



BLENDED LEARNING SOLUTIONS GUIDE

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WHAT IS BLENDED LEARNING?

Traditionally, blended learning has meant combining instructor-led training (ILT) with some form of online training, typically an elearning course.

More recently, learning professionals often use the phrase blended learning to mean any combination of different training delivery methods within a training program. So while a blended learning solution still might be a combination of instructor-led training and an elearning course, it could also be a combination of a PDF, an elearning course, a webinar or virtual classroom, and a discussion board (all of which the employee consumes online).

In this guide, we're going to follow this broader understanding of what a blended learning solution can be. In fact, we're going to broaden that even more by referring to some workplace performance improvement ideas that aren't training.



THE GOALS OF BLENDED LEARNING

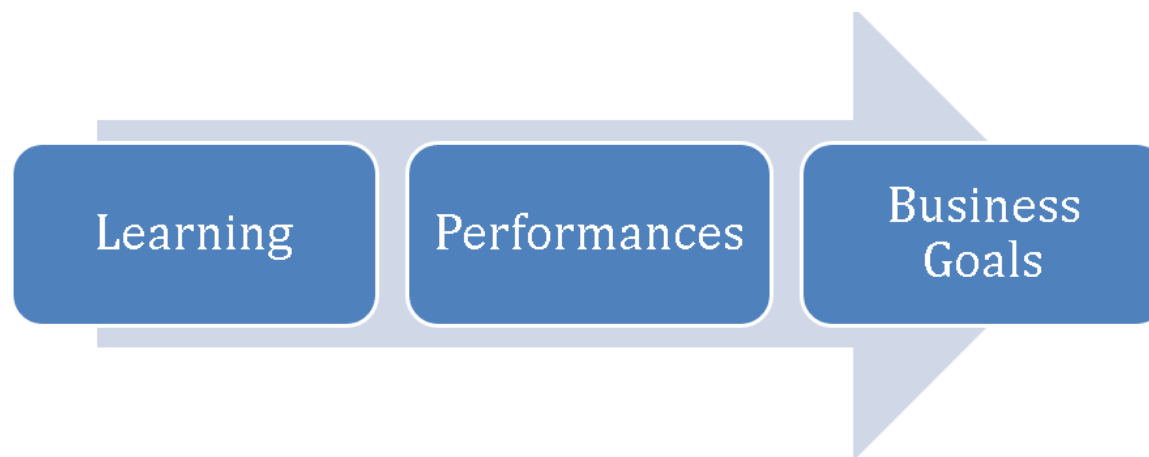
What is the ultimate purpose of blended learning or, to be more general, of workforce training?

Ultimately, it's to help our organizations reach or get closer to business goals. And it does that by helping workers develop skills and perform job tasks that help the business reach those goals.

Note that the ultimate purpose of job training isn't to teach people and it isn't to help them learn. Both of these may be part of the job training equation, but they're definitely not the end goal.

Keep this in mind when you're reading this guide and when you're designing your own blended learning solutions. Your end goal is to (1) help the organization attain business goals by (2) helping employees learn to perform tasks that move the organization closer to those goals.

So when you design your blended learning solution, you have to start with the end goals in mind—your learning and performance outcomes.



DOES BLENDED LEARNING WORK?

Before we go further and begin offering some models to consider when you design your own blended learning solution, we're going to explain if blended learning actually works in creating more effective learning outcomes (in this section) and provide a list of evidence-based training methods plus some great sources for learning more (in the next section).

First, it's fair to ask if blended learning solutions lead to better learning outcomes. And study after study suggests they do. Consider the following three summaries of meta-studies on the topic:



"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, Evaluation of Evidence-Based Practices in Online Learning*



"Evidence from hundreds of media comparison studies...suggest[s] that blended learning environments are more effective than pure classroom or pure digital..." – *Dr. Ruth Colvin Clark, Evidence-Based Training Methods: A Guide for Training Professionals, Volume 2*



"Overall, these meta-analyses found that eLearning tends to outperform classroom instruction and, blended learning (using both online and classroom instruction) creates the largest benefits..." – *Dr. Will Thalheimer, "Does eLearning Work? What the Scientific Research Says!"*

So the evidence is clear that blended learning programs lead to better learning outcomes.

WHAT IS THE BEST WAY TO BLEND?

So if you're now sold on the benefits of blended learning, the next logical question you might have is: "So what's the BEST way to blend training?"

But sadly, it's not that simple. There is no single best way to blend training for every training situation. Instead, you'll have to take a step back, consider what it is you're trying to do with your training in a given circumstance, and then pick the appropriate training delivery methods to create a blend that will help you with THAT training circumstance.

Then you'll do the same thing again when you're considering a new blend. And the answers you come up with may not be the same. But that's OK.

Just remember to start by thinking of the desired outcomes of the training: what are the organizational goals the training supports? What do employees need to learn to do after the training is over? What might they need to know in order to perform those skills? Then, ask yourself what learning activities will help workers develop these skills and then use those skills on the job in order to help the business reach those goals.

And the answer to those questions will tell you what the best way to blend is—that time.



EVIDENCE-BASED TRAINING METHODS

An evidence-based training method is something that studies and data have shown will lead to improved learning outcomes.

We've now seen evidence from learning researchers that blended learning solutions are one form of evidence-based training method. But learning researchers have identified other evidence-based training methods as well.

Before we discuss evidence-based training methods further, let's make a distinction that's important in discussing evidence-based training and is also directly relevant to discussions of blended learning: the difference between training delivery methods (or media) and instructional methods.

The training delivery method is how training is delivered—in a classroom setting with an instructor, through an elearning course, or during a live webinar, for example. By contrast, an instructional method is something that can happen during training regardless of the delivery method—a demonstration, an opportunity for practice, constructive instructional feedback, and so on.

It is not the training delivery method that makes instruction effective, it's the instructional method. Here's how one learning researchers explains it.

"Hundreds of studies have compared learning from classroom instruction with learning from the latest technology...a meta-analysis found...no major differences in learning from classroom lessons compared to electronic distance learning lessons...But wait...the basic instructional methods must be the same in all versions...that's because the psychological active ingredients of your lessons are what cause people to learn, regardless of what media you are using."

– Dr. Ruth Colvin Clark, Evidence-Based Training Methods: A Guide for Training Professionals, Volume 2

So in choosing your training delivery methods while designing a blended learning solution, don't fall into the trap of thinking one delivery method is automatically better than another. Instead, choose delivery methods because of their ability to let you include specific instructional methods that will help employees satisfy the desired learning outcome for the training.

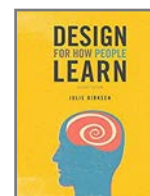
Finally, consider the list of evidence-based training practices below. This is not an entire list, of course, but it's a good start:

- Analyzing learners & their current knowledge before training
- Writing learning objectives
- Chunking
- Variation
- Awakening prior related knowledge
- Storytelling
- Conversational language
- Metaphors, analogies & similes
- Comparisons and contrasts
- Visuals paired with spoken words
- Brevity
- Examples & non-examples
- Demonstrations, practice & feedback
- Checking if learners have understood
- Reflection
- Elaboration
- Retrieval
- Testing
- Spaced practice

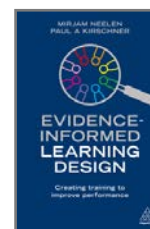
Because explaining each of these evidence-based training methods is beyond the scope of this guide, we encourage you to study up on this topic on your own and we offer the short list of excellent books below as a starting point:



[*Building Expertise: Cognitive Methods for Training & Performance Improvement*](#) by Dr. Ruth Colvin Clark



[*Design for How People Learn, Second Edition*](#) by Julie Dirksen



[*Evidence-Informed Learning Design: Creating Training to Improve Performance*](#) by Mirjam Neelen and Paul Kirschner

SYSTEMS SOLUTIONS & TRAINING

It sometimes happens that a “problem” (or opportunity) of one sort or another is identified at work and people quickly decide that training is the best or only solution to that problem.

But that’s not always true.

Yes, there are times when training is a good solution to help solve problems at work. But there are other times when training can’t solve the problem at all, or it can’t solve the problem as well as something else can, or it can’t solve the problem on its own.

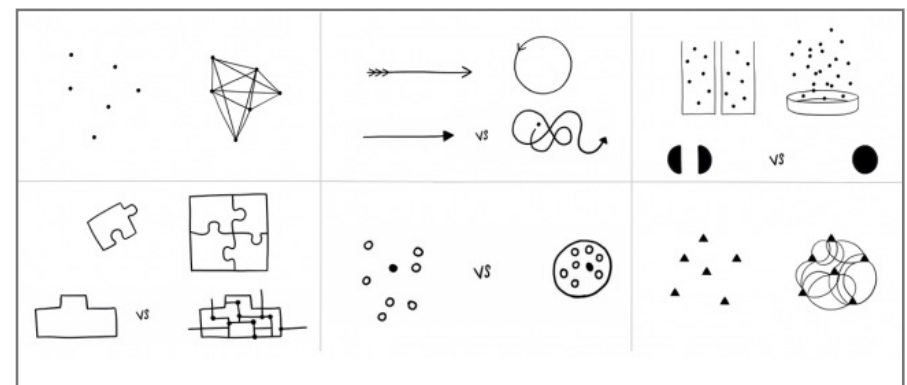
So before you sit down to begin designing any kind of training, be sure to analyze the problem and consider it within the entire workplace context (or system). Is this really a problem? If it is a problem, what’s contributing to it? And what is the best solution(s)?

You may find that training won’t solve the problem. For an easy example, telling people that smoking is dangerous rarely causes them to stop smoking, because they already know that smoking is dangerous. The knowledge you’d pass along

in training is knowledge they already have, and it most likely won’t lead to behavior change.

Likewise, you may find that training isn’t the best solution. For example, you can hold training sessions and teach people to not put their hand on that dangerous, sharp blade on a piece of equipment, or you can put a guard on the blade and remove the hazard entirely without the training.

So always start your training design process by analyzing the problem and seeing if training is an appropriate solution. In many cases, you may want to “blend” in some system changes along with your training.



SYSTEMS THINKING

THE 70/20/10 WORKPLACE LEARNING MODEL

The basic idea behind the 70/20/10 model of workplace learning is that people learn what they know at work from three primary sources:

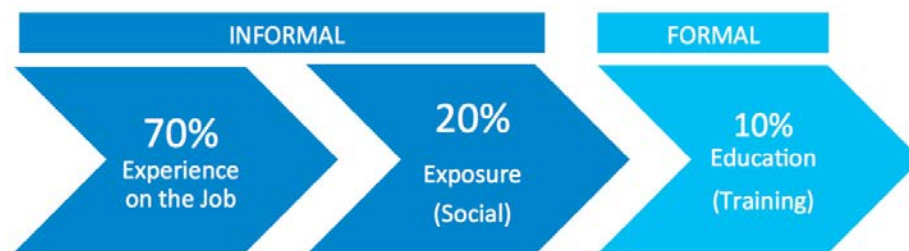
- Direct on-the-job experience
- Learning from coworkers
- Learning from formal, assigned training

The model is known as 70/20/10 because it was originally claimed that workers learned 70% of what they know on the job from direct on-the-job experience, 20% as a result of learning from coworkers, and 10% from formal assigned training. It turns out there's no solid data to back up those percentages, and as a result people have begun to re-name 70/20/10 to The Three Es (Experience, Exposure, and Education).

But if you ignore the issue of the exact percentages, and just

consider the basic idea, it will probably ring true to you that people learn a lot at work from direct experience and exposure to their coworkers. Would you agree?

If you do agree, then the next natural step is to realize that as a learning professional, you shouldn't focus all of your efforts on developing and delivering formal, assigned training to employees. In addition to your work with formal, assigned training, how can you help facilitate the processes by which workers learn from their on-the-job experiences and from their coworkers?



A LEARNING ECOSYSTEM

The idea behind helping to develop and foster a learning ecosystem at your workplace is similar to the idea behind the 70/20/10 or Three Es workplace learning model—people learn from many different sources at work.

The lesson for learning professionals, then, is to help create and nourish a learning ecosystem for people to learn, perform, and work in. Elements of a learning ecosystem include:

- Formal, assigned training
- Elective-based training
- On-the-job training (OJT)
- Spaced practice/reinforcement
- Performance support
- Mentoring and coaching
- Social learning
- Manager feedback
- Performance reviews

The more you can develop a robust learning ecosystem at your workplace, the more employees will learn and the more their performance will improve.



PERFORMANCE SUPPORT & TRAINING

Once you've analyzed the workplace problem and determined that training could be a good answer, ask yourself one additional question: how much of this problem could be solved with the creation of performance support, also known as job aids and workflow learning?

In some cases, such as when workers are required to memorize things, especially things that are long, complicated, or not used often, it's much easier to develop a job aid they can access at the time and place of need on the job instead of trying to train them to memorize it. In fact, your training can teach the workers how to access and use the performance support.

Common forms of performance support include checklists and manuals and, these days, online videos.

So consider creating a blend of performance support and training to help employees improve their performance at work.

PERFORMANCE SUPPORT



TRAINING



KNOWLEDGE & SKILLS

One consideration when you're designing your training blend is whether your goal is to help the workers acquire knowledge or to develop skills.

Now, you may remember that earlier in this guide, we mentioned that all job training should ultimately help workers develop skills (either cognitive skills such as calculating and decision-making or physical skills such as operating a machine). But it is true that sometimes pre-requisite knowledge is necessary in order to learn to perform a skill or in order to learn to perform a skill safely.

So if developing knowledge is your goal, you won't have to select a training delivery method that allows you to incorporate active learning experiences such as demonstrations, practice opportunities, and targeted feedback.

On the other hand, if you're trying to help employees develop skills, perhaps with the use of that pre-requisite knowledge, you'll need more active learning experiences and may need different training delivery methods.

Knowledge	→	Performance
Learn	→	Perform
Know	→	Do

TYPES OF CONTENT & DESIRED OUTCOMES

Another thing to consider when you're trying to select training delivery methods within a blended learning solution is the desired learning outcome.

Different learning outcomes can be more easily attained by using different instructional methods, and those instructional methods may be easier to embed into different training delivery methods.

For example, here are some different kinds of things you might want employees to learn during a training session:

- **Facts**—things that are true, such as “this is Machine X.”
- **Concepts**—individual items that are part of a group because they share a set of core elements, such as “all three of these are production lines.”
- **Processes**—understanding how a process works, such as “this is how we create our product at XYZ Manufacturing.”

- **Procedures**—how to perform a procedure, such as “this is how you start and operate the press.”
- **Principles**—a set of guidelines to apply, such as “given the principles of lean manufacturing, make the production process at ABC Motors more lean.”

Remember that earlier in this guide we stressed the need for creating training that developed skills and helped on-the-job performance. So while creating training to help workers acquire knowledge (such as facts, concepts, and processes) is sometimes helpful in teaching those skills, it should never be the end goal (instructional designers might consider that pre-requisite knowledge an enabling objective that leads to a terminal learning objective).

Here are some specific training techniques to match the five training needs listed above.

Facts—The human brain is inefficient at memorizing facts. When possible, create performance support (job aids) that workers can refer to when they need those facts on the job instead of creating training and trying to get workers to memorize those facts.

If it IS necessary to train workers to remember facts, use diagrams for concrete facts (for example, an image of a tax form with an arrow pointing to the part of the tax form the worker must remember); use tables and lists for data facts; ask workers to apply those facts during training in a manner that matches what they'll do on the job; use mnemonic devices to make it easier to remember facts; and, if all else fails, revert to drill-and-practice training, which can be done effectively with elearning.

Concepts—Concepts can be concrete, such as the concept of a chair, or abstract, such as the concept of efficiency. When training workers to understand concepts, ask them to restate the common characteristics and to identify things that fit into the concept. In addition, give a definition, examples, and non-examples. Analogies are effective for helping people learn to identify concepts.

Processes—You might train workers to simply understand a process or to apply their knowledge of that process into a job task (such as troubleshooting a flaw in your production line based in part on their understanding of your production process). When explaining processes during training, begin by defining necessary terms and facts, such as the name of the different parts of your production line. Use a combination of words, images, tables, diagrams, and charts. Present the process itself in some form of flow-chart or diagram that makes the order of the steps clear. And use images to represent the different steps of the process. Studies show that video can be very helpful in helping people learn and understand processes.

Procedures—When training employees to perform a procedure, explain the different steps or stages of the procedure, and also explain the steps differently for novices and experts; determine if it's a linear or a branching procedure and train accordingly; provide a clear explanation of the procedure (this can be done "live" or with video); demonstrate the procedure; allow employees to practice their performance of the procedure; and give employees feedback based on their practice performance of the procedure.

Principles—In training employees to employee principles, start by explaining the principles (cause-and-effect relationships that lead to specific outcomes) and guidelines (rules that help employees apply the principles) clearly. Provide demonstrations or examples of the guidelines being applied in different scenarios. Ask the employees what they see or notice about the application of the principles in your different demonstrations. Allow employees to practice applying the principles in different contexts or scenarios, let them see the consequences of their practice attempts, and give them helpful, supportive feedback.

For more on this, please see *Developing Technical Training: A Structured Approach for Developing Classroom and Computer-Based Instructional Materials* by Dr. Ruth Colvin Clark (this section was largely based on Dr. Clark's ideas in that book).

1. Facts
2. Concepts
3. Processes
4. Procedures
5. Principles

Credit—Dr. Ruth Colbin Clark

ASYNCHRONOUS & SYNCHRONOUS TRAINING

Another helpful way to think about training for a blended learning solution is to think about the benefits that synchronous and asynchronous training can provide.

To define our terms, asynchronous training is training that the learner completes on his or her own, and synchronous training is training that learners complete in a group, often with an instructor or facilitator present.

Both asynchronous and synchronous training have their own unique benefits (and drawbacks).

Asynchronous training allows a worker to take the training at a time that's convenient for him or her, to advance through the training at his or her own pace, and to feel free to practice and perhaps "fail" without worrying about doing it in public and feeling embarrassed. Additionally, asynchronous training activities are often training activities that the worker can refer to again later (such as an elearning course, a video, or a PDF).

On the other hand, synchronous training brings benefits of letting employees interact with the instructor during training as well as interacting with one another. This allows the instructor to judge understanding during training and to correct misconceptions as well as to participate in Q&As. Additionally, employees can learn from one another, either by sharing ideas and thoughts in an unstructured manner or by participating in group collaborative exercises.



THE FIVE MOMENTS OF TRAINING NEED

The “five moments of training need” model was developed by Conrad Gottfredson and Bob Mosher. The basic idea is that the following five moments cause employees to require training:

- Learning for the first time
- Learning more
- Remembering and applying
- When things go wrong
- When things change

Thinking of the training needs may help you determine the training delivery methods and instructional methods appropriate for each need. For example, we’ve included some thoughts below.

Learning for the first time: You can use just about any training delivery method for the initial learning experience. Focus on the desired learning outcome(s) and the instructional methods most likely to help bring about those learning outcomes.

Learning more: Advanced, scenario-based training may be helpful at this point; this can be conducted in face-to-face

role-plays or through elearning courses. Another consideration is that you can use microlearning courses delivered on mobile devices to help learners add additional small “chunks” of information to their initial understanding of the topic.

Remembering and applying: Microlearning, possibly delivered online, can help employees remember (by helping them combat the training “forgetting curve.”) And performance support, also known as workflow learning, is an effective way to help workers apply training on the job as they’re actually performing the job task.

When things go wrong: Online training, including training delivered on mobile devices, can be an effective way to notify a large number of workers when something has gone wrong. Likewise, online discussion boards and other methods of social learning, can be an effective way to (1) notice that something’s gone wrong, (2) inform others of the problem, and (3) create and share solutions.

When things change: Change often involves resistance, and people often want to understand the reasons for the change. Face-to-face, interpersonal discussions in a classroom setting or on a webinar can be an effective way to address this natural desire.

BUILDING A LEARNING CAMPAIGN

It's common to think of blended learning activities happening all at one time or within a relatively short, compressed time frame.

Another way to think of blended learning solutions is to think of how to build a learning campaign around a particular learning goal. This model, based on one developed by Arun Pradhan, is broken down into six different phases, as shown below.

Before Employees Perform the Work

- Engage
- Prime

As Employees Perform the Work Initially

- Apply
- Connect

After Employees Have Been Performing the Work

- Reflect
- Embed

Let's look at each of these more closely.

Engage—let workers know the training is to come and sell them on the “what’s in it for me? (WIIFM).”

Prime—deliver initial training (consider a “flipped-classroom” model if appropriate), explain big-picture mental models, provide an opportunity for practice and feedback in a safe environment.

Apply—have workers apply new skills on the job, provide performance support when helpful, create feedback loops to learn more.

Connect—help workers create learning teams and communities of practice so they can collaborate and learn together.

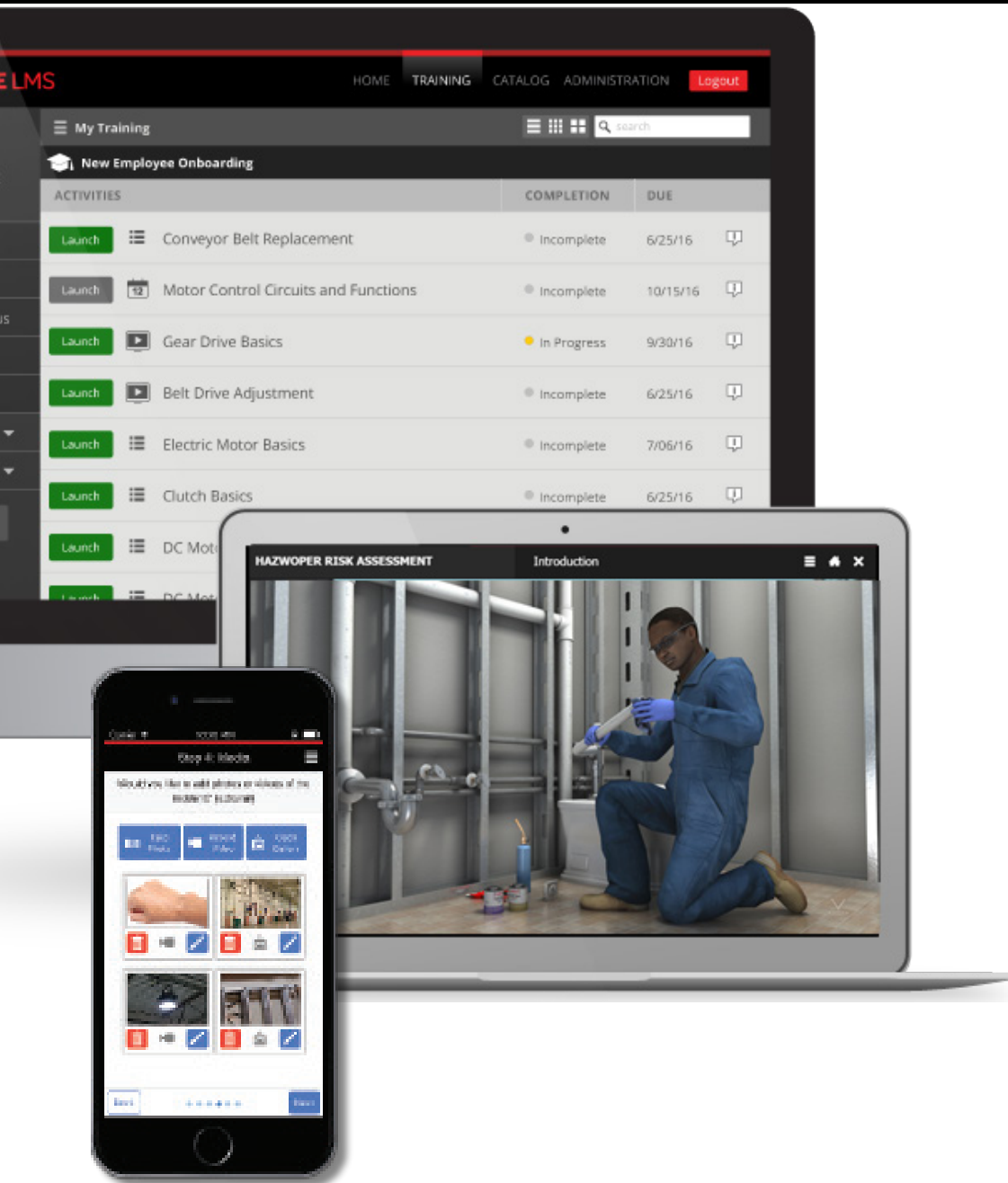
Reflect—at a later time, have employees get together with trainer and report back on the training and transfer to work performance, reflect on training and performance, sharing insights, consolidate and distribute what you’ve learned.

Embed—help workers establish habits and practices and provide support for their continued improvement.

CONCLUSION: BE INTENTIONAL WHEN DESIGNING YOUR BLENDED LEARNING SOLUTIONS

We hope you've found this guide to creating blended learning solutions that lead to desired learning outcomes and impactful performance improvements at work helpful.

Just remember to use evidence-based training methods and select different training delivery methods within your blends in an intentional manner focused on learning outcomes and performance improvement and you'll be well on your way.



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