training, written training materials, community college courses, virtual reality, augmented reality, chatbots, and more.

Traditionally, the phrase blended learning has been most commonly used to refer to blending instructor-led, classroom-style training with online learning, but it's fair to think of it more broadly.

In the following sections, we're going to look at blended learning more deeply, including giving you evidence it's more effective (because using effective, [evidence-based training](#) practices is always a good thing) and giving you a variety of tips to think about blended learning and ways to design blended learning for your manufacturing workforce.

## Is Blended Learning Really Better?

First, let's look at three sources, all of whom have performed meta-studies (studies of studies), crunching data to find evidence that blended learning solutions including online training and instructor-led training leads to improve training effectiveness as opposed to training solutions that include just instructor-led or training solutions that include just online learning activities.

First, the US Department of Education.

"The difference between student outcomes for online and face-to-face classes—measured as the difference between treatment and control means, divided by the pooled standard deviation—was larger in those studies contrasting conditions that blended elements of online and face-to-face instruction with conditions taught entirely face-to-face." — US Department of Education

Next, the famous learning researcher Dr. Ruth Colvin Clark from her classic book *Evidence-Based Training Practices*.

“Evidence from hundreds of media comparison studies... suggest[s] that blended learning environments are more effective than pure classroom or pure digital learning...

And finally, the equally-famous and credible learning researcher Dr. Will Thalheimer.

“Overall, these meta-analyses found that eLearning tends to outperform classroom instruction, and blended learning (using both online learning and classroom instruction) creates the largest benefits.” — Dr. Will Thalheimer

You can learn more by listening to [our interview with Dr. Thalheimer on the effectiveness of different training delivery methods and blended learning solutions](#).

## Plus OSHA Requires Blending When Using Online for Safety & Health Training

The focus of this article is online training for manufacturing, so we're not going to focus on [safety training that occurs in a manufacturing facility](#) too much. On the flip-side, though, we'd be remiss not to bring it up at all, especially in reference to OSHA compliance regulations and a recent OSHA letter of interpretation regarding the use of online safety training.

After all, all of you US-based manufacturing organizations have to comply with OSHA's compliance requirements, including those that govern safety training requirements.

In the summer of 2019, OSHA published a letter of interpretation that clarified or expanded their past comments on using online safety training. In the past, with a 1994 letter of interpretation, they made it clear it was acceptable to use online safety training at work. In this 2019 letter of interpretation, they noted that while it's OK to use online safety training, it's not OK to use JUST online safety training--there must be some interactive, hands-on, person-to-person component of the training. So, in short, OSHA requires a blended learning solution.

To read more about this, check out our [article on the recent OSHA letter of interpretation regarding the use of online safety training](#). And feel free to check out our article on [selecting online safety training solutions as well](#).

## 4 Ways to Blend Manufacturing Training

We're going to follow-up with an article that goes into this in more detail, and we've already got this [Blended Learning for Manufacturing Training](#) article, and this free [Blended Learning Beginner's Guide](#) for you as well.



But here's a quick introduction to four ways to blend online manufacturing training with instructor-led training at your site.

### **Online then Classroom**

One way to blend your training is to have employees complete an online training course on a specific topic and then follow that up with instructor-led training or another form of face-to-face training that will allow you to demonstrate job tasks, see if employees can perform those same tasks safely and effectively on their own, provide feedback, and handle questions & answers.

In instances like this, it's common to use the online training course to introduce fundamental knowledge workers will need in order to understand and perform their job task. It's also a good way to provide a visual demonstration of the task, even if you later demonstrate it again during the classroom training.

This ordering of learning activities is often called the flipped model of instruction.

### **Online During Classroom**

As we all learned from a Reese's commercial, it's OK to mix your peanut butter and chocolate in the same time.

Likewise, it's fine to introduce online training into an instructor-led training session. In fact, you can get a lot of learning benefits out of this.

Not only does it break up the monotony of classroom session (this is always a hazard and it's always a good idea to use different types of learning activities and interactions in the classroom), but it also provides a great opportunity to bring some advance visuals, videos, and animations into the classroom and then discuss them as a group.

### **Online after Classroom (Training)**

You can also perform instructor-led training and then follow that up with online training for your employees. This model has a variety of applications, but perhaps one of the best is to use the online training in small, bite-sized "bits" delivered via mobile devices in what L&D professionals refer to as spaced practice or spaced learning (you may think of this as "refresher training," and you're on the right path, but it's a little more complicated than that).

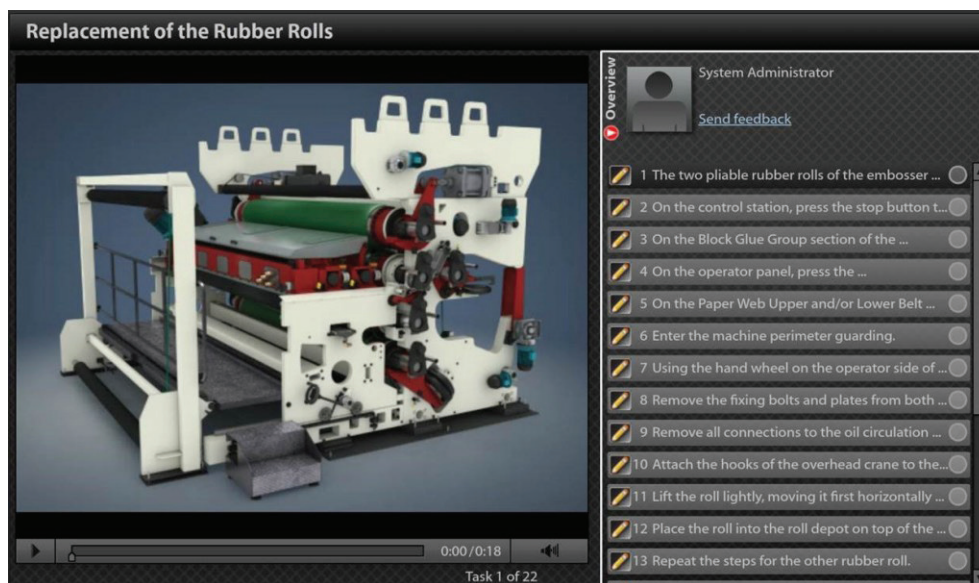
Click to read more about [the forgetting curve](#) and using [spaced practice](#), and again for an interview with learning researcher Will Thalheimer on [the benefits of spaced practice and how to use it](#).

### Online After Classroom (Performance Support)

You can also use online training, especially in that short, bite-sized length we just talked about, not strictly for training but for performance support after training.

If you're not familiar with performance support, think of it as getting information to workers when and where they need to use it on the job. You might know this as a job aid, and a checklist is a common example. But online training means you can deliver any number of things to the worker in the field at the moment of need, including short videos and online training courses.

Read more about [using job aids to improve worker performance](#).



The background of the slide is a grayscale photograph of an industrial setting. It features large, complex machinery with various gears, pipes, and structural components. In the background, two workers wearing hard hats and safety glasses are visible; one is pointing towards the machinery. The overall scene suggests a manufacturing or industrial environment.

PART X

# **FORMAL TRAINING AS PART OF ORGANIZATIONAL LEARNING**

# FORMAL TRAINING AS PART OF ORGANIZATIONAL LEARNING

Above, we gave you four ways to think about using online manufacturing training within a blended learning solution at your facility. However, there are more ways to think about this issue. To do so, let's take a broader look.

Although this article is about online manufacturing training, it's important to take a step back and think more broadly about all the learning and development efforts taking place at your organization. Although this term is admittedly a bit wonky, learning and development professionals often talk about this as your [learning ecosystem](#).

## Formal, Assigned Training

Learning and development professionals spend a lot of time thinking about, planning, delivering, tracking, evaluating, and perhaps continuously improving formal, assigned training at the workplace.

That might include instructor-led training and it might include the topic of this article, online training. It could also include other things--written materials, a video, or being sent to a conference.

It's common for manufacturers to use formal, assigned training for a variety of training needs. These include new employee onboarding, compliance training, job skills training, and more.

But it's important to remember that this formal, assigned training is far from the entire workforce learning and development reality, and that perhaps L&D professionals can become too narrowly focused on just formal training.

## Informal Learning

A LOT of what people learn about their workplaces, their jobs, and their job tasks happens outside of formal training in informal learning experiences.

This includes things we learn through experience on the job as well as things we pick up from our coworkers (social learning--remember we talked about this earlier). It can also include mentor programs and things like pre-task discussions (also called before-action reviews), post-task reviews (after-action reviews), shift-change discussions, and more.



Although you might not think of this immediately, learning and development professionals can do a lot to help facilitate this kind of informal learning at the workplace. And again, although this may not seem immediately obvious, there are online training tools, such as an LMS that allows for social learning (through features like discussion boards), the uploading and distribution of user-generated content, curation of external content for L&D, tools to help workers identify other workers who are subject matter experts on particular topics, and more that can facilitate this kind of informal learning as well.

### Management Guidance & Feedback

In theory, at least, regular (and helpful) guidance and feedback from managers is another part of the workplace learning ecosystem in a manufacturing facility.

While some managers do a great job of this, the reality is many managers don't have these skills or don't even think of this as a regular and important part of their job. In many cases, this is understandable, because those managers are neck-deep in their own job tasks and have little or no time to help their employees learn and better their workplace performance.

But this STILL is one part of the learning ecosystem, and even if managers aren't actively participating in it, workers are still learning at least some lessons from it (often negative ones, including the company values lack of communication and teamwork despite any "official" company values or statements to the contrary).

If you want your organization's performance to improve, and you would like to help employees increase their knowledge and develop better job skills, this may be one area to focus on.

### Performance Support

Performance support is a way to get information or learn skills right at the time and place where you need it on the job. Traditionally, this often been done with something like a [checklist](#), and checklists can still be great.

In some cases, this can now be done with [mobile devices](#), delivering short video snippets (or even digital checklists) as well as access to manuals and more.

Read more about [performance support and job aids](#) here.

The background of the slide is a grayscale photograph of an industrial setting. It features large, complex machinery with various gears, pipes, and structural components. In the background, two workers wearing hard hats and safety glasses are visible; one is pointing towards the machinery. The overall scene suggests a manufacturing or industrial environment.

PART XI

# **SOME WAYS TO THINK ABOUT FORMAL, ASSIGNED TRAINING**

# SOME WAYS TO THINK ABOUT FORMAL, ASSIGNED TRAINING

Given that you're going to want to use online manufacturing training at the correct times and for the correct training needs, it may be helpful to think of these three models to help you consider when to use online manufacturing training and when not to.

## 70/20/10

The 70/20/10 model refers to the idea we've mentioned earlier--people learn a lot from job experience (the 70%), less from their coworkers (the 20%), and even less from formal, assigned learning (10%).

Now, nobody knows the true percentages here, so don't take those seriously and don't throw out the whole idea just because of the numbers. In fact, some people have tried to rebrand 70/20/10 to 3Es (Experience, Exposure, and Education) to avoid that. But you'll probably admit there's a lot of truth to the general idea behind 70/20/10 and it may help inform how you spend your time and effort in regards to your organization's entire learning ecosystem.

Please read our article on [70/20/10](#) for more on this.

## 5 Moments of Training Need

Bob Mosher and Conrad Gottfredson developed the [Five Moments of Need learning model](#), and this is also a helpful way to consider your L&D efforts in general but also your use of online manufacturing training.

According to this model, there are--you guessed it--five primary moments of learning needs:

- When you're learning something for the first time
- When you want to learn even more
- When you need to learn to remember and apply
- When you need to learn when something goes wrong
- When you need to learn when something changes

Give these learner "moments of need" some thought when you develop your company's L&D programs.

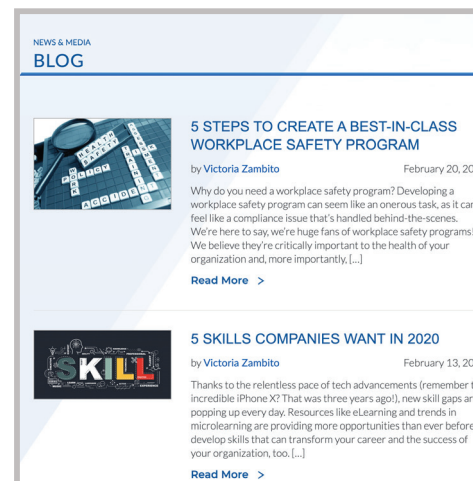
## Different Types of Training for Different Kinds of Learning

Another thing that's worth thinking about is that you may need to change the kind of training you deliver depending on what it is you're trying to teach an employee. In particular, different types of training will be more or less effective depending on if you're trying to teach employees:

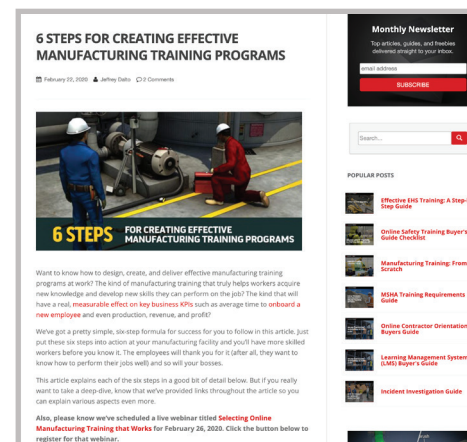
- Facts
- Concepts
- Processes
- Procedures
- Principles
- Far-Transfer

Please see our [Different Types of Training for Different Types of Learning](#) article for more on this.

### For more, see the [Vector Solutions blog](#)



### and the [Convergence Training blog](#)





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