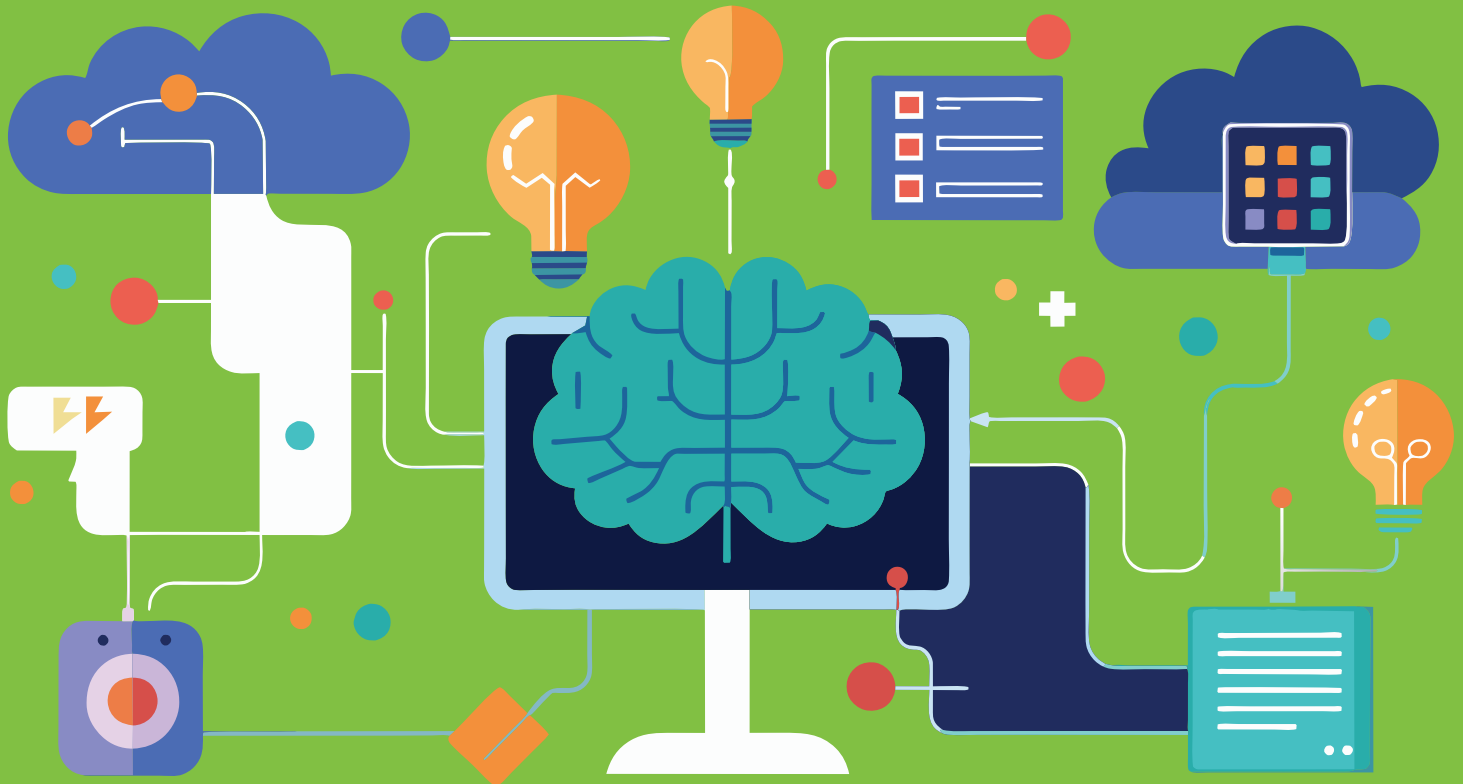


Instructional Design Captive Your Learners



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TD at Work Editorial Staff

Director: Sarah Halgas
Editor-in-Chief, Periodicals: Vanessa St. Gerard
Managing Editor, Periodicals: Rachel Pelovitz
Editor, *TD at Work*: Patty Gaul
Text and Cover Designer: Shirley E.M. Raybuck

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TRAIN THE TRAINER, 2ND EDITION

Instructional Design

Captivate Your Learners

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Focus on Moments That Matter in Employees' Learning Journeys



FOCUS ON MOMENTS THAT MATTER IN EMPLOYEES' LEARNING JOURNEYS

AUTHORS

Marek Hyla

Marek Hyla is the learning principal director at Accenture Poland, Strategy & Consulting.

Ariel Wrona

Ariel Wrona is a learning consultant with Accenture Poland, Strategy & Consulting.

Grzegorz Plezia

Grzegorz Plezia is a learning senior principal with Accenture Poland, Strategy & Consulting.

Natalia Kmieć-Braun

Natalia Kmieć-Braun is a learning and communications consultant with Accenture Poland, Strategy & Consulting.

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**Content Manager,
Instructional Design**
Jes Thompson

Editor, *TD at Work*
Patty Gaul

Managing Editor
Joy Metcalf

Senior Graphic Designer
Shirley E.M. Raybuck

Most industries today are increasingly putting humans at the center of their business approaches.

The L&D field is the same. Advances in instructional design and the adoption of design-thinking techniques have changed the way talent development practitioners develop and deliver training programs to best fit learners' needs. That timely shift is expected to bring substantial benefits by enabling TD professionals to continuously innovate with the future workforce in mind.

Several other fields have taken advantage of technological advances and other changes, such as an increased focus on the customer, to adapt how they do business. Marketing and sales are two examples, because professionals in those two industries meet their intended audience where they are, with the type of information they want, in a format they're familiar with. Other companies,

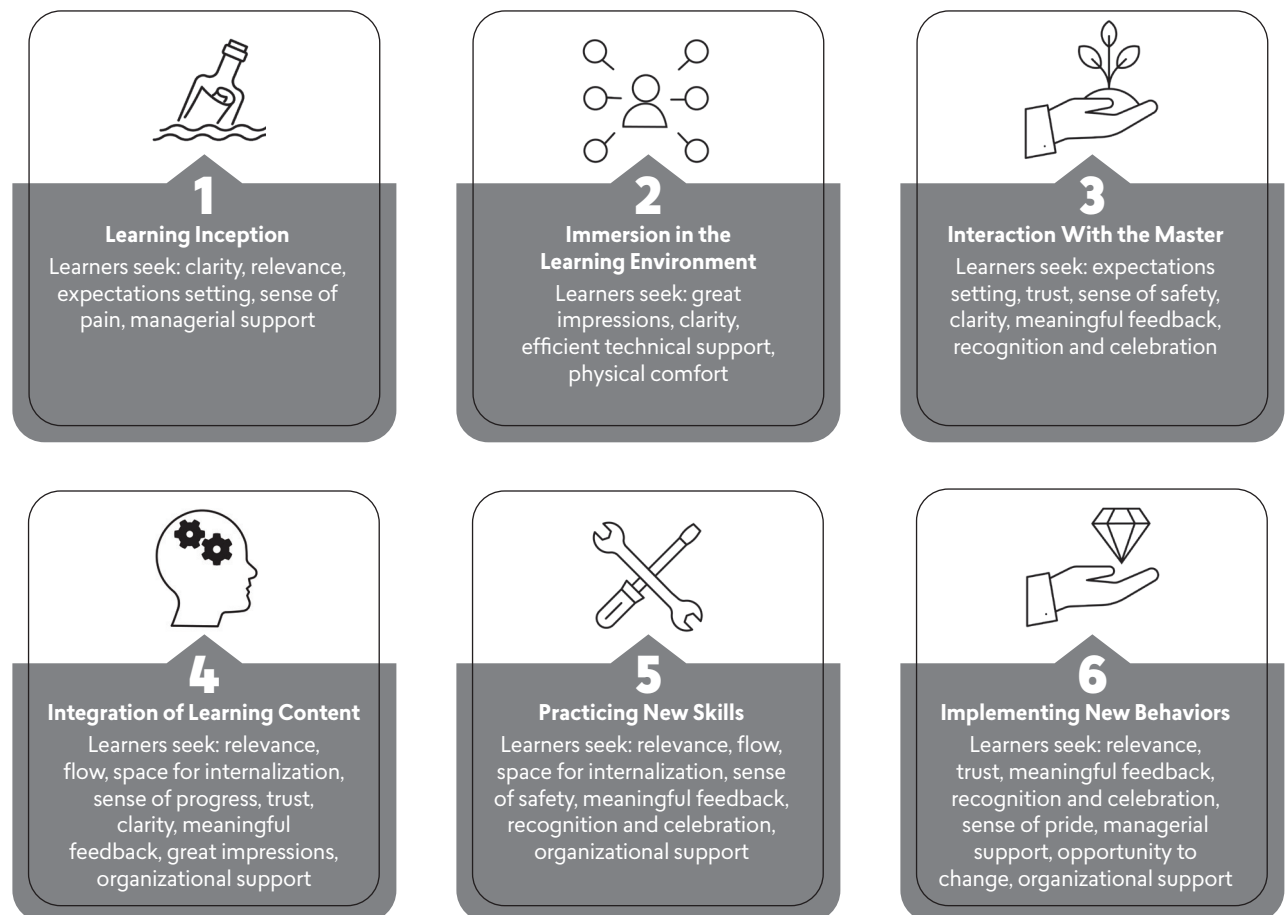
regardless of industry, have begun to liken staff to customers in an age where retaining staff means listening to them and keeping their needs front and center.

To put people at the center of learning, you can use the Moments That Matter in Corporate Learning framework that we created, which focuses on the combination of various learners' experiences. The moments—learning inception, immersion in the learning environment, interaction with the master, integration of the learning content, practicing new skills, and implementing new behaviors—are spread across the learning journey. Within each moment, learners seek or undergo specific experiences: relevance, setting expectations,

sense of pain, great impressions, clarity, efficient technical support, physical comfort, trust, sense of safety, meaningful feedback, flow, space for internalization, sense of progress, recognition and celebration, sense of pride, managerial support, opportunity to change, and organizational support.

Although not all moments and experiences will be part of every learning journey, account for them during the instructional design process. And know that you likely can't implement them alone. Line managers, executives, learning administrators, and peers must be involved to create a conducive learning space full of effective, positive experiences.

Figure 1. Moments That Matter in Corporate Learning Framework



Source: Accenture

In this issue of *TD at Work*, we will:

- Explain each moment and the individuals involved.
- Detail why each moment is important and how you can best create an effective experience.
- Suggest questions to ask learners along the way to create the best learning journey.
- Offer considerations that can facilitate or detract from learning.

Learning Inception

“The beginning is the most important part of the work.”

That well-known quote from Plato applies to every human activity. Without a proper start, individuals

will have to expend much more effort to achieve their goals. Or they may not be able to achieve anything. With L&D, starting properly means planning every detail and step you will take while preparing training programs for learners.

The learning inception moment onboards and prepares participants to start their learning journey. It involves activities that influence their motivation toward learning by creating a perception of meaningfulness of the entire experience based on relevance, timeliness, and instant applicability of new behaviors on the job. That is crucial because people who are part of a learning journey that starts poorly may transfer their negative feelings to the entire learning experience.

Figure 2. Learning Journey Experiences

Within each moment in the Moments That Matter in Corporate Learning framework, employees will have numerous experiences.

	Inception	Environment	Master	Content	Practice	Implementation
Relevance	X			X	X	X
Setting expectations	X		X			
Sense of pain	X					
Great impressions		X		X		
Clarity	X	X	X	X		
Efficient technical support		X				
Physical comfort		X				
Trust			X	X		X
Sense of safety			X		X	
Meaningful feedback			X	X	X	X
Flow				X	X	
Space for internalization				X	X	
Sense of progress				X		
Recognition and celebration			X		X	X
Sense of pride						X
Managerial support	X					X
Opportunity to change						X
Organizational support				X	X	X

Source: Accenture

Naturally, the learning inception is not a standalone entity. It is a complex set of experiences that may influence trainees during various stages of the learning event. To begin, set expectations. At the onset, clearly inform employees of post-training expectations and why they need the training course. Managerial support is critical in this first phase, because managers must conduct pretraining, have one-on-one conversations with staff, and provide workers with the necessary information to succeed. Likewise, involve the executive sponsor. They should share with employees and managers the learning expectations, such as employee practice, managerial feedback, and peer support.

Offer managers a template for developing a learning contract, which outlines expectations and how they as a supervisor will support their direct reports throughout the process. Through their actions, managers can influence staff's motivations and push for the desired results. Because the purpose of the training course is to change behavior, the manager's role is to ensure that trainees fully understand their positions and that they need to apply the new behavior in their everyday work.

When stakeholders correctly address those activities about the need for change, learners will encounter a sense of pain, which is a natural psychological reaction when they realize they are missing the necessary skills for their current job. They may feel pressure to upskill

to fully prepare themselves for upcoming tasks. That is a motivational experience—but only when the training program is relevant to their role. Adult learning works best when learners clearly see that learning is to the point and timely and covers topics that are readily applicable in individuals' work.

When all those factors are fulfilled and learners receive enough training and organizational information, they achieve a sense of clarity. That clarity is important, because when trainees don't know where to go, whom to contact in case of issues, or how to log into the training environment, they may feel lost and confused, which can undercut their motivation and engagement.

Key Takeaways

The first steps of the learning journey are crucial. However, e-learning provider Emerald Works' research shows that only 49 percent of learners have a clear and approved development plan, and as few as 30 percent of organizations have discussions of learning goals and outcomes with individuals before they start learning.

It's important to understand how the proper planning and managerial support during this initial phase influences learners' perception. Likewise, you should know what to do to make it feel right. That means having discussions and providing managers with tools and templates ahead of time and ensuring that learners

Supervisors' Role in the Learning Journey

Engaging supervisors or line managers is often the most neglected part of the learning process in the Moments That Matter framework. Along the learning journey, learners' supervisors play a crucial role in four main ways:

- **Clarity.** This is built when the supervisor and learner meet to discuss the context of the training course before it starts.
- **Set expectations.** During this first meeting, both sides should agree on the training or learner contract, which ensures that the learner is aware of the purpose of the training.
- **Manager support.** Throughout the journey, a constant level of managerial support is needed so the learner understands how they will use their new skills and can properly address potential challenges related to implementing new behaviors on the job.
- **Opportunity to change.** It is the supervisor's responsibility to create an environment that will support the learner's behavioral change.

What happens if supervisors don't support their learners in those ways? Employees could lose interest in the training, may not know how to use their new skills in their daily work, or resort to old behavior.

understand the reason for the training course before they start it.

The learning inception is a cornerstone not just for the first steps but for the whole training program. The executive sponsor should be visible early in the endeavor, emphasizing the importance of learning to employees, the team, and the organization. Provide communication templates for email, a newsletter, and speeches for leaders.

Questions to Ask Learners

As you work to improve the learning experience and the individual moments of need, check in with learners during the learning inception to see how everything is going and what needs they have. Ask them:

- How does your manager show that they care about your learning?
- How are learning expectations communicated to you?

Immersion in the Learning Environment

You're likely familiar with the saying "You never get a second chance to make a first impression." The learning experience is no different. Either you win over your participants from the beginning, or you lose them more quickly than it took them to sign up for the course. It doesn't matter what extras you provide learners if the valuable, relevant content is not there. Secure the right content, and everything that surrounds the training course will come into play with great force. A good mix of learning environment elements can significantly empower and support learners' efforts, provided that they're properly introduced to the whole learning experience.

The learning environment extends beyond the physical space you secure for the training course or a learning platform available for self-learning. It encompasses such aspects as participants' impressions of the learning space, the clarity of logistics, learners' ability to solve technical issues, their physical comfort during the learning process, and even the choices of food during a break.

For learners to have a positive impression of the learning space, think about all components that constitute the learning solution, such as training communications,

learning materials, venue, catering, and logistics. Prepare and deliver the training with care and on time; and meet the expected quality standards. The trainer or facilitator is another essential factor in this stage. That individual can either make or break participants' impressions. During a face-to-face training program, the trainer's personality and their ability to build rapport with learners and shape positive attitudes toward the course are critical for overall success. Building rapport with learners in a synchronous virtual classroom is possible but can be more challenging for trainers initially.

Additionally, in the case of online training, efficient technical support is vital. It is difficult to avoid all technical issues because you may not know up front whether all devices and technologies are working properly. Technical issues can negatively affect the learning process, especially if you do not address the problems immediately. Technical glitches can erode learners' interest or drive them to abandon the course all together. Ensure that the infrastructure works well and that you have adequate support available to solve any issues quickly before or during the training program. Have an IT staff member available to help during synchronous training. Involving a producer to aid during an online synchronous course also can be helpful; the person can watch for any trainees who may be having difficulties and troubleshoot the problem.

When choosing a venue for in-person training, consider the ergonomics and proxemics—spatial aspects—of the place. Arrange the classroom and equipment in a way that provides physical comfort and supports focus, because a training course is most effective when it takes place in an environment with no or minimal distractions to the learning process. However, don't confuse physical comfort with the comfort zone that participants need to step out of to enter the growth zone and allow learning transfer to take place.

Further, the learning journey does not start and end with the training course. To avoid such an incorrect impression, design support activities—such as pre-work, a community of practice, performance support materials, and follow-up sessions—around the learning event, and decide which features of the broader learning environment to activate. Although we won't delve

deeper into those particulars in this issue, many helpful resources are available with additional guidance. See the References & Additional Reading at the end of this issue.

Clarity is likewise critical to building motivation. It reflects how well informed learners are about all operational aspects of the learning experience. To enhance clarity, provide participants with relevant information ahead the course, such as what to expect from the course and prework, and secure references and resources for post-training, including job aids and people to contact in case of problems.

For learners to have a positive impression of the learning space, think about all the components that constitute the learning solution.

Key Takeaways

According to “The Impact of Practicing Reaction and Learning in Theory of Kirkpatrick for Training Evaluation,” up to 95 percent of organizations focus their learning evaluations on impressions by checking Kirkpatrick Level 1 (reaction). For the overall experience to be effective, learners need to perceive the learning environment as being well organized, free from distractions, and having a reinforcing focus.

Of course, measuring and relying on participants’ overall impressions is not enough to make the learning effective or to deliver any direct business value. However, the experiences related to the learning environment can contribute to higher levels of motivation and to learners’ ability to absorb new knowledge and skills. For example, if the temperature of a training room is too hot or cold, learners won’t be able to focus on the material. Similarly, if they eat a heavy meal at lunch or don’t have the opportunity to take breaks to stretch, their minds will wander.

Questions to Ask Learners

To gauge participants’ reactions about the training environment for future improvements, ask them:

- What are your first impressions of the learning environment?
- What makes you feel comfortable in the learning environment?
- In which ways were you supported with your learning-related issues?

Interaction With the Master

This moment in the learning journey establishes and sustains mutual trust. Note: “Master”—or trainer—is now a role rather than a position. Many individuals can play that role, including line managers, peers, or even customers. Learners need to trust the training process and their trainers, but they also need to trust themselves as a key player in the learning journey. Smooth interactions based on trust naturally occur in safe learning spaces, where people are not judged for what they share or whether they were equipped with all relevant information in advance.

Prior to starting any learning activity, it is important for learners to have a clear understanding of what they are expected to do and the results they are expected to deliver after training. The trainer should look for the right ways to convey the business objectives and to set expectations about why, when, and how the knowledge transfer will take place, and they should put a particular focus on explaining how to convert new skills into new behaviors (what to do and what not to do after the course).

Once expectations and ground rules are set, learners seek trust—in the training process and with the trainer. According to “A Study of Best Practices in Training Transfer and Proposed Model of Transfer,” 73 percent of learning transfer is dependent on the trainer’s upskilling capabilities, professional skill set, and code of conduct. Trust is a multilevel experience that can be gained or lost at any point in the learning journey, and it’s closely related to a sense of safety. One of the ways in which the trainer can help participants feel safe is by guiding them to understand that *FAIL* is an acronym for first attempt in learning—that it’s OK to make mistakes, because that is integral to the learning process. Clarity is likewise closely linked to a

sense of safety. As noted earlier, learners need to be well informed about all operational aspects of the learning to avoid diminishing their motivation and engagement.

Learners also need to receive meaningful feedback, ideally from those familiar with the detailed training goals. That's where the trainer steps in. The interactions between the learner and trainer are based on a mix of attitudes, behaviors, and cognitive elements that build and intertwine throughout the training, evoking a set of experiences that in turn affect the emotional and motivational aspects of the learning experience.

The problem, as Jeanine Prime and Brian Kropp write in the article “It’s Time to Stop Training Managers to Give Feedback,” is that 82 percent of employees believe that their managers lack knowledge about their work. At the same time, learners expect meaningful feedback, which helps them improve their performance. With that discrepancy in mind, we can’t stress enough how crucial feedback is in the training process and that it’s best given by someone familiar with the training goals, trainees’ progress, and the training program.

Upskilling is an investment that can bring direct benefits to employers and provide employees with real value. Despite that, only 25 percent of workers are recognized for their learning achievements, according to *Back to the Future: Why Tomorrow’s Workforce Needs a Learning Culture*. For learners to feel appreciated, they need to see their efforts and achievements recognized and celebrated. Recognition is best when done publicly, so classroom training is more conducive to that than other formats—for example, it may be more challenging to recognize completion of an online, self-directed course than it is to acknowledge efforts in a facilitated in-person course.

Key Takeaways

Most people—as learners, trainers, and supervisors—have been told many times that to grow, they have to step out of their comfort zone. That sounds so simple, and you may be tempted to push learners into that unknown, uncomfortable place to help them grow. However, you should not do so lightly. The line between people feeling uncomfortable and feeling

Case Study: Integration of Learning Content

Use simple approaches to create the positive experiences in the Moments That Matter in Corporate Learning framework. Consider this case study. Recall from Figure 1 that for integration of learning content, learners seek relevance, flow, space for internalization, sense of progress, trust, clarity, meaningful feedback, great impressions, and organizational support.

For a recent learning project, we amplified relevance by leveraging the 3J approach—learning that is just in time, just enough, and just for the learner. We supported that in the learning management system by color-coding the learning content for specific roles within the organization. Then, we carefully crafted all training materials—regardless of their complexity—both from the visual and structural side to build great impressions.

Next, to provide clarity, we developed short self-learning materials in the form of videos and knowledge pills. We also made sure that the flows of the business processes were reflected in the flow of the

training course. Additionally, to provide a space for internalization, we designed, developed, and introduced to the classroom training portion pen-and-paper games related to calculations dependent on specific processes, which helped the learners implement new skills.

In the learning project, we embedded time for participants to reflect on their individual experiences and the experience of completing the project with other teams. What’s more, for learners to build a sense of progress, we started the learning journey with a self-assessment of competencies and then provided opportunities for interim and final testing, which gauged their learning performance and maintained high motivation.

Finally, we showed appreciation of the learners’ effort with branded, beautifully designed virtual badges available in the LMS and sharable through social media. We recognized and celebrated their upskilling successes both internally and externally.

disturbed, which blocks them from taking on any development actions, is thin.

The positive and motivating—or trust-based, safe, clear, meaningful, and rewarding—interactions with a trainer create learning experiences that help participants move from their comfort zone to the growth zone without stepping into a panic zone.

Questions to Ask Learners

To assist learners as they interact with a trainer—whether a facilitator, manager, or peer—pose the following questions. Use their answers to continue to improve the training course as well as managerial skills and the organizational culture from the learning perspective.

- How do you feel when you're interacting with a well-prepared trainer who is an expert in their field?
- How can the trainer build a trust-based and safe learning space for you?
- What makes your relationship with the trainer conducive to efficient learning?

Integration of Learning Content

How many times as a learner have you looked forward to a new training program only to discover a short time into the program that it won't be a pleasant experience? Many factors contribute to such disappointment: bulky slides with no illustrations; intricate terminology without explanations; a distorted learning flow; chaotic communication from trainers, peers, and line managers; or the “curse of knowledge,” which is a trap subject matter experts can easily fall into because they understand the material so well but overlook that learners do not.

Sometimes trainers forget how important the learning content is to the entire learning solution's success. Great training materials are much more than good-looking slides or errorless system simulations. They need to be designed from the beginning with the intention to make a big impact on learners. Carefully craft effective, digestible learning content that doesn't overwhelm participants with disproportionate cognitive load but is also challenging enough to maintain their focus and emotional investment. Additionally, allow time and space for reflection after each aha moment.

Upskilling is an investment that can bring direct benefits to employers and provide employees with real value.

The foremost objective behind the integration of learning content is to make it relevant for learners. Provide real-life business cases, and tailor content to specific work groups within the company. Vary how you present the content, such as via storytelling, simulation, and role playing. Make material applicable to trainees' daily work, which can increase their motivation toward the learning efforts.

Next, ensure learning content is clear and to the point. Clarity translates directly to learning content's effectiveness and usability. Likewise, build in a proper flow to the learning materials' difficulty level—if attendees receive content that is too advanced or difficult for their skill level, they may feel anxious and insecure. In contrast, if the training materials are too easy, participants can feel apathetic and bored. To strike a balance, know participants' skill levels, and gradually increase the difficulty of training exercises. Facilitate initial conversations with learners and managers, and use assessments to discover participants' skill levels.

To maintain an appropriate flow, give learners enough space to internalize the content. Avoid overloading them with too much information in a rush to meet learning objectives within tight time frames. Allow them time to digest new knowledge and reflect on it after every milestone or module. A good practice is to divide information into smaller chunks and introduce them in a logical order.

By designing learning content with those principles in mind, you will provide learners with a sense of progress where they can determine, at any given moment, how far along they are on the learning journey. Create checkpoints—such as knowledge checks, quizzes, and games—and provide feedback so learners know what

they are doing right and in which areas they still need to work to reach their learning target.

Key Takeaways

Training content and efficient integration are critical to the learning experience. According to Emerald Works, only 9 percent of organizations use diagnostic tools to tailor learning to learners' individual needs, and 26 percent of organizations do not provide attractive, high-quality digital content that supports their business goals. To make a deep and lasting impact on learners, remember how training content influences the entire learning experience and what to do to make the content easily digestible.

Questions to Ask Learners

To make the learning journey effective for individuals in terms of the learning assets you create for them, consider posing these questions either as you pilot a new experience or periodically to continue to improve existing training.

- Are you receiving high-quality learning content?
- How is the learning flow aligned with your skill level?
- Do you have enough space and time to internalize the learning messages?

Practicing New Skills

A growth mindset and opportunities to learn from mistakes are essential to the learning process. According to the Middlesex University's Institute for Work Based Learning, 74 percent of workers said that they aren't achieving their full potential at work due to a lack of development opportunities. The greater the training program's focus on learner opportunities to practice new skills, the higher the odds that they will transfer those skills into their day-to-day jobs. Don't assume that individuals know their growth needs and are willing to try new things. Establish an environment where it is acceptable and encouraged for participants not to get it right the first time. A sense of safety comes with an emphasis that it's OK to make the mistakes that are integral to the learning process, even though that doesn't feel comfortable. Accompany their efforts and failures with moments of recognition.

Training exercises should be relevant—ideally based on scenarios related to learners' jobs—and appropriate

to participants' skill levels. Experts and beginners have different needs for upskilling, especially in terms of content and technique. That means personalization is key to designing training activities. Further, give participants ample time to practice and learn from feedback. It seems obvious and yet, as Emerald Works reports, only 7 percent of organizations encourage and provide time for reflection that is required for new knowledge to sink in.

Key Takeaways

American professional baseball player Yogi Berra said, "If you don't know where you are going, you'll end up somewhere else." That statement reinforces the need to reserve time for learners to practice and receive guidance so that training solutions can bring real value to them and the business. For longer learning journeys, include many practice points along the way; for short training events, plan post-training activities to consolidate the knowledge and supplement that with skills practice.

The more controlled and supervised the practice is, the higher quality feedback others can give learners, which will increase their motivation, confidence, positive feelings, and commitment toward the upskilling process.

Questions to Ask Learners

To improve the effectiveness and experience with practice opportunities, ask learners:

- How is practice incorporated into your learning journey?
- How do you practice new skills in the flow of your daily work?
- At which points of the learning journey has feedback been most meaningful to you?

Implementing New Behaviors

The goal of the learning journey is to change an individual's behavior. Of course, the whole learning experience is not entirely dependent on the learner, because many other elements are involved as well as people who may influence the learner's performance. Such external factors have a significant impact, especially during the last moment of the learning journey: implementing new behaviors. Unfortunately, people responsible for

supporting the successful implementation of learning outcomes in the workplace often overlook this phase.

A well-designed learning journey factors in not only what happens during the knowledge transfer and the skill-building part of the training program but also what happens after learners leave the classroom and resume their work.

Supervisors, managers, leaders, and peers can help individuals implement what they learned during the training course. For that to happen, those people must be able to properly adapt to and accept the necessary associated changes. That may include giving learners time and space to implement their new knowledge and behavior with full managerial support. All involved should work to create a supportive learning culture within the organization.

In the hectic pace of work, managers often lose sight of the target outcomes of their direct reports' learning experiences. The manager's role, however, is critical post-training. They need to ensure that the business benefits from the employees' upskilling—or else training is wasted time, cost, and effort. And a byproduct is reduced employee motivation and engagement.

Remind managers to meet with their direct reports to reiterate the importance of the learning, provide feedback regarding recent endeavors to practice, and state expectations for newly gained skills. Such actions build relevance by demonstrating the value of the employees and their new skills to the company. That continues to foster trust between the manager and learners. Share with managers why this step is important in the learning journey and how they can have conversations with direct reports. For example, nudge managers to schedule conversations, and provide a list of questions to ask employees about the new skills and putting them into practice.

Relevant organizational support is needed in this final stage. That support is amplified when a culture of learning flourishes in the organization and when employees are encouraged or self-determined to learn. Senior leaders can create a welcoming environment where they share a clear vision about organizational learning and where employees feel responsible for their own growth.

Staff who are incorporating what they've learned into their daily work may encounter resistance from colleagues, the environment, internal processes, or their

manager. If left unaddressed, that can discourage employees from continuing in those efforts and from fully engaging in the next learning process. Managers must investigate and act whenever needed to support learning implementation. Work with managers from the start of the learning journey so that they understand the importance of this final stage and have the tools to uncover barriers.

Remember, too, that training helps people be more relevant in their field and brings visibility to their efforts. Emphasize that by encouraging recognition and celebration—publicly when possible—of the learners and their success. For example, a manager could send an email to the whole team explaining why the training was so important, or colleagues could gather in an open office space and give the learner a round of applause. When done properly, learners will garner a sense of

Learning From Salespeople

L&D professionals can learn a lot from how salespeople treat customers in a way that leads them to repeatedly purchase products or services. Just as the key to sales is focusing on customer experience, L&D professionals should put greater effort into creating superior learning experiences.

Start by asking yourself sales-inspired questions:

- Similar to customer retention, why and where are we losing learners along the learning journey?
- As with customer satisfaction, how can we make the learning experience more memorable and effective?
- Like cross-selling and upselling, how do we find motivational bridges between various learning events?

Leverage the Moments That Matter in Corporate Learning framework to create training programs that make a deep and lasting emotional impression on learners. Those moments can either be positive (improving the experience) or negative (hindering the experience). They have the power to amplify or hinder learners' motivations and engagement. Therefore, create positive experiences around learning and reduce negative ones.

pride, which is essential for their motivation to take on new challenges and learning efforts.

Key Takeaways

According to an Emerald Works study, only half of learners feel that their direct supervisor supports them in the application of learning in the workplace. Implementing new behaviors is a complex process, and people involved in that are sometimes not aware of the important role they play in an individual's success. To reap the full benefits and ensure employees' efforts matter, everyone in an organization must support learners after a training program.

Questions to Ask Learners

To improve the organizational environment around upskilling, uncover the barriers learners are encountering when putting their new skills to practice. Ask them:

- How does your manager support you in adopting and applying the new skills?
- In which way does your manager demand new behaviors from you?
- Is your team and the organization supportive of knowledge sharing and peer-to-peer learning? What could we do better?

See Learners as Customers

The logic behind the Moments That Matter in Corporate Learning framework seems straightforward—when any of the described experiences are bad, learners lose motivation. When those experiences are good, learners want to learn and grow more. Let's look at that more closely.

Engagement amplification versus engagement reduction. Research related to customers' behaviors shows that the effect of negative experiences is too strong for them to be easily outweighed by positive experiences. The same can be said of learners. What's more, if people experience something bad, they are more likely to share it with others. Although we haven't researched it, we presume that is analogous in the learning space. As such, focus on removing negative experiences from the learning space to avoid the detrimental outcome on learners' engagement and motivation.

Satisfied learner versus delighted learner. There are two scales of customer happiness. The first is the satisfaction scale, in which one bad experience decreases satisfaction. The second is the delight scale, where positive experiences increase delight. A single experience can influence both scales simultaneously. For example, you deliver a visually compelling, interactive 360-degree video in a virtual reality training session, and learners uncover critical subject matter-related errors. In that situation, the delight level may increase because of the attractive content but satisfaction decreases because of the errors.

What individuals value versus what they have.

People often view previous situations as how things are and will be. For example, if learners have had bad learning experiences, they consider low quality a standard. It won't take much to improve their satisfaction and delight. After you make an improvement, they will become accustomed to the present situation as the current state and require that to remain engaged. Once you start improving standards, don't stop or reduce your efforts, or you will trigger learners' demotivation and disengagement.

Conclusion

When we first started to work on the Moments That Matter in Corporate Learning framework, we were not aware of the complexity of this space. Corporate L&D is not solely about a training course and the trainer and learners' interactions. Behavior change is the reason for L&D, and that requires preparatory work and learner understanding about the reason for the training program, support from numerous individuals, many post-training steps before true behavior change takes place, and recognition and celebration to foster intrinsic motivation.

Although we managed to create a detailed framework that consists of six moments and multiple experiences, we recognize that there are many additional layers of intriguing insights that you could derive from this concept, such as those that align with customer behavior. The learning journey is a process that continues to evolve and improve.

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Moments That Matter Checklist for Instructional Designers

Use this checklist as you design or re-evaluate the learning journey for employees to develop the best training assets, environment, and support for them. Note that some of these experiences overlap.

Experience	
Relevance	☐ Translate business objectives relevant to a specific target group of employees into learning objectives, and use those objectives to shape the learning experience. ☐ Understand the target audience's learning needs; prepare the learning process corresponding to those requirements. ☐ Make the audience aware of the importance of the learning process on different levels—individual, group, and organization; have supervisors and executives convey that message.
Flow	☐ Allow learners to skip the parts of the training program that they are competent in; allow them to control the increase in the level of challenge in the learning process. ☐ Provide learners with tools and information that will help them gauge their progress in the journey to competence; leverage those to motivate them in their next learning efforts. ☐ Leverage immersive learning techniques; consider amplifying them with digital solutions such as games, simulations, extended reality, and social learning.
Space for internalization	☐ Divide the learning process into chunks, and incorporate activities—such as time for reflection, summarizing, sketching, mind mapping, and visualization—that will help learners make connections. ☐ Conclude each session with an implementation task that reinforces the corresponding learning objective; provide mechanisms to verify results. ☐ Incorporate time for learners to discuss with their peers and supervisors what they have learned.
Sense of progress	☐ Design mechanisms for communicating and visualizing learners' progress throughout the learning journey so they can see how they've progressed. ☐ Create checkpoints that provide learners with a space for reflection about their competency improvements. ☐ By the end of the training event, provide an opportunity to test and certify learners' capabilities.
Sense of pain	☐ Build a sense of pain by sharing insights from the skills gap analysis with learners and their supervisors. ☐ Ask supervisors to discuss with learners how specific skills gaps affect their individual performance; provide supervisors with a template for the discussion. ☐ Ask supervisors to discuss with learners how closing the skills gaps will help them on the job and in the market; ask them to unpack the value of the training course to learners from a career perspective.
Sense of pride	☐ Ask supervisors to discuss with learners their aspirations that completing the learning process will support; provide supervisors with a template for the discussion. ☐ Ask the executive sponsor to justify at the beginning of the process and recognize at the end the value of building the new competency in general communications and individual messages to learners. ☐ Incorporate into the learning path the gamification rules related to the learning project; keep learners informed about their progress during the project.
Sense of safety	☐ Leverage simulations and virtual space to create a safe learning environment; allow learners to experiment and learn from their failures in a comfortable setup. ☐ Provide specific, timely, meaningful, candid, goal-oriented, and process-focused feedback to create a comfortable learning space that supports and facilitates improvement. ☐ Discuss with supervisors how they can contribute to building a conducive learning environment; ask them to openly communicate their expectations related to learning with employees.

Moments That Matter Checklist for Instructional Designers (Cont.)

Experience	
Trust	☐ Build clear communication around the learning journey, and make sure it reaches all involved; make sure that the logic behind the learning and how it supports the learning and business goals are clear. ☐ Use principles of adult learning—autonomy, learning by experimenting, relevance, problem-centric learning, and self-motivation—while designing and delivering the learning process. ☐ Let learners take responsibility for their own development within the process; make them aware of that responsibility.
Great impressions	☐ Create high-quality training materials and content; provide well-prepared, professional, empathetic trainers. ☐ Ensure a great learning experience as it relates to the learning environment, such as training venue, training room, learning management system, and learning experience platform. ☐ Ensure positive final impressions, such as a visually appealing certificate or badge, a handshake from trainer or supervisor, or a thank-you note upon completion.
Meaningful feedback	☐ After each exercise, include space for clear, specific, and timely feedback for learners. ☐ Create opportunities for learners to use their new skills and behaviors on the job with a skilled person shadowing them; ask the shadower to provide instant positive or corrective feedback. ☐ Encourage supervisors and peers to provide feedback to learners if they witness them using new behaviors on the job; help grow the culture of feedback in the organization.
Recognition and celebration	☐ In the learning design process, include recognition moments to show appreciation of learners' efforts, such as badges, levels of capability, e-mails, and information about progress sent to supervisors. ☐ Prepare recognition tools—such as certifications, certificates, badges, completion notes, points, and a hall of fame—for completion of specific parts or the entire learning journey for the whole cohort or individual learners. ☐ Encourage and help supervisors indicate their verbal or written appreciation of learners' progress during the learning process and after its completion; prepare templates and set up triggers to alert supervisors to relay that appreciation.
Clarity	☐ Provide supervisors with details about the program, including the goals and business outcomes, and ask them to meet with learners and discuss the training program's context. ☐ Clearly communicate to learners the rules, including access, registrations, prerequisites, schedules, deadlines, and costs; update that information on an ongoing basis as needed. ☐ Use clear and simple language in all training-related communications, and be mindful of nonnative speakers. ☐ Provide contact information in case of questions, and keep the response time short.
Efficient technical support	☐ Reduce the need for technical support—that is, design the learning program using a tried and tested learning environment, including the learning platform and technical tools. ☐ Set up IT and administrative support for the learning project; agree with support personnel on a reasonable level of turnaround time. ☐ Analyze feedback from learners on an ongoing basis; modify your approach based on lessons learned by implementing changes and improvements.

Moments That Matter Checklist for Instructional Designers (Cont.)

Experience	
Physical comfort	☐ For face-to-face training courses, secure a usable, accessible, and comfortable learning environment, such as a quiet, well-ventilated room with natural light and enough space, comfortable chairs, and a relevant setup. ☐ Provide breaks in the learning process both for face-to-face training and self-learning to make it more comfortable and to facilitate memorization. ☐ While designing the learning content, consider the target audience's needs and the advantages and disadvantages of technology for specific training purposes.
Setting expectations	☐ Keep the learning program aligned with business expectations to deliver the right content, apply relevant activities, and showcase targeted examples. ☐ Encourage and help supervisors meet with learners and discuss their expectations; provide a template for this meeting that includes goals, engagement during the training, and implementation of new behaviors on the job. ☐ Craft a powerful and compelling learning invitation, and directly state what is expected of learners; engage the executive sponsor to communicate that invitation.
Managerial support	☐ Encourage supervisors to meet with learners before the learning process starts and agree on the learning contract, or expectations and the support they need. ☐ Provide supervisors with a template for the discussion about expected new on-the-job behaviors and skills as a result of the learning journey; ask supervisors about any potential challenges they foresee with employees performing those new behaviors and skills. ☐ Ask supervisors to have an open-door policy following the training course in case learners have any issues in applying the new behaviors and skills.
Opportunity to change	☐ Help supervisors understand the learning curve and its impact on employees applying new behaviors and skills on the job; prepare supervisors for lower performance before full implementation of new behaviors and skills. ☐ Inform supervisors of the need to test employees' learning from experiences; help them not overload learners after the training program. ☐ Assist supervisors with creating a conducive environment to support learners' behavioral change; reduce the risk of peers, supervisors, work routines, or the work environment undermining the course of change.
Organizational support	☐ Ask the executive sponsor to position learning as a strategic initiative; provide the sponsor with the necessary support, such as a communications template. ☐ Encourage decision makers and influencers to make employees accountable for their own competency development; provide incentives for learning and performance development. ☐ Encourage experimentation, knowledge sharing, peer-to-peer learning, learning by doing, and learning on the job; make it OK for employees to learn from their mistakes.

Learner Personas: Beyond Demographics



LEARNER PERSONAS: BEYOND DEMOGRAPHICS

AUTHOR

Karen Bishea Williams

Karen Bishea Williams is the founder of SPARK Innovation Training, whose mission is to guide adult learning professionals to deeper insights. Williams spent 27 years with Procter & Gamble, where she built and led its products research global training programs. Her training and development experience includes curriculum and course design and curation and implementing training across global learner groups of scientists, technical experts, marketers, and engineers.

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**Content Manager,
Instructional Design**
Eliza Blanchard, APTD

Editor, *TD at Work*
Patty Gaul

Managing Editor
Joy Metcalf

Graphic Designer
Shirley E.M. Raybuck

In the 1980s, Procter & Gamble launched a marketing campaign for its Camay soap. The company created three personas based on its consumers and then developed products to meet those personas' needs.

For the “romantic woman” persona—who enjoys soft, romantic experiences—P&G developed feminine pink packaging with scripted font graphics and a pink bar of soap with a soft, classic, floral scent. For the “natural woman” persona, who is concerned about the environment, the company met her needs with the classic product in a white package with crisp, simple graphics and a low-level clean scent. Finally, black package labeling appealed to the modern, independent “chic woman,” with its woody scent reminiscent of the outdoors or adventurous experiences. P&G conducted extensive research to find a right color and scent combination that would appeal to each persona.

A persona is a fictional character developed to represent a group of people in a target audience, and a persona set is a collection of several such fictional characters who represent the realities of your target. Defining the people you are trying to reach typically has been a marketing technique. Marketers create a persona story of target purchasers, which helps marketers create effective advertising—just as P&G did with Camay soap.

But personas aren't just for marketers. Recently, political candidates have begun using them to understand voter groups and their

values to create effective messaging. And talent development professionals can find personas equally beneficial.

Having a deeper understanding of your target learner can help you make better design and curation decisions. When you know more about your learners' interests, knowledge gaps, learning preferences, and even their amount of discretionary time for learning, you can offer products that better meet their learning needs.

In this issue of *TD at Work*, I will unpack learning personas from the L&D perspective, providing:

- information about how to better understand your learners, which can influence your learning design
- insights and a five-step process for building a set of learner personas
- a sample learner persona set.

Discover Your Learners

You likely already have a basic understanding of your learner group or audience. Perhaps you have your courses divided or subdivided into categories based on

the learners' time in their role (such as new hire and new manager); work type (for example, accounting, customer service, manufacturing); level of learning required (that is, foundational, intermediate, advanced); and location (such as the central office, manufacturing site, and remote office). These categories take into account a basic understanding of the target learners.

Learner personas can further your understanding as you dig deeper so you gain more complete knowledge and perhaps some new insights for target learners and their environment. They will help you create better strategies and design learning assets.

For example, creating a persona group could lead you to make different learning choices by using less conventional learning methods—such as information-sharing, job aids, and one-on-one coaching. Or it may help you understand corporate cultural differences that direct you to develop a program away from the classroom to smaller online-searchable learning assets.

Having a deeper understanding of targeted learners benefits you on many levels. The modern learner is living in the world of fast-pace change. Information travels at the speed of light and often can be frustrating and overwhelming, given individuals' daily pressures. Your learners have resources and information (and misinformation) at their fingertips. Yet, finding, engaging, and applying learning can present hurdles for both experienced and new employees.

Your responsibility is to create learning assets that organize information to engage employees, lead them to the right information at the right time, and enable them to apply learning effectively. Having a clear picture of your learners in the form of learner personas gives you a tool for:

- **Engagement.** Not all learners need the same level of knowledge or tool for their role. For example, an IT specialist needs to understand how to specifically gather data and make them work together to present a story. However, for a different employee, the working details are an overload and instead a summary could be enough. One size does not fit all when it comes to creating engaging learning.
- **Stickiness.** Stickiness is the abstract but essential quality of learning that makes the important principles stay with the learners so they can call upon and

Cast a Wide Net

Consider these avenues and potential individuals to tap as you collect data to create learner personas.

How

- survey: learner self-assessment
- survey: knowledge check
- job shadowing
- task observation
- learner as teacher
- individual interviews
- group discussions
- exploring existing data

Whom?

- learners
- managers and supervisors
- customers
- subject matter experts and industry experts
- leaders or employees from similar industries
- other stakeholders

apply them. Design decisions that make learning sticky include learner hands-on interactions and creating realistic and relevant actions and consequences within the learning. An understanding of this can help you seek out the best subject matter experts as consultants and trainers—for example, the ones with the correct level of expertise or the ones who will establish a rapport with your audience.

- **Prioritization.** This can be vital when an organization is overhauling a corporate-wide system. You and your L&D team should recognize that, by using learner personas, there are levels of user knowledge: expert, proficient, occasional, and new users. By prioritizing the rollout to expert and proficient users, you can use those individuals as global trainers to the occasional and new users.
- **Access.** Not all learners have equal access to or a need for learning tools. Learners in a manufacturing setting have different access to technology than learners in a corporate office setting. Another example is learners' preferences in the way they access learning in different regions. I was surprised to learn that learners in Asia like to watch training videos during their commute. Having learning personas to identify these learning preferences makes learning access planning easier.
- **Expectations.** Learning personas can help identify segments where it is important to set clear and robust expectations. For example, a principle such as “Never disparage the competition; our product quality speaks for itself” is something the sales force needs to practice daily, but for production engineers, an occasional reminder will be adequate.

Having a deeper understanding of your target learner can help you make better design and curation decisions.

Consider Your Purpose and Tools

Before you create learner personas, know your desired purpose for them. Are you planning a learning program for a range of learners with one common curriculum (such as on compliance)? Are you developing a specific skill set, like providing effective feedback? Or are you targeting a particular delivery mode—for example, mobile learning for sales professionals? By determining your purpose, you'll avoid collecting extraneous, unnecessary data.

Personas are a composite representation of characteristics. Collecting information on characteristics is based on both your current learner knowledge and new information you collect using quantitative and qualitative tools. Take time to understand the discovery tools you have and what help you may need.

For example, you may need to interview learners, managers, and leaders—even customers and external stakeholders such as partners who can shed light on what learners need to know. Interviewing is effective but can be time consuming and require recordings, transcripts, and analysis resources. Discovery tools may also mean developing and deploying learner surveys and conducting analysis. Knowing your tools and resources in advance can help you make informed recommendations for next steps.

Create Learner Personas

Let's walk through a five-step process to create a learner persona set and increase your understanding of your learners. In doing so, I will present case study examples so you can see the process lived out with real-world learning.

The process of creating a group of learner personas is just as important—maybe more so—than the output stories themselves. Do not get discouraged with the rigor of these steps; you likely will find some profound insights. Note: I created this five-step process in collaboration with my colleagues Lisa MD Owens and Crystal Kadakia.

Before we delve into each step, let me set the stage for our case study: Company X recently conducted an

annual job satisfaction survey of its 500 employees across four U.S. sites. One issue that came to light was employees' frustration with the number of meetings they attend. Employees pointed out that meetings aren't considered a good use of their time, get in the way of "real work," and provide no actionable steps to move a project forward.

Several senior managers attended numerous meetings across the corporate sector and across disciplines. They witnessed meetings that were often disorganized and lacked agendas and clear outputs. While an employee typically handled the meeting invites, the meetings themselves lacked a leader. Most were simply status-reporting sessions.

To address the situation, the L&D team planned to review existing learning assets—such as training classes and job aids—and conduct a needs analysis. It then planned to recommend a way to close the skills gap of conducting effective meetings. Rather than create a series of workshops for all employees, which may not have the desired positive impact, the L&D team will use personas to guide the learning solution.

Step 1: Summarize Your Learner Knowledge

Take an inventory of the information you have on your learners. Thinking about the business need or learning opportunity you have already identified, jot down what you know about your target audience.

The information you'll want to explore—and that you may or may not have on hand—includes such details as job function, use of technology, work hours, and key performance gap differences. You likely will be able to identify the areas where you have information or know where to find it. Note: It may be necessary to call out a specific sector, organizational function, or job role that has struggled with this skills gap. Keep this information confidential.

EXAMPLE The L&D team collected factual information from a variety of HR and L&D reports, previous projects, and corporate knowledge assets. It knows from HR data and other sources the learners' ages, their education level attainment, and work locations, as well as current learning

assets and technology available to learners. Further, the team knows about employee frustration regarding ineffective meetings and that employees feel meetings take up far too much of their time. The team handled the information carefully, maintaining confidentiality and limiting its distribution.

Step 2: Dive Deeper

You now have a good deal of learner information at your fingertips and may have started forming ideas for the learner personas. The next step is to fill in your knowledge gaps to bring the personas to life. Determine the what, how, and whom; consider your resources, specifically how much time, money, and staff you have; and plan your data-gathering steps. With each of those actions, consider whether they will advance your or the L&D team's learning about target learners, and pursue those that are most beneficial to that goal.

“What” Assessment

Reviewing the information you have and the learning project objective, ask yourself what other information may be helpful in creating learner personas. Critically think about that gap in information. You may find that you need to explore learners' current knowledge, the barriers to applying a given skill or practice, or the current cultural practices relative to the learning objective.

Next, think critically about the information areas beyond what you know already and the information you don't have but that would be helpful to build your learner personas. For example, if you are creating a group of personas to better understand new hires, day-in-the-life information about a normal workday isn't likely relevant, so skip that. If you are creating a group of personas to understand how to deliver training on a new corporate travel accounting tool, make sure to focus on employees who travel; collecting information on their performance is irrelevant.

“How” Assessment

Next, determine how you will collect additional information. Consider using a combination of techniques

Discover Learners' Differences

Most learning projects benefit from you discovering characteristics about your learners. Be aware that you are collecting information to identify subsets of learners within your larger learner population, not collecting all the information about them.

Be intentional. Search for key differences and similarities among learner groups, specifically information pertinent to the performance gap and related on-the-job behavior and application.

Demographic differences. List pertinent information to your objective, the skills gap, or desired on-the-job behavior.

Examples: role, function, level, tenure, age, gender, division, country

Learning need differences. List your understanding of your learners and how, when, and where they are currently gaining knowledge and skill building.

Examples: the typical response to training and learning, such as it's an opportunity to get away from the job or it's a sought-after skill-building opportunity; how, when, and where learners prefer to learn, gain useful tools and knowledge, and practice new skills; primary technology used on the job, such as a go-to resource for learning assets or performance support; the learning preferences learners have, such as instructor-led training, e-learning, videos, or self-assessments; level of self-awareness

Life-at-work differences. Understand your learner's typical day for hidden gems of information.

Examples: work hours, job environment, level of discretionary time for learning, best time for learning, barriers to learning, and network for learning

Performance gap differences. These should be specific to your project.

Examples: current skill or performance level for the specific topic or skill; attitude toward the skill set; barriers to behavior change; awareness of this skill set or the need for it on the job; self-assessment of capability for this skill set

and qualitative and quantitative data to further your understanding. Quantitative methods may be a learner self-assessment or a knowledge assessment. Qualitative methods could include interviews or on-the-job observations.

If you are using interviews as a discovery technique, keep the number of interviews manageable—focus on quality rather than quantity. Be mindful of your time and the employees' time. Consider recruiting help within your organization; others may be interested in learning more on this topic. Those individuals also could help you explore and analyze the information you gather as you move along in the five-step process. Note: Sometimes the information you seek already exists within the company archives or studies that you just need to access.

Be sure to plan ahead and prepare regardless of how you plan to collect the information. Think through the key questions, flow, and what you want to learn from each person you talk to (use the Sample Discussion Tool & Resource at the end of this issue). You want the flow and information-gathering to be painless for everyone—this is not an interrogation. Planning discussion areas will help ensure that you cover the main points and maintain control of the discussion and keep it within the allotted timeframe.

“Who” Assessment

The final question is whom will you reach out to? Based on your learner persona hypothesis, which employees do you want to talk with to learn more? Consider the various roles; individuals' years of service; employees who are knowledgeable on the topic or, on the flip side, new to the role; or employees at different locations. Also consider the content project stakeholders, customers, or SMEs. The list of employees with whom you will want to engage should be diverse and reflect the breadth of the learner population.

Remember that while the information you gather directly from learners is important, do not forget to talk with a few of the managers or leaders who have a stake in making skill and culture improvements. They have tacit knowledge that will help you with your starting hypotheses.

EXAMPLE During the “what” assessment, the L&D team identified three knowledge areas where learners need to grow:

- » awareness of effective meeting principles, tools, and applications
- » attitude toward meetings, both of the current state and desired future state
- » application of effective meeting tools, tips, or other helpful devices.

Next, for the “how” and “who,” the team decided to interview 20 individuals within four groups:

- » the senior managers who observed the meetings, because they will have valuable observations as to the meeting attendees, roles, and what was and was not working in the meetings
- » new project managers so as to understand what is working and not working in the meetings they take part in or lead; they will have the freshest perspective
- » project team members who have a high level of meeting frustration and have experience with different meeting leaders; these learners will be motivated to share knowledge, but the challenge will be to keep the interview in information-gathering mode and not allow it to deteriorate into a gripe session
- » individuals who have shown strong or exceptional meeting-organization and output skills.

Resource Determinations

Your available resources, such as money and time, will determine the type and source of information you collect. If you have a method for collecting data for your personas but face resource constraints, such as no travel budget, be creative. Alternatives could include a video chat; a phone interview; or recruiting an on-site employee representative to help with shadowing, interviewing, or collecting information. Outline how you will deal with resource limitations and add details for helping leadership buy-in for the learning program.

Step 3: Analyze the Data

You have done a lot of work to this point to develop your learner personas. Don’t give up. The analysis—

a detailed examination of the elements and structure of a given theme or topic relative to the learner persona or learning objective (such as the learning preference or skills gap)—is the fun part where the new ideas, aha moments, and personas take shape.

Team Debriefing

Conduct a debriefing with all the team members who have helped, including those who conducted interviews. If you haven’t tapped others for their expertise, spend time sitting quietly and reviewing the gathered materials and the impressions you have from the new insights. The purpose is to capture the top-of-mind impressions from interviews.

The debriefing does not need to take long. However, plan to debrief in a timely manner—target within 24 hours of the last interview or exploratory action (that is, the way you or another individual gathered information). Letting time lapse muddies impressions, and you could lose important aha moments.

You can conduct the debriefing electronically, but if possible, get everyone together in the same room to share what they found, including verbatim quotes from interviewees about frustrations, helpful tools, organizational culture, and so forth. Use poster-size pages to capture the key learning visually.

Analysis Process

Next, gather an analysis team. Members could include individuals who helped you collect data. Ideally, your analysis team will consist of a set of individuals who have an interest in your L&D objective and come from a variety of disciplines or sectors. All members must be committed to the analysis process to get the most out of the collected information. It is beneficial to have an experienced facilitator lead the analysis process. A facilitator will provide fresh perspective and be able to guide the team by asking relevant questions and keeping the process on track.

Then, as a team, begin analyzing the data. Although this part can feel overwhelming, trust the process. Analysis can be considered an art form in that you will use the insights discovered to paint the persona and create a story.

Review the Subject

Each team member should become acquainted with all the gathered information and come to the analysis meeting with a list of identified insights to share.

Lay the Foundation

This is when the team members meet and lay out their insights, building on each other's ideas. Capture ideas on sticky notes and place them on larger boards, so you and the team can categorize and arrange your ideas.

Consider hosting three analysis rounds to capture and build insights. Base the time needed for each round on the number of team members who have insights to contribute.

Round 1: Allow each team member to state insights and observations regarding learners' similarities and differences. Document each insight on a separate sticky note. During this verbal review, team members may have new thoughts or ideas; document them on sticky notes as well.

EXAMPLE In round 1, the L&D team identified these insights:

- » Managers who are new to projects have more meetings. This could be from lack of confidence and overcompensating by micromanaging every step.
- » Most of the interviewees like the idea of an effective meeting tool that guides them to effective steps. But the L&D team needs to be cognizant of sending the wrong message that a tool can solve the problems.
- » Most interviewees struggle with setting priorities and recognizing their power to prioritize meetings to which they are invited.

Round 2: Once all the team members have shared, other members can build on those insights. The team then reviews and arranges all the sticky notes into the big ideas. Next, the facilitator asks the team key questions, such as "What else?" "Are these insights new?" "Can we envision these ideas leading to potential learning actions?"

Round 3: Team members now use markers, dots, or any other effective means to vote on the insights they believe will help build a persona. Have each team member vote on 10 percent of the total number of sticky notes. After voting, ask team members to explain their choices verbally. This is an important step because verbalizing their choices could lead other team members to new ideas.

Resource Considerations

When determining how you will collect information and from whom, balance your time, resources, and budget.

Timing

What is the project's target deadline? Are there mileposts for creating recommendations?

What percentage of your time can you devote to collecting and analyzing information?

What is employees' availability to engage—the length of time they have available to step away from their role to complete a survey or participate in an interview?

Resources

Are there staff or others who can help with arranging, conducting, or analyzing interviews? For a team approach, be sure to get buy-in from interested individuals recruited for information-collection tasks.

What methodology will you employ for collecting data—paper versus electronic survey, video interview?

Budget

What are your operating funds? Is it possible to use an outside consultant or knowledge holder to guide data collection and analysis?

Now give members time to process these insights, perhaps overnight. They will need a clear mind and fresh eyes to create the persona stories.

Build the Picture

At this point, you have a list of important insights the team has created. Look at these insights through the lens of the other information you have gathered. During this process, you likely will see personas start to emerge. This process also helps as a check to see whether the insights make sense.

Further, new insights may arise—evaluate them as they come up. Ask whether it is similar to an insight already in the list or if it's a new idea. If it's new, add it to the list so you and the team can use it when building personas.

EXAMPLE In rounds 2 and 3, as the L&D team continued to review the data they'd gathered, it developed further insights:

- » **New managers schedule more meetings.** The facts show that currently 27 percent of all managers are new in their role. Of the 20 multidiscipline project teams, 10 have newly promoted managers. An internal tracking tool captures the number of meetings scheduled. Corporate survey data, when broken out, show those on newly formed project teams have high dissatisfaction scores in terms of work-life balance.
- » **Setting priorities, specifically balancing meetings with hands-on work, is a struggle for most employees.** Additionally, employees stated that “real work” does not happen during meetings. Corporate HR data show that overtime has been steadily climbing for the past three years. Employees expressed via comments that they feel overwhelmed with the number of priorities that are communicated as “everything is important.”

This layering of facts process adds color, texture, and clarification to insights.

Create Persona Outlines

Now create learner persona outlines. Link together several insights and facts to create a group that works together—that is, that makes sense as a general learner snapshot.

This is where you will see all the analysis work pay off and a persona emerge. Celebrate when you see the insights and facts start to take shape.

The team should identify insight groupings that seem to make sense together because of similar themes and facts. There is no right or wrong, and you may use an insight more than once. Consider these questions:

- Who has the biggest performance gap (problem approach)?
- Whose growth would significantly influence the whole (strengths approach)?

In your outlines, be bold. This information is for the team members' eyes only. If you know who the problem child is, name the individual. Surfacing the obvious realities and barriers is the only way to assure you address them effectively.

EXAMPLE The L&D team developed two persona outlines based on all of the information they gathered and the insights they gleaned.

Persona 1 Outline

- » Role: chemical engineer, a research and development role
- » Experience: project manager
- » Challenge: Meetings rule his life. He is not happy with his work-life balance. He has some awareness of what a good meeting is supposed to be like but has no time or energy to explore what he needs to do to change the current meeting execution to be better. He has little time for any formal learning.

Persona 2 Outline

- » Role: marketing associate
- » Experience: first job; eager to be part of the fast pace of the organization and her teams
- » Challenge: She goes to every meeting she is invited to. She is expected to create weekly marketing reports using the latest marketing statistics across multiple channels. But the only quiet time she has to do this work is at night. Learning for her is like drinking from the fire hose. She has difficulty retaining all the information. She has been in well-run meetings in the past but has no authority or confidence to provide useful feedback to meeting managers.

Gather Input

Next, get the learner persona outlines in front of a few current employees in the same roles as those of the personas as well as in front of managers or stakeholders.

Determine whether these individuals:

- get a sense that the outlines feel true (refrain from naming names in this instance, of course)
- believe the persona employees have an opportunity to make skills gap improvements
- imagine a set of learning assets that those employees could use.

Build their input into the outline. You may come across an outline that just doesn't work—either rework or move insights to a different persona outline. Or perhaps the insights are not relevant to this skills gap.

Step 4: Create the Learner Personas

It's time to start writing a story for each persona.

Remember, you should base these on the summary of your explorations, interviews, and demographic knowledge. Include your insights, barriers, awareness, skills and gaps, and attitudes. After, do a quick check with analysis team members and other stakeholders to ensure everything rings true.

Step 5: Use the Personas to Guide Learning Design

With your personas in hand, use them to guide your learning program designs. Everything you have done up to this

EXAMPLE



FRUSTRATED FRANK

Tenure: five years; promoted six months ago

Role: leading a new project team

Background: The team is tasked with delivering new product

claims in three months. Frank wants to be a good team leader but needs guidance about creating a meeting game plan.

Challenges:

- » Frank and his team are struggling with burnout.
- » Team members are juggling three to four other high-priority project teams.
- » Team members are required to participate on this project.
- » The team has long, overlapping meetings with no clear agendas.
- » The team doesn't accomplish work or make decisions during meetings.

Development Goals

Awareness: Know the basics of what a good meeting looks like.

Attitude: Help his team with action plans that forward the work, not hinder it.

Application: Learn to modify the current meeting style for improvements.

EXAMPLE



RESPONSIVE RACHEL

Tenure: new hire

Role: marketing associate

Background: Rachel attends five to six meetings each day. She is learning a lot but typically does not

contribute. She is required to complete five new-hire learning modules every week.

Challenges:

- » Because of the number of meetings each day, Rachel regularly must work late to complete her mandatory weekly marketing reports.
- » The long hours are not sustainable.
- » Rachel is invited to meetings that she cannot contribute to.
- » Meetings seem to have no leader prioritizing the work and distributing it evenly among associates.
- » Rachel struggles with priorities because she isn't given clear deliverables.

Development Goals

Awareness: Know what effective meetings and actionable outcomes look like.

Attitude: Know when or how to push back on the number of meetings she is invited to.

Application: Develop confidence and feedback skills to provide useful input to meeting managers.

point will help you—and, if applicable, the rest of your L&D team—design better learning solutions. The three areas to pull together now are the purpose of this work (for example, improving the effectiveness of the organization's onboarding program); learning areas you have identified (where are the opportunities—for example, can influencers use a program to help generate interest and excitement about the learning initiative?); and persona insights. Consider what you've learned developing personas and how that could guide your learning design choices.

EXAMPLE The L&D team used the learner personas to determine how it would move forward with creating a development program. The team reached these assumptions:

- » **Purpose statement.** The purpose of this work was to identify employee groups in which conducting effective meetings training will have a positive impact, both for work efficiency and culture.
- » **Learning areas.** The L&D team identified three opportunity areas of learner discovery: awareness of effective meeting principles, tools, and application; attitude toward meetings in their current state and desired future state; and application of effective meeting tools, tips, or other helpful devices.
- » **Insights on new project managers.** There is an opportunity with new project managers to have in-depth effective meeting how-to modules. Some topics may include when a meeting is needed and when it is not, efficient member contributions, and feedback with role-play exercises. As part of the training program, provide a take-away guide to help in preparing for, conducting of, and creating next steps to an effective meeting.
- » **Insights on project team members.** Create some guidelines to raise awareness about effective meetings. Provide examples on what a good meeting looks like. Consider a series of videos that touch upon sharing information, raising issues, and asking for help.
- » **Insights on new hires.** As part of new-hire training, recommend some modules to address effectively balancing priorities and advantageously using weekly manager meetings.

Conclusion

Knowing your target learner on a deeper, more complete level is always a good idea. Using personas as a learning aid to guide learning strategy, design, curation, and implementation will strengthen your learning programs.

In an Association for Talent Development Insights blog entry, MJ Hall writes, “How do we respond to, compete with, and meet the needs of the learner in a rapidly evolving environment? It's all about advancing performance excellence for employees in a way that meets their personal needs. This includes providing a broad range of learning experiences to engage and inspire employees—anywhere, any time, and in a variety of ways. Using personas to gain a deeper understanding of our employees can help fulfill this mission more effectively and precisely.”

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Learner Persona Template

Use this five-step process to understand your target audience and create learner personas.

Step 1. Summarize what you already know about your learners.

Step 2. Dig deeper into learner differences. Identify exploratory actions and to whom to reach out for the data.

- Exploratory actions

- Resource

Step 3. Analyze the data to develop learner persona outlines.

- Persona name

- Key demographic differences

- Key learning need differences

- Key life-at-work differences

Tools & Resources

Learner Persona Template (Cont.)

- Key performance gap differences

- Moments of learning need (for example, is this new material? Have things changed?)

Step 4. Create the learner personas.



PERSONA 1

Tenure:

Role:

Background:

Challenges:

»

»

»

»

»

»

Development Goals



PERSONA 2

Tenure:

Role:

Background:

Challenges:

»

»

»

»

»

»

Development Goals

Step 5. Use the personas to guide learning design.

Listening Grid

A listening grid is a form for capturing and organizing ideas that you glean from your interviewee during an interview. Use this grid to note your questions and document interviewees' important ideas and comments. These comments can add credibility and context to insights you gather during the five-step learner persona process.

The grid template includes example questions for each section. Customize the grid and questions to reflect your L&D project.

Note: Do not include demographic information that can link back to the interviewee. Keep the individual and the information anonymous.

Topic:	
General demographic info about the interviewee	
Warm-up	
What was your best experience? <i>Example: If the topic is conducting effective meetings, what's the most effective meeting you experienced?</i>	
What was your worst experience?	
Awareness	
Have you taken a course, read, or investigated any information about the topic? <i>Example: how to more effectively conduct a meeting</i>	
Attitude	
What does an effective [fill in the blank] look like? <i>Example: What does an effective meeting look like?</i>	
What outcome would you like to see in this organization relative to the topic at hand? <i>Example: implementation of more effective meetings</i>	
Application	
How, when, and where do you want to learn, receive information, or practice a new skill?	
What learning tools would be helpful relative to the topic at hand? <i>Example: job aid, video, etc.</i>	

Sample Discussion

Use this sample discussion to gain a better idea for how your conversation—whether you are interviewing learners, managers, customers, or other stakeholders—will go. This will keep you on track in terms of focus and time and will ensure that you collect the type of information you most need from the interviewee. Modify the discussion points to align with your learning project.

TOPIC STATEMENT

Conducting Effective and Efficient Meetings

FOCUS

Awareness, attitude, and application

OPENING

- Thank you for your time. I see you have provided a response to the statement I sent: “Describe your best and worst meeting experience.” Tell me about those experiences. [Listen and take notes, record the individual's responses, or have a colleague take notes.]
- How many meetings a week or day would you estimate that you attend? How do you feel about that number of meetings?

BODY

Awareness

- Have you taken a course, read, or investigated any information around conducting effective meetings?
- Based on the response, add questions later to build your understanding.

Attitude

- What does an effective meeting look like to you?
- In your opinion, how long should a meeting last?
- How should meeting discussions and outcomes be used to forward your work?

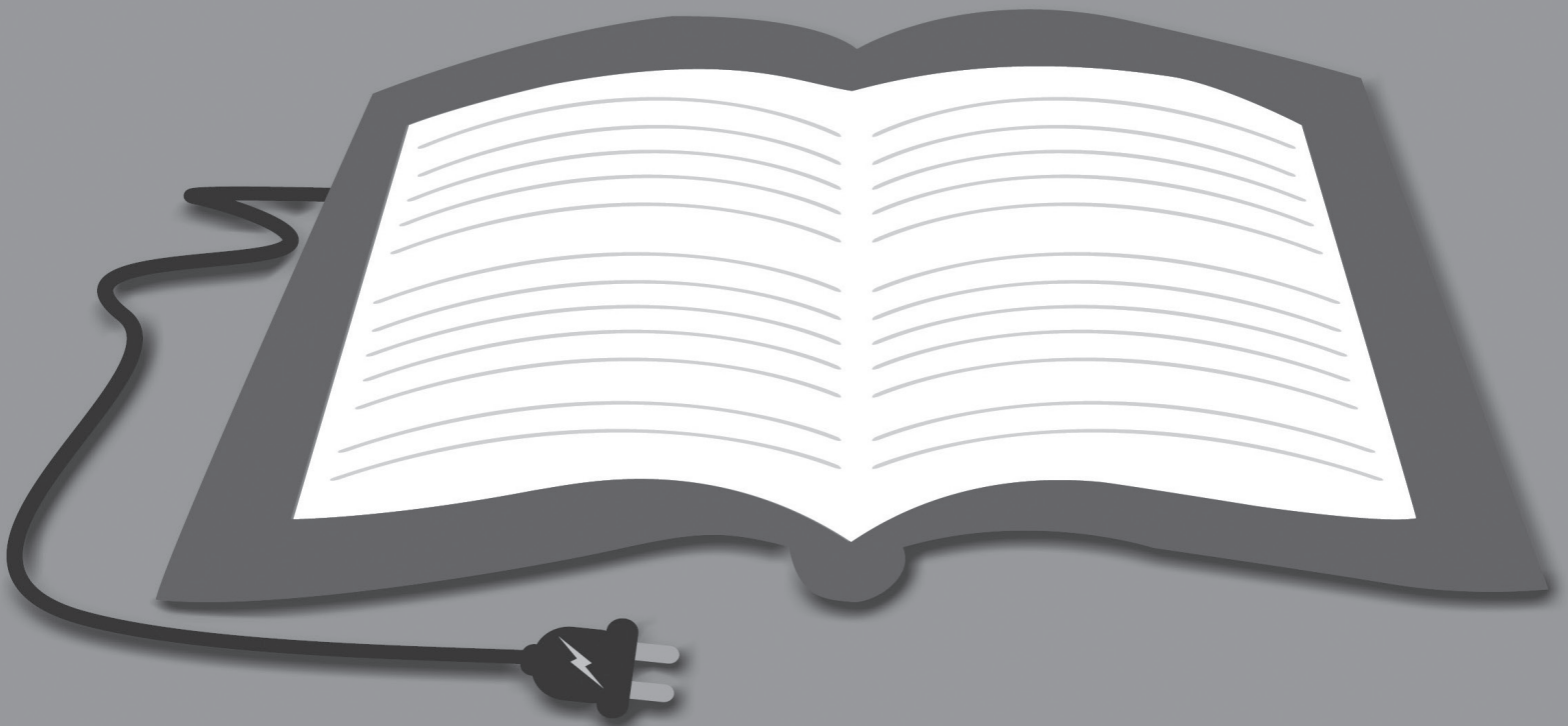
Application

- When and how can a meeting be replaced with another form of communication?
- What type of learning tools on the topic of meeting effectiveness would be useful to you? *Note: You can provide suggestions, such as a meeting-creation guide with templates to access when needed; a tips newsletter on effective meetings; an online course on effective meetings; or a YouTube-type video with examples of effective and ineffective meetings.*

CAPTURING THE DISCUSSION

- If using a recording device, mention this to the interviewee and ask permission to record.
- Consider having a partner take notes. It can be challenging to simultaneously ask questions, listen for probing, and take notes.
- Use the listening grid to capture key ideas, insights, and quotes. Concisely capture the interviewee's thoughts and quotes in clear notes for the analysis phase. Remember that verbatim comments are critical—actual statements from learners are a powerful learner persona creation tool. And the interview details will make a difference in final persona stories.
- If you recorded the interview, use a service to transcribe the recording. Seeing the words in typed form is helpful for pulling out insights.

Power E-Learning With Stories



POWER E-LEARNING WITH STORIES

AUTHOR

Hadiya Nuriddin

Hadiya Nuriddin, CPTD, is an accomplished L&D professional with 20 years of experience in learning strategy, instructional design, e-learning development, and learning facilitation. She owns Duets Learning, a full-service L&D consultancy. She is also author of *StoryTraining: Selecting and Shaping Stories That Connect* (ATD Press).

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**Content Manager,
Instructional Design**
Eliza Blanchard, APTD

Editor, *TD at Work*
Patty Gaul

Managing Editor
Joy Metcalf

Senior Graphic Designer
Shirley E.M. Raybuck

Stephanie has a problem. As vice president of customer relations at Chimmey's, a chain of clothing stores, her job is to ensure that customers get the best service possible. But they aren't. As a result, customer service representatives have sat through hours of training, navigated three performance incentive programs, and struggled through two reorganizations. After every solution, the customer service quality numbers tick up slightly but soon fall again.

Stephanie has toured the stores, observing customer interactions. She notices standard barriers: slow systems, inadequate scheduling, and questionable site leadership. What stands out to her most, though, is reps' apparent lack

of respect when managing customer interactions. Reps are ignoring customers from the time they enter the store until they leave.

Stephanie asks individual reps why they don't make eye contact or engage with customers mulling about. Unfortunately, none of their answers is acceptable. She returns to headquarters and asks the training team if she can review the customer service curriculum. Reading the content for the first time, she notices it consists only of processes and procedures. There is no focus on creating an enjoyable customer experience or on how the company's values translate into delighting customers.

Realizing what's needed is a multifaceted performance solution, Stephanie works with the training design team and determines that the new content must complement the existing training by focusing less on procedures and more on people. She agrees that e-learning is a promising delivery modality for that information, but she doesn't want just any e-learning. The training design team thinks that bringing storytelling into the e-learning program may be the answer.

In this issue of *TD at Work*, I detail:

- Why storytelling is powerful in e-learning
- How to use adult learning theory to explain to stakeholders the reasons storytelling works
- A process for incorporating storytelling into e-learning
- Best practices for designing transformative stories into e-learning courses

How Stories Help Learning

In the above scenario, Chimmey's training design team has known for years about the poor customer service issue and has widely believed that it needed to shift the training strategy. Still, stakeholders were resistant to using storytelling as a framework for the e-learning courses the team produces. Their primary concern was that learners will take the training less seriously or get distracted by the stories.

While valid concerns, the design team is not considering using casual stories and anecdotes. Instead, it wants to use objectives-supported, performance-focused stories of transformation that are designed to bring to life the journey to the destination or—as

instructional designers say—the desired state. While processes and procedures drive the journey, the trip is fueled by the travelers' desires, needs, fears, and motivations. That all-too-human experience is the story that needs to be told.

E-learning is a hospitable host for stories because it can be an intimate experience between the learners and the content. Without immediate access to facilitator support, learners are free to filter what they see and hear through the lens of their experiences and find the relevance of the content to their own lives.

In Chimmey's case, the customer experience story may be an effective way to frame the e-learning course content. A transformative story structure could provide an opportunity to humanize customers, illustrate the impact the company has on their lives, and articulate customer service reps' role in shaping the customer experience.

Building the Case

Humans are wired to remember stories. In fact, people are more—not less—likely to remember what they've learned if you teach knowledge, skills, and attitudes using a story structure. Stories also provide context. Context matters because it's as essential to know when to demonstrate a performance as it is to know how to do it. Having context makes the information easier to retrieve when needed and helps learners better understand its importance.

Although the training design team at Chimmey's anticipates pushback from senior leadership, it doesn't need to look far to make its case. Using stories in any learning context is grounded in learning theory.

Adult Learning Theory

Malcolm Knowles developed adult learning theory, or andragogy, which focuses on what motivates adults to adopt new behaviors and provides insight into using that knowledge to trigger and support change. The theory goes beyond simple information intake and retrieval and encompasses the following general principles. Along with each description, I have included an explanation of how storytelling is consistent with the principle.

The need to know. Adults need to know why they need to learn something. Stories provide context, so

designers can use them to clearly illustrate within the e-learning course how, why, and when participants can or should use the given content.

The learners' self-concept. Adults have a self-concept of being responsible for their own decisions and lives. Using scenarios in e-learning could facilitate an experience where learners have control to make decisions and see the consequences of their actions.

The role of the learners' experiences. Individuals want a training course to respect and use their prior experience and knowledge. Starting an e-learning module with a scenario that prompts learners to complete a task based on their current knowledge is an effective design strategy.

Readiness to learn. People become ready to learn information when they recognize that it's useful to their real-life situations. Incorporating realistic stories in e-learning modules provides opportunities for learners to see how the material they are learning can benefit them on the job.

Orientation to learning. Adults are problem-centered in their orientation to learning. Using character-driven stories of transformation in e-learning makes the content inherently problem centered because stories focus on the characters' journeys: where they started, the challenges they encountered along the way, and how they changed as a result.

Motivation. The most potent motivators for adults are internal pressures that desires and needs drive. Experiencing the possible outcomes of applying or not applying newly learned strategies, albeit in a safe environment, can motivate learners to adopt a change.

The First Principles of Instruction

Utah State University professor emeritus M. David Merrill identified the first principles of instruction by searching instructional design theory and instructional research to see whether he could find a set of consistent principles across both. Here's how storytelling supports each of those principles.

Problem-centered. You promote learning when individuals acquire skills in the context of real-world problems. Going up another level, you can design the scenario, which you then ask learners to use to apply

the newly learned skills, to mimic the real-life problems they must solve on the job.

Activation. You also promote learning when learners recall existing knowledge and skills as a foundation for new skills. Begin the experience of using those real-life scenarios by first tapping into learners' existing knowledge before they explore new content.

Demonstration. Enhance learning by asking participants to show the learned skill. E-learning modules can include story-based videos that demonstrate how individuals can apply strategies or skills, along with the expected outcomes.

Application. When learners use their newly acquired skills to solve problems, that cements the knowledge. Going up a level, learners can apply what they learned in the video demonstration within the context of a scenario.

Integration. Learning sticks when individuals reflect on, discuss, and defend their newly acquired skills. Scenarios can include clues and triggers designed to help learners remember when and how to use their new skills on the job.

Use Cases

Another component of building the case for stories in e-learning is specifying how you'll use them in a training course. Four common ways to incorporate stories into your e-learning are scenarios, case studies, testimonials, and other teaching strategies.

Scenarios

In a learning context, a scenario is a short, problem-centered narrative based on a real-life performance challenge. It encourages learners to address a problem with existing or new knowledge.

Generally, scenarios fall into two categories for e-learning:

- Scenario-based exercises, where the scenario addresses the problem by answering questions that transform learners into observers who reflect, analyze, and share their understanding of what they are seeing or what to do next.
- Scenario-based e-learning, where learners become the actors in the scenario, driving the narrative with the outcomes of their choices.

► Train the Trainer

Either strategy can be effective as a problem-based e-learning design strategy, but scenario-based e-learning is far more immersive, more authentic, and less directive. Consequently, those scenarios are more time-consuming to produce and may require more skill for designers to create and learners to use.

Scenarios in e-learning typically employ branching. Training design expert Cathy Moore writes that branching “contains multiple questions (‘decision points’). The consequence of one decision affects the next decision. Two people going through the same branching scenario could see different questions and story lines.”

For example, the Chimmey’s training design team’s e-learning course could include a scenario-based exercise where learners observe an employee-customer interaction and then answer questions on which standards the employee followed. In a scenario-based e-learning approach, the customer could interact directly with the learner in a branched interaction.

Case Studies

In their book *Evidence-Informed Learning Design*, Mirjam Neelen and Paul A. Kirschner describe case studies as “descriptions of actual or hypothetical problem solutions situated in the real world.” Learners derive solutions by working through questions that require deep processing of both the problem and how to address it.

Case studies tend to be longer than scenarios with far more detail. One of the challenges with case studies is finding the appropriate level of specificity. You want a case that is specific enough to be realistic but vague enough to apply to multiple work environments. For example, the customer experience course needs a case study applicable to large stores with multiple resources and smaller stores

where fewer people are on duty at a time. Keep in mind that learners can only successfully resolve a case study if they have the context that the narrative can provide. Even if it’s a situation that occurred in real life, you must realistically communicate the data and options.

Testimonials

A testimonial is a story told by an individual with a valuable perspective that contributes to the course in some way. For example, in your e-learning course, an experienced employee relays a specific challenging situation and how they used their skills to tackle it; a long-time customer service rep could describe a time they made a customer feel comfortable and valued; or a coach could jump in at certain points with guidance via mini stories. As learners engage in challenges throughout the course, they may click an image of a character and hear what to do next.

Other Teaching Strategies

Instructor-led training facilitators often use stories as a way to explain course content. The stories may be part of the course design, pulled from personal experience, or an improvised analogy. To use that strategy in your e-learning design, you can:

- Record subject matter experts giving testimonials about their experience with the topic and prompt learners to play the audio or video recordings at different points throughout the course.
- Design reflective exercises in which learners read or hear a person tell a story that culminates in a question for the learner to ponder, reflect on in a journal, or simply empathize with.
- Create an avatar that serves as a guide or facilitator who uses various stories, analogies, and story-based

Story-Based E-Learning Process



coaching tips throughout the course. For example, the avatar could ask learners to review scenarios and make decisions based on what the avatar says. Or, in the e-learning course, you could encourage learners to click on the different avatar experts to hear their stories and gain insight to determine their next step.

Integration

While there are many ways to design stories into your e-learning courses, I recommend using a high-level variation of the instructional design and development process and considering ways to incorporate stories along the way. I have simplified the process, dividing it into four linear steps, and detailed several critical story design decisions to address during each phase. To help you visualize it, I revisit the Chimmey's training design team scenarios in each step.

1. Define

In this first step, define the areas you need to address in the e-learning program. What needs to happen to influence performance or change learners' behavior? Then consider the ways you can use stories to reinforce the learning to influence the needed changes.

Scenario: To begin the design process, the Chimmey's training design team first conducted a needs assessment that focused more on employee behaviors and customer interactions than on processes and procedures. While the team would often gather performance data, which can be useful, for this new e-learning course, it also needed to gather stories.

In practice: The best way to collect stories—and not just stories but transformative ones, as I discuss next—is to talk to individual employees about the experiences they've had, the challenges they've overcome, and what advice they would give their colleagues. Ask open-ended questions, and use behavioral interviewing, in which you ask individuals how they acted in specific situations to ascertain their knowledge, skills, and composure.

For example, based on the Chimmey's scenario, the training design team asked:

- What is an experience you had where a customer interaction went exceptionally well?

- When was a time you believed you made a customer feel valued? How did you know?
- Tell me about a time you felt valued as a customer. What about that situation made you feel valued?

Gather Transformation Stories

Collect stories that reveal the change the storyteller went through. That makes the story transformational—it captures, as Joseph Campbell describes in *The Hero with a Thousand Faces*, the spirit of the hero's journey. In his book, *The Writer's Journey: Mythic Structure for Writers*, Christopher Vogler describes that journey from a writer's perspective as a hero leaving her ordinary world to venture into a challenging, unfamiliar one. He writes that “In any good story the hero grows and changes, making a journey from one way of being to the next; from despair to hope, weakness to strength, folly to wisdom, love to hate, and back again.”

Scenario: The Chimmey's training design team reached out to two customer service managers it knows in the industry and asked them to share their experiences as first-time customer service reps. The designers asked them what lessons they learned along the way and encouraged them to share the trials and failures they experienced that led them to where they are now.

In practice: In the learning context, capturing change is essential, because the learning is more about getting there than being there. Telling learners what life is like on the other side of the river is motivating, but there's little point if they don't know how to get across the water. When reaching out to SMEs for their stories, encourage them to reveal that change. They may not recognize, remember, or sometimes acknowledge the change, so you may need to coach them through that discussion by asking questions and giving prompts such as: How did this experience change you? Give me an example that demonstrates your approach before the change. Give me an example that demonstrates your approach after the change. When did you recognize the point of change?

Create Learning Objectives

Although the transformational stories are necessary, anecdotal testimonials in e-learning alone may not shift

The Hero's Journey

Stories take learners on a trip. One universal story structure is the hero's journey, which academic Joseph Campbell developed. It consists of the hero's departure act, initiation, and return. Subsequently, screenwriter Christopher Vogler expanded the structure to include 12 steps of the journey:

- | | | |
|--------------------------|-----------------------------------|----------------------------|
| 1. The ordinary world | 5. Crossing the first threshold | 9. The reward |
| 2. The call of adventure | 6. Tests, allies, and enemies | 10. The road back |
| 3. Refusal of the call | 7. Approach to the innermost cave | 11. Resurrection |
| 4. Meeting the mentor | 8. The ordeal | 12. Return with the elixir |

In the *Infoline* issue "Learning Through Transmedia Storytelling," Anders Gronstedt and Marc Ramos write, "In the learning and development context, the training professional assists the employee or student to move along the Hero's Journey. The learner undergoes what is basically an inner exploration to understanding where she's currently at, where she should be, and then deciding to make a change."

Within the journey, the learner faces challenges but is not without the help of the L&D professional, their manager, peers, and others. The learner encounters and receives tools and resources to help them but also faces challenges. After the final challenge, the learner is rewarded. Within the work environment, that may be knowledge, a certificate, or the satisfaction of a job well done.

Gronstedt and Ramos conclude, "At the core of every training challenge, no matter how mundane, is a good story waiting to be told."

learners' performance. You still need to determine the performance you want to see and develop strategies to achieve it.

Scenario: During the training design team's needs assessment interviews, a Chimmey's store manager shared that he often witnesses incidents where customer service reps don't know how to effectively communicate with customers who become agitated about out-of-stock items. Some behave as though simply telling the customers the item is unavailable is enough. The manager would like to see all reps demonstrate the various strategies at their disposal for placating customers, first empathizing with the individuals and then helping them with their specific product challenge, such as locating a reasonable substitute or finding the item at another location.

The training design team initially drafts learning objectives based on Stephanie's stated needs. It then modifies and adds more objectives after uncovering additional areas of concern during the needs assessment. For example, based on the store manager's experience, the desired performance for reps includes demonstrating different

methods of satisfying customers' needs when they cannot get the items they are seeking. That task is more of an enabling objective that supports the terminal objective, focusing on addressing customer needs regardless of the circumstance. The team has pinpointed a behavior that answers the question of what needs to happen. During the define stage, it can have further discussions to determine what those methods are and what competency in demonstrating those behaviors looks like.

In practice: Glean objectives from the experiences you hear from storytellers. Translate those real-life stories into learning objectives and then convert those learning objectives into stories tailored to your e-learning course.

Translate Objectives Into the Storyboard

As you gather stories, be sure you understand how individuals demonstrate the competencies in real life. Ask questions to help clarify them so you can make sure they feel authentic.

Scenario: The training design team was already considering how the e-learning module would take shape.

It's nearly unavoidable not to ponder how the designers would bring to life on the screen the stories that feature customer and employee interactions. To ensure they understood the skills they were covering in the e-learning course, designers asked:

- Where do these interactions take place? Do we want to focus on interactions at checkout or include customers roaming the aisles?
- What objects could we use during the interactions? For example, do reps commonly use communication tools like two-way radios to talk with other employees or with their managers?

Once it became clear which behaviors the customer service reps should demonstrate, the team identified nuances that may influence the module's design. For example, are there additional people involved in supporting those behaviors? Such factors as whether reps have permission to use accommodations, such as giving discounts or approving special orders, were essential elements of stories the team would bring into the course.

In practice: Think broadly about competencies. You may uncover additional aspects and angles. For instance, is there a different performance expected by tenure, level, department, or position? Understand all factors so you can reflect that during the design and development stages.

2. Design

Now that you've collected the data and stories, you can move forward to the design phase. Use the same skills for designing an e-learning course with stories as you would for designing any e-learning course. However, there are differences in focus that will factor into your design.

Scenario: During interviews, Sydney, a Chimmey's customer service rep, shared a common yet compelling story regarding an interaction with a customer. A customer was angry about an item that scanned in at the wrong price. He had three small children with him, each of whom was at varying stages of meltdown. Sydney wanted to help but was equally frustrated because she didn't know what to do and no managers were quickly responding to her calls for guidance. As a result, she felt helpless and abandoned. After eventually getting managerial assistance, she moved on to the next customer and

didn't process what happened nor did the manager offer strategies for handling price discrepancies in the future.

That story focuses on two people's frustrations, fears, and vulnerability. Nestled beneath the surface is a failure of policy and procedures. In fact, that failure may have created the problem. The solution may be in resolving the pricing issues, teaching employees how to handle customer conflict, and educating managers on how to support reps throughout their shifts, regardless of what they encounter.

In practice: Here is where the focus shifts from traditional e-learning course design. As designers, we often look at how the failure in policy and procedures are influencing the bottom line. That is useful, but it may not motivate learners to change, as is the case in the scenario. Change the focus from presenting the policy and detailing how to follow it to homing in on the experience of the individuals involved and how the policy is shaping that. Shifting the focus from policy to people makes immediately clear how one influences the other.

Story Strategy

You likely have ample experience using performance data to drive course design, but you may not have as much incorporating stories. The story strategy is how you use stories to promote and support performance in the e-learning courses.

Scenario: The training design team decides to use the story of Eduardo throughout the e-learning course. Eduardo has stopped by the store after a frustrating day at work. On his way in, he receives a call from his wife that the kitchen sink is leaking. He wants to get in and out of the store quickly so he can get home to address the plumbing issue. After a 10-minute wait in line, customer service rep Analise tells Eduardo she can't accept his return because he purchased the item 35 days ago and the store has a 30-day return window. Eduardo is now even more frustrated, and he wants resolution immediately. The design team will also bring in a few one-off stories as needed to reinforce the behaviors reps should mirror.

In practice: There are several ways to draw on stories in an e-learning course, but the two most common are using one story throughout and using shorter, unrelated scenarios.

One story. Using one story throughout has several benefits. Learners spend a longer time with the characters and consequently become more invested in their lives. Learners also have time to become better acquainted with the characters' environment, role within the organization, and the challenges you've created for them.

The drawbacks to the strategy are that, as in any work of fiction, the characters' wants, fears, and behaviors need to remain consistent throughout the course. Their circumstances—and reactions to those situations—must also be realistic. Depending on the length and complexity of your course, using one story requires heavy input from SMEs on the realism and accuracy of the story line and considerable imagination and writing skills, both of which may lengthen the design and development timeline.

Multiple unrelated stories. There are likewise benefits to using the shorter, unrelated scenarios. For example, the course could cover various situations and people at different levels, positions, and circumstances. You then increase the odds of more learners recognizing themselves in at least one of the characters and feeling a connection to them. SMEs may also embrace this approach more because it may be easier for them to identify shorter scenarios than one longer one to which many learners can relate.

The drawbacks are the advantages of the one-story approach. Learners will have fewer opportunities to get to know the characters and their circumstances, so they will be less invested in the outcomes. You also may have to spend more seat time setting up each scenario. That additional information could weigh heavily on learners' cognitive load because they will have to take time to process the new information and distinguish it from information they received in prior scenarios.

The strategy you select depends on a variety of factors: SMEs' availability and willingness to help you develop scenarios, the variety of people and circumstances in the learner pool, and the course length. Ultimately, a longer scenario is a more immersive experience, which may help with learner retention. You can also combine the two strategies by having a set of main characters that hold different positions who are each experiencing only loosely related scenarios.

Incorporating Learner Interactions

A key difference between designing instructor-led training and e-learning courses is incorporating participant interaction into the learning experience. Creating a story-based course adds another layer of complexity because of the added need for realism.

For example, in an instructor-led course, you can have participants engage in role play and pretend they're in a store. Learners don't expect to see a real store. In an e-learning course that is more policy and procedure based, you may also be able to present a short scenario in text

Build Transformation Characters

Stories of transformation usually focus on the person who's doing the transforming. Character-driven stories place an individual's experience at the center of the narrative and the learner follows along as the character lives their life. Telling a story requires knowing the character. Characters have three dimensions:

- Psychological—actions, attitudes, opinions, beliefs, and worldview
- Sociological—the character's past, present lifestyle, culture, and living environment
- Physical—how the character physically looks and behaves

Stories come to life when a character demonstrates the ability to care about something. Caring raises the stakes and makes the character vulnerable once that element they value is threatened. Story lines need to plunge a character into a pre-planned situation that challenges the part of the character that cares. Stakes help learners empathize with characters. Even villains can be intriguing and relatable because of loss.

When relaying real-life stories, incorporate the dimensions of the real individual the same as you would with a fictional character. Draw out those elements to bring the story to life. Use the Building Characters Template at the end of this issue as you craft stories or retell individuals' lived experiences.

with no visual context. However, story-based e-learning brings with it an expectation that learners will be “inside” an environment and engaging in realistic interaction.

Scenario: For the customer experience e-learning course, the training design team has chosen to create a module that will feature Analise, Eduardo, and the point-of-sale system, all of which learners will interact with in some form. However, because the focus is on customer engagement, the team doesn’t need to concentrate on the store aisles or products, show customers walking around, or even display multiple customers in the store at once. Because the goal is to make one customer feel valued, the team only needs Analise, Eduardo, and a way for them to interact with one another—that is, via the point-of-sale system.

In practice: Here are two guidelines for designing story-based interactions.

Look to your objectives. Interactions can be challenging to design and develop, so choose wisely what will become an interaction. Perhaps the wisest and most economical use of interactions is to support the program’s learning objectives.

Always err on the side of simplicity. The saying “Just because you can doesn’t mean you should” applies to designing interactions. First always consider what is the simplest, most realistic way to portray an interaction. It’s not just your design and development time to consider—you must also factor in how much time learners will have to spend engaging with a complex interaction and whether it will be worth it to them. Realistic doesn’t mean complicated.

3. Develop

Now it’s time to develop a designed, story-based module. Because not all instructional designers develop, I am exploring this from a design perspective and the decisions you will need to make to influence the development process. This section focuses on three guidelines for the designer’s role.

Bring Stories to Life

People often connect emotions with storytelling. In her book, *Stories for Work: The Essential Guide to Business Storytelling*, Gabrielle Dolan writes, “Good stories make us

feel something as we listen to them—excitement, anger, sadness, empathy or enthusiasm.” Research also ties emotions to decision making because experiencing emotions tends to motivate individuals to act more than listening to facts does.

Stories are not inherently emotional. They simply provide a structure for describing experiences in a manner that features emotion. That means you and your SMEs must find the emotion in the experiences you want to use as inspiration for stories. Don’t choose just any emotion—it should be one that will motivate learners, such as joy or pride, rather than one that could potentially undermine the target performance, such as guilt or shame.

To identify the emotions that underpin an experience, ask the person in the situation to share how they felt at the time. It’s not always a clear-cut or easy discussion to have.

Scenario: Recall Sydney, the Chimmey’s customer service rep who struggled to navigate the pricing discrepancy with the frustrated customer. The training design team asked her how she felt during the interaction. She described feeling angry and disappointed with the organization. The team delved deeper to learn more about how the incident made her feel about herself and her ability to do her job. The team uncovered that it wasn’t so much the snafu that frustrated her but rather she felt that the lack of training and know-how made her look and feel incompetent.

In practice: While people do not want to feel animosity toward their company, they may be more motivated to avoid having negative feelings about themselves. Revealing strategies during the e-learning course for avoiding those undesirable personal emotions and experiences may be more motivating for learners than boosting the organization’s bottom line.

Ultimately, asking the affected individuals is the only way to know the truth. That said, you can also draw inspiration from your own or colleagues’ experiences if the situation is common. Once you have the emotions you want to focus on in the course, the goal is to show them rather than state what they are. For example, instead of writing “Sydney is angry that her managers didn’t come when she called,” write “Sydney felt her heart race as she called for her manager over

the loudspeaker for the third time, ‘Carl, please, please come to register 1.’ Exasperated, she slammed the phone down, and avoiding the customer’s gaze, she said softly, ‘I don’t know what to say. He’ll be here soon.’”

The first scenario tells learners what Sydney feels. The second one puts them in the room watching her from afar. They don’t just read the difference—they feel it. In fact, that’s one of the secrets to being able to describe a scene. Visualize yourself watching the scene from a distance and write down what you see. You may be thinking that the second scenario is too long. Yes, it often takes more words to describe a scene. Judge for yourself what the additional words—and time—contribute to your goal. Consider whether learners would rather read something long and meaningful or short and meaningless.

Create an Environment

After developing characters and building a story or stories around them, go further and physically ground them in a realistic environment that visually represents where the action takes place, whether in an office, in a retail store, or at home. Throughout the experience, the characters can appear in different, yet plausibly related, locations. You want learners to be clear about where the characters are in space and time. (See the Tools & Resources section for additional character-development guidance.)

Scenario: The scenario with Eduardo and Analise takes place in the retail store at the customer service counter. The design team replicates the look and feel of a typical store and counter area, drawing in the branded colors associated with Chimmey’s that learners will recognize but leaving out the retail company’s logo.

In practice: Grounding matters once you introduce realism, because learners will begin to expect a realistic portrayal of both the characters and the environment. Seeing characters floating with no background or a poorly executed one is distracting and will begin to weigh on learners’ cognitive load as they attempt to orient themselves in the characters’ world.

Ensure that the environment is the same type of space where the work takes place in real life, ideally in a place learners recognize. Unless required, there’s no need to feel pressure to duplicate the environment exactly. In fact, taking pictures of a specific location, such as a warehouse,

Storytelling and the Brain

Paul J. Zak, founding director of the Center for Neuroeconomics, conducted research that shows that character-driven stories with emotional content result in better listener understanding of the key points a speaker wishes to make and enables better learner recall of those points weeks later.

Zak also found that stories trigger the empathy-producing hormone oxytocin, which is the chemical behind human connection. Oxytocin affects social interactions and how close individuals feel to people around them.

The body releases other chemicals in listeners’ brains when they hear a story:

- Cortisol is the chemical that tells the brain to pay attention.
- Dopamine affects memory, learning processes, and information retention. Heightened interest raises dopamine levels, increasing the likelihood of information retention.
- Endorphins trigger happiness and ward off anxiety and sadness. A listener finding something amusing, for example, can trigger that hormone.

Note that stories do not trigger those hormones inherently. Storytellers must do the work by shaping into the story structure content that is interesting, relevant, and exciting to listeners.

and using it as a background can backfire if the organization moves to a new location or something or someone is captured in a background that’s changed. Or the company may not want elements such as the uniform or product labels in the course. The environment only needs to be similar so that learners can relate. A generic office or warehouse will do.

Incorporate Multimedia Strategies

Consider using multimedia components, such as images, video, and audio, as part of your story design strategy.

Scenario: The training design team has planned for numerous multimedia features throughout the e-learning

course. For example, it will use a series of animations to depict the scenario with Eduardo and Analise. The designers will have voice-overs for each character. They also have opted to bring in background music that starts out calm but builds the longer Eduardo is waiting in line to help relay the building emotions he is feeling.

In practice: Adding multimedia can make learning more memorable and more effective.

Images. In addition to using background images to create an environment, select imagery that represents the characters. There are several considerations to undertake when using imagery to portray people, including whether to use photorealistic imagery, illustrations, stock photos, or real-life photos.

Whether you use photorealistic imagery or illustrations largely depends on your organization's preference and guidelines. If you don't have to comply with corporate marketing guidelines or have guidelines specific to your L&D team, you or a client, sponsor, or SME may make that call. There is no universally preferred style, but part of the effectiveness of storytelling is learners being able to recognize themselves in the portrayed situations. That helps learners connect with the characters and build empathy. That connection is much easier to make if learners are seeing a human.

Note, though, that using photorealistic imagery could backfire if the character looks like a model or individual whom learners wouldn't see in their environment. Keep diversity of representation in mind. Some designers will opt for using illustrations, stick figures, or even animals to avoid potential conflicts. If you do not have specific guidelines to follow, test your assumptions with the target audience to better understand what type of imagery your learners best respond to.

Additionally, you may prefer to personally photograph people in the target audience or accessible co-workers and use those images as characters instead of using stock images. The benefits of that approach are that it is less expensive and only requires the photographed individuals' consent. It also adds authenticity to your course, which may influence learners' connection and empathy with the characters.

However, people often overestimate their ability to take good high-resolution images. Poor lighting or

the inability to recognize and correct poor lighting can diminish image quality. Despite reduced monetary costs, planning and participating in photo shoots requires time. Additionally, if a photographed employee leaves the organization, you may have to remove their images from the course.

Videos. Instead of reading a story independently, learners could watch videos that show actors playing out an entire narrative or shorter scenarios. Videos are a great option, and if done well, they can go a long way in immersing learners in the story. One drawback is the time and expense associated with shooting a quality video that enhances the learning experience rather than detracts from it. Likewise, videos are a passive experience, so ensure you support them with other interactions that engage learners with the content and process of what they watched.

Audio. Successful storytelling is possible without audio. Learners can read the story and dialogue and use their imaginations to determine how the characters sound. However, incorporating audio is an additional engagement opportunity that may have a positive effect on the learning experience. Audio adds realism to the course and—most importantly—gives characters their own voice. Having a voice matters because, in some cases, the characters will be proxies for the learners.

4. Deliver

In an e-learning context, course distribution is the delivery phase. With that, explore ways to evaluate whether your story-based design strategy worked as intended.

Scenario: Stephanie won't know what was effective with the new e-learning course until a considerable amount of time has passed and a sizable number of learners have completed the course. However, it won't be readily apparent how the course contributed to performance results until Stephanie and the training design team develop a strategy to capture that data. They opt to hold a post-training focus group to ask questions and record participants' responses. Rather than asking questions about how participants liked the course or what they learned, they ask how learners felt when Analise was confronted with a challenging situation. They also ask whether that situation was familiar to participants

The Story Spine

In 1991, Kenn Adams, a teacher, author, and the artistic director of Synergy Theater, created the story spine. Improvisation actors often use it to develop stories on stage.

The story spine is not a story itself but rather, as Adams writes, “It’s nothing but the bare-boned structure upon which the story is built. And, that’s what makes it such a powerful tool. It allows you, as a writer, to look at your story at its structural core and to ensure that the basic building blocks are all in the right place.”

Adams gives eight introductory phrases to help a storyteller craft the action.

- Once upon a time ...
- Every day ...
- But one day ...
- Because of that ...
- Because of that ...
- Because of that ...
- Until finally ...
- And ever since then ...

Adams’s story spine, which has been adapted extensively since he first created it, is a useful template for creating stories of transformation. It loosely mirrors the hero’s journey in that it focuses on a character’s journey from the ordinary world to the new one and how the individual was transformed as a result.

and what they would tell Analise if they could meet her. The participants’ answers reveal how invested they were in the story and show Stephanie and the team how the story potentially influenced the way participants see their jobs and themselves.

In practice: In addition to the post-training focus group option relayed in the scenario, you can add to any standard course evaluation models you already have in place, such as Kirkpatrick’s four stages of evaluation. Use questions that specifically ask about the story-based approach so that learners can tell you how they believe the stories motivated them to complete the course and demonstrate the desired performance.

Conclusion

Integrating stories into e-learning may be a challenging, time-consuming endeavor, but so is repeatedly using the same strategies that are not shifting performance. The goal of incorporating stories into e-learning is to get learners invested enough in the training experience to motivate them to action. Knowles’s work in andragogy shows that adults tend to be more intrinsically motivated, so creating learning experiences that tap into what learners personally need is more likely to drive change. Based on research on

storytelling, stories can spark emotions and build empathy, which are also behavior change motivators.

The customer experience course that Stephanie and the Chimmey’s training design team built will provide a space for customer service reps to explore strategies for engaging with customers in a safe, low-consequence environment and one that encourages practice and exploration. Stephanie learned through the design process that fresh approaches to performance may require new ways of supporting the customer service team as employees and individuals.

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Tools & Resources

The Story Spine Template

Kenn Adams's story spine provides introductory phrases that help individuals craft a story's action. Use the phrases to shape your own stories, or use them as a template while collecting subject matter experts' experiences.

Example

Phrases	Outline	Operation
Once upon a time ... Every day ...	Introduction	Detail the main character and the story's location along with the main character's routine.
But one day ...	Event	Introduce an element that breaks the main character's routine.
Because of that ... Because of that ... Because of that ...	Middle	Identify the consequences of that break. Each step builds on the previous one, with suspense growing because listeners don't know whether the character's outcome will be positive.
Until finally ...	Climax	Relay the character's actions and lessons learned. What has the character learned? How has the character changed?
Ever since then ...	Conclusion	Describe the new routine the character has established as a result of those learned lessons or changes.

Template

Once upon a time ...	
Every day ...	
But one day ...	
Because of that ...	
Because of that ...	
Because of that ...	
Until finally ...	
And ever since then ...	

Building Characters Template

Use this template to detail a character’s strengths, weaknesses, fears, stakes, and desires within the psychological, socio-logical, and physical dimensions. If interviewing an individual about their real-life experience, use the template to guide you in asking questions to capture additional information in each dimension.

Name			
Age			
Purpose			
	Psychological	Sociological	Physical
Strengths			
Weaknesses			
Fears			
Stakes			
Wants			

Unlocking the Power of AI



UNLOCKING THE POWER OF AI

AUTHOR

Myra Roldan

Myra Roldan is a technologist, author, and international public speaker on curation, augmented and virtual reality, voice, artificial intelligence, and design. She brings a unique mix of technical, business, and learning experience innovation to the field of adult education and competency development.

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**Content Manager,
Technology Application**
Alexandria Clapp

Editor, *TD at Work*
Patty Gaul

Managing Editor
Rachel Pelovitz

Senior Graphic Designer
Shirley E.M. Raybuck

It's Monday morning and Rosa, an instructional designer on a lean learning team, is feeling overwhelmed as usual.

She has three new e-learning course requests to design this month on top of the two courses she is already creating. The subject matter experts sent Rosa a few PowerPoint slide decks, meeting notes, and a 100-page manual, but they keep rescheduling kickoff calls. As Rosa refills her coffee mug, she decides to try a new approach—using a generative artificial intelligence tool.

“Claude, review the following course topic materials and requirements, then generate a draft outline with some meaningful interactions for a 30-minute e-learning course,” Rosa types.

Ten seconds later, the application confirms, “I’ve compiled a high-level outline for this course, drawing on the provided materials. Please review and let me know if any changes are needed.”

Rosa is amazed at the high-quality outlines that Claude produced in just a matter of seconds—work that would have taken her hours. She reviews the outline and sends it to her SMEs, requesting a new kickoff call to review the draft outline. This newfound time-saver has made Rosa’s Monday less daunting.

Those in the L&D profession, like Rosa, face an AI reckoning. Are you leading the charge or are you disrupted?

AI adoption is accelerating across industries, but many learning teams may not be moving the needle fast enough. With 60 percent of companies increasing investments in AI, according to McKinsey, now is a prime opportunity for learning teams to prioritize its usage. However, although some learning professionals have experimented with ChatGPT or other generative AI tools, few know what the game-changing technology really is or how to leverage it to reinvent how the tools work and create content.

In this issue of *TD at Work*, I will share:

- A simplified explanation of how AI works
- The difference between traditional AI and generative AI
- Sample use cases
- A brief overview of how to get started using AI
- Some notes on privacy and ethics

The ABCs of AI

“Hey Alexa, what is artificial intelligence?”

Imagine asking your Alexa device to explain AI and machine learning in simple terms. While Alexa has a grasp on basic facts, the true act of demystifying AI’s inner workings requires a human perspective. AI has become ubiquitous, powering everything, including our smartphones, streaming services, and social media platforms. It has silently and stealthily integrated itself into our daily lives. However, like Alexa, current AI does not have the ability to fully grasp what everyday people need to know versus what engineers need to understand. In this section, I will detail the fundamentals of AI in a way that provides clarity without the technical jargon.

When explaining AI, I like to use a car analogy. AI is comprised of two main components: machine learning (ML) and deep learning (DL). The car represents the AI system, where you sit in the driver’s seat. The engine is ML; it powers and enables the car to move—just as ML models power AI systems to function, analyze data, and perform tasks, such as making predictions. The fuel that powers the car’s engine is DL, which provides immense amounts of data that feed and train complex ML models to recognize patterns and features.

But how does AI really work? Fundamentally, it relies on two core things: data and algorithms. An ML model ingests data—such as text, images, videos, and sensor readings—to train the AI about the world and what we want it to understand. Algorithms are mathematical formulas (think of them as recipes) that process the data, identify complex patterns within it, and use those patterns to complete tasks without needing explicit human instructions for every step.

These are some other key techniques that enable different AI capabilities.

Neural networks are modeled loosely after the human brain. They have interconnected nodes that can identify

The Soul of Artificial Intelligence

All laptops and desktops have a central processing unit, which is the brain of the system. To perform complex work, artificial intelligence models require powerful hardware known as graphics processing units to run complex algorithms quickly and efficiently.

The GPU is the soul of the system. For years, GPUs have been mainly associated with gaming computers; but today, they are key to deep learning technology.

If you’re wondering how many GPUs it takes to train a machine learning model, the answer is that it depends on the type of model and the number of tasks the large language model needs to perform. For example, 10,000 GPUs trained the ChatGPT LLM.

The recent AI boom has created GPU chip supply chain issues and shortages that could affect the advancement of AI. Such a bottleneck verifies the popularity of the new technology, which is a good problem to have, but solutions are slow. The US 2022 CHIPS Act provides billions of dollars in funding for domestic chip research, development, and production. But those investments are not directed specifically at GPUs, so it could take as long as two to three years for chip manufacturers to get up and running.

data patterns, getting smarter with more data. The networks power abilities such as computer vision—which enables computers to see and understand digital images and videos—and natural language processing, which enables computers to understand and respond to voice, text, and music.

Generative adversarial networks generate realistic content such as images, videos, or audio. They learn to mimic the world.

Supervised learning refers to training AI on labeled data. For example, AI can learn the differences between images of cats and dogs by analyzing tagged or labeled images. People interact with supervised AI models every time they complete a security CAPTCHA on a website.

Unsupervised learning is when AI finds hidden patterns and relationships in messy, unlabeled data so it can group and categorize things on its own.

The Age of Generative AI

In the 1990s, it took what felt like hours for dial-up internet to load a simple webpage. Now, high-definition movies stream instantly on any device. AI has undergone a similar evolution, moving from narrow, expert-only capabilities to the dawn of mainstream generative AI that anyone can use.

The origins of generative AI reach back decades, with early research papers on data-generating algorithms published in the 1980s. But such technology requires significant computational power, such as graphics processing units. The 2010s saw the rise of generative adversarial networks for images and WaveNet for audio generation. At the end of 2022, generative AI made its debut on the world's stage with breakthrough models such as DALL-E for image generation and ChatGPT for text generation, signaling the start of a new era: the Fourth Industrial Revolution.

Traditional vs. Generative AI

Traditional AI solves specific problems. It is typically rule based and uses a set of pre-programmed instructions to achieve its goals. For example, an instructional designer can use a traditional AI system to conduct a sentiment analysis based on survey data. The system would have a set of programmed rules that define what constitutes various sentiments. The rules may specify that a survey

response of “strongly disagree” is negative and a response of “strongly agree” is positive.

Generative AI, on the other hand, is designed to create new content based on historical data. It uses ML first to learn from data and then to generate new content similar to the provided data. An instructional designer can use the generative AI system to create an interactive safety compliance course, for example. The system would use

Fourth Industrial Revolution

Coined by Klaus Schwab, founder and executive chairman of the World Economic Forum, the term *the Fourth Industrial Revolution* first appears in his 2016 article by the same name. Also known as 4IR or Industry 4.0, the phrase refers to the current era of rapid technological advancement fusing the digital, physical, and biological worlds. Emerging technologies such as artificial intelligence, advanced robotics, and the Internet of Things are driving unprecedented changes across industries and society. The revolution builds on the mechanization of production, mass production, and digital automation of previous industrial eras.

4IR means that corporate L&D teams must develop new strategies and priorities. As AI, automation, and smart technologies begin to transform jobs and their required skills, learning teams must reskill and upskill workforces at faster rates. They need to deliver more personalized, tech-enabled learning while ensuring human-centric leadership development—and they must be able to quantify their solutions with clear data. Gathering data from various sources within the business and aggregating it to learner data is an important step to move beyond the collection of enrollments and completion rates to a better understanding of skills gaps, thus optimizing training and demonstrating valuable return on investment.

As workers adapt to more tech-augmented roles, they require strong change management capabilities. By proactively aligning learning programs to business goals and 4IR shifts, L&D teams can ensure they remain relevant and valuable to the businesses in which they operate.

a dataset of existing safety data and information relevant to the company and then generate course content with interactive features or improvements to previous courses.

How Does Generative AI Work?

The meticulous craft of course content creation involves hours of research, writing outlines, creating storyboards and drafts, and finding the right images and animation. Many of the advancements in generative AI that L&D professionals are most excited about are on the language front—those that rely on large language models. An LLM is like a predictive text algorithm with superpowers. For

example, when you're writing a text message and your smartphone tries to autocomplete the next word in your message, that is a basic language model at work. It uses the words you've typed to predict the next word.

LLMs that power generative AI systems such as Bing Chat, Bard, and ChatGPT have analyzed a huge amount of text datasets, which is equivalent to millions of books, articles, research papers, online posts, and websites. LLMs are expert predictors based on digesting massive text bodies. They use that data to calculate complex statistical relationships between words and phrases using something called *parameters*—also known as fragments of a word—to forecast the next words with high accuracy, enabling the application to generate human-like text.

When you use an AI tool, you must provide a request called a *prompt*, which includes the instructions you give the generative AI tool, often specifying the desired outcome. A prompt may be a question such as “What are the most popular L&D frameworks?” Alternatively, you could seek a request for information such as “Provide a list of questions I should ask stakeholders when conducting a needs assessment.”

The AI tool processes prompts through its LLM to generate the most relevant content. However, to get the best possible response, you must provide the tool with context, which refers to the information or background knowledge (such as previous sentences or paragraphs, specific keywords or phrases, documents, images, and code snippets) you supply to the AI tool so it can generate a coherent response.

When providing that context, I recommend taking the approach of pretending you are speaking to a teenager who doesn't have real-world experience and requires additional information in addition to, at times, explicit instructions to understand the context of the task you are asking them to complete.

Before You Start

The goal of AI is not necessarily to copy human thinking, but to use technology in smart ways that can augment and assist humans. AI excels in areas where human weaknesses exist, such as processing lots of data quickly,

Sample Generative Artificial Intelligence Prompts for L&D

To get started with generative artificial intelligence, here are a few ideas for L&D prompts along with instances of when you might use them.

- “Generate a list of potential learning objectives.” Identify the skills or knowledge that learners should acquire.
- “Write a learning plan.” Outline the steps that learners will take to achieve the learning objectives.
- “Create a learning environment.” Create a space where learners can learn effectively.
- “Develop learning materials.” Generate materials that support learners' understanding of the content.
- “Deliver instruction.” Use a variety of methods, such as lectures, workshops, or online courses.
- “Create learning checks.” Use multiple mediums, such as quizzes, exams, or performance assessments.
- “Develop feedback on incorrect steps or actions.” Help learners identify areas for improvement.
- “Create short tips to coach learners on covered materials.” Enable learners to apply what they have learned to real-world situations.
- “Review instruction materials to see where several learners have difficulty.” Identify areas for instructional improvement.

doing repetitive tasks consistently, and not getting tired. Because of AI's abilities, some people have concerns about AI taking over their jobs and being displaced; many also express concerns about their privacy and how their data is being used and by whom. Those concerns are not unfounded, but AI is still limited compared to our human abilities.

Before unleashing generative AI into your workflow and your learning content, pause for perspective. As L&D professionals, we tend to suffer from the “squirrel effect.” Every time the L&D space encounters

a new technology, that single advancement becomes all anyone can talk about. In our eagerness to be the first to adopt the latest and greatest technology (coupled with a zest for innovation), we risk letting AI run unchecked.

Many of those who have encountered generative AI end up suffering from the Dunning-Kruger effect, a cognitive bias that makes someone believe they are more competent with the technology than they really are. Generative AI tools redact the complexities of the technology, giving users simple interfaces that make it seem as if the technology isn't such a great feat.

Myths vs. Realities About Artificial Intelligence

Myth	Reality
Artificial intelligence can fully automate course and curriculum design.	AI can assist, but instructional design still requires human creativity, subject matter expertise, and pedagogical principles.
AI tutors and coaches will replace human teachers.	The social-emotional connection of human teachers is vital for learner success. AI tutors are narrow supplements, not substitutes.
AI will make learning professionals obsolete.	AI will augment human capabilities, enabling learning teams to focus on higher-value work. Employees will need new skills to direct AI systems.
AI-generated content is as good as human-created content.	AI content has limitations in nuance, accuracy, and originality. Learning experts must review and refine content.
Learner data and AI are objective and fair.	Biased data, unfair algorithms, and lack of transparency can propagate inequities. Users must ensure ethical AI design.
AI is unbiased because algorithms are mathematical.	AI bias emerges from flawed data and a lack of diversity in training datasets. Proactively test for fairness.
Implementing AI is simple: Just plug and play.	Realizing AI's full potential requires careful integration with workflows, extensive training, and iteration. Quick fixes rarely work.
AI can assess soft skills and analyze emotion and engagement.	AI cannot yet effectively measure subjective social-emotional traits such as leadership or empathy that require human insight.
AI will fully personalize learning content.	While AI enables greater personalization, individual learning differences necessitate nuanced human design tailored to cohorts and contexts.
AI is a black box: You can't understand how it works.	AI should provide transparency into data practices and a general sense of how models function. Total opacity is unethical.
More learner data always improves AI performance.	Irrelevant or poorly processed data reduces model accuracy. Focus on quality over quantity and purpose specification.
External AI vendors remove liability for misuse.	The learning team remains accountable for monitoring vendors and ensuring responsible and ethical AI use.
Encrypted data is sufficient to protect learner privacy.	Couple robust technical protections with restricted data-handling policies and access controls.
Learner consent for data collection is enough.	Leverage ongoing transparency, the ability to forget, and use control.
Learning teams aren't responsible for AI vendors' data practices.	Learning teams must validate that vendor security provisions meet stringent internal standards.

Don't Trust the Hype

Learning professionals must pay attention to the hype surrounding generative AI. Approach generative AI tools, which promise the ease of productivity and content generation in seconds, with restraint. Comprehensive research and collective data on adoption trends in corporate training are still emerging. The innovations garnering the most attention lack rigorous evidence validating their impact or superiority over other learning tools. Many proclaimed AI trends represent hypothesized potential more than quantified transformations of real-world practice. The possibilities of personalized AI tutors, automated content creation, and predictive analytics are promising, but they still require extensive piloting and iteration before the L&D industry can draw conclusions.

ChatGPT is not a silver bullet. Start creating and validating use cases, scientific comparisons of outcomes, and transparency from vendors when evaluating AI tools. Learning teams should also seek independent analyses from trusted research firms, such as Gartner and Forrester, while avoiding overpromising unproven benefits to stakeholders. Adopt a spirit of informed experimentation and strike a pragmatic balance between AI optimism and caution as the technology matures. Embrace the innovation while establishing oversight. Adopt AI with your eyes wide open.

Develop Partnerships

When integrating generative AI into workflows, take an ecosystem approach and strategically cultivate partnerships with different vendors and experts to create a balanced set of capabilities attuned to your organization. Rather than attempt to build all AI solutions in-house, accelerate progress by collaborating with partners in the AI ecosystem.

- Work with model providers to customize LLMs for education-specific applications.
- Partner with education-technology companies offering user-friendly tools tailored for learning.
- Leverage infrastructure partners to enable scalable cloud computing for AI tools.

The key is to tap into outside expertise while maintaining flexibility. Avoid overreliance on any single vendor or platform.

ChatGPT is not a silver bullet. ... Adopt AI with your eyes wide open.

The Required Skills Behind AI

The rise of no-code AI has shaped the perception that anyone can easily build their own AI solutions. In reality, people often underestimate the skill levels that best facilitate effective applications. My early experiments with no-code AI tools is that they lacked the quality and sophistication needed for real learning impact. Many learning professionals do not have the hardcore technical skills to engineer robust AI systems from scratch, but they play a vital role in guiding ethical, learner-centric applications. To build successful AI solutions for learning, teams need complementary roles such as data engineers, ML engineers, data scientists, and project managers.

Instructional designers and learning engineers can experiment to uncover ways AI tools can enhance pedagogy and curriculum based on instructional design principles. Learning designers and facilitators can test systems to ensure they improve learning outcomes. Learning leaders can establish policies for ethical AI use. On the technical side, data engineers construct data pipelines, integrate systems, and ensure quality data collection. Data analysts derive insights from learning data to guide AI development. Data scientists and ML engineers have skills in programming, algorithms, and statistics to build optimized AI models. Project managers coordinate timelines, requirements, and communication.

Each role contributes unique strengths. Learning teams focus on human expertise in pedagogy, curriculum design, and understanding learners. Technical staff lend their skills to data modeling, programming, and engineering robust AI systems. Partnerships among those domains are key to moving education into the new AI era. Your L&D team doesn't need to have all the skills in-house but should cultivate an ecosystem of internal and external experts.

What AI Can Do for L&D

For corporate learning teams, AI enables promising applications such as personalized learning at scale, intelligent tutoring systems, and automated content generation. However, AI still has distinct limitations in the learning context. For example, while AI can deliver customized content and recommendations, it lacks the empathy, emotional intelligence, and true mentorship abilities of human coaches.

AI-generated content requires careful human curation to adjust tone, refine messaging, and insert authentic details. Although AI assessment engines can efficiently score employees and surface patterns, we must contextualize and properly act upon AI insights to avoid oversimplified or biased solutions. A Deloitte review found that, if unchecked, biased AI training data widens skills and opportunity gaps in the workforce. AI can learn bias and penalize individuals in a variety of areas, such as gender, race, or disability status.

Striking the right balance between AI and human intelligence is essential. With responsible design and implementation, learning teams can harness AI's capabilities and value for learners while proactively mitigating the risks of over-automation.

Although use cases are still emerging, there are four areas in which learning teams can use AI to provide a high return on investment: curating and customizing learning content; personalized learning paths; process automation; and learner data analytics.

Curating and Customizing Learning Content

Content curation plays a key role in L&D. Through internal and external content curation, we can gather critical information for specific projects and use it to customize training solutions. For many learning professionals, generative AI holds great promise to provide customized content curation at scale with LLMs.

Using AI, learning platforms can automatically generate personalized reading lists, podcast recommendations, and microlearning content for each employee based on their interests, knowledge gaps, and learning goals. First, L&D must train the AI tool with the company's learning materials as well as each employee's

historic performance and learning data. Then, the AI can use natural language processing prompts to produce tailored, curated content that aligns with each learner's needs. To truly personalize the learning journey, AI can collect learner feedback data to continuously improve its understanding of the learner's preferences.

People often underestimate the skill levels that best facilitate effective applications.

Personalized Learning Paths

For years, I've listened to learning teams talk about personalized learning paths, and some L&D professionals have managed to implement a low-level version using rules-based, if-then statements—without AI. It's an approach that has always felt like a half-baked solution to the problem of individualization.

Similar to content curation capabilities, AI ML algorithms can analyze employee profiles and performance data to construct individualized learning paths using existing internal learning content, providing every learner with maximally relevant content to improve their capabilities and productivity. Going beyond merely recommending content, AI can dynamically sequence and pace learning activities, assess mastery, and modify the path in response to the learner's evolving needs.

The power of ML algorithms combined with the expansive scope of company data unlocks hyper-personalization. As the system ingests more data points over time, the personalized paths become smarter and more significant, providing employees with the right learning solution at the right time in the right format. Using that method, companies could maximize engagement and retention as well as realize on-the-job performance gains. Studies, including "The Impact of Artificial Intelligence on Learner-Instructor Interaction in Online Learning" by Kyoungwon Seo and colleagues, show personalized learning can

increase course completion rates by 60 percent and double the speed of training.

Process Automation

One of the main pain points that many L&D professionals have shared with me over the years is administrative tasks such as intake processing of requests, course scheduling, managing enrollment, allocating resources, tracking completions, and other repetitive manual workflows.

AI automation tools can handle many of the high-volume administrative tasks involved in corporate learning, saving teams countless hours. AI tutors can provide guidance to learners with convenient, 24/7 support, freeing up instructor time. Meanwhile, the automation of repetitive manual workflows enables

administrators to focus on more-strategic initiatives such as curriculum innovation, program evaluation, and forging partnerships across the business to drive culture change. The workload reduction, coupled with powerful analytics from AI systems, unlocks the potential for learning teams to function at a strategic level.

Learner Data Analytics

Historically, learning teams have had to wait until after learners complete a course to gather and evaluate feedback. However, with AI analytics, real-time data enables continuous optimization, even midway through a course. As learners participate in virtual or in-person training, algorithms can ingest engagement data, knowledge assessments, and feedback surveys to produce analytics dashboards. The dashboards provide visibility into the effectiveness of the learning solution, knowledge retention levels, and learner satisfaction. For example, when metrics indicate certain modules are not resonating with learners or concepts are unclear, you can adjust the course at that moment rather than waiting until learners complete the training program.

Over time, AI analytics uncover insights such as macro trends, systemic knowledge gaps, and opportunities to improve modalities to refine overall learning strategies. For key learning programs, AI can quantify the downstream impact on employee productivity and business key performance indicators by demonstrating the ROI on critical training investments, enabling learning teams to build credibility with senior leadership and business units. The insights unlocked by AI analytics empower learning organizations to evolve from being reactive to proactive, thereby continuously improving quality, documenting value, and becoming a strategic driver of organizational success.

Case Studies: What Works and What Doesn't

Khanmigo

Khan Academy uses artificial intelligence to offer personalized learning experiences through its Khanmigo platform, which provides each student with AI-powered mentors tailored to their needs, such as an Isaac Newton physics tutor or a Warren Buffett career coach. The platform helps students develop critical thinking skills via debates and writing exercises while providing feedback for improvement. Khanmigo also assists teachers by generating lessons and progress reports, saving them time to focus on personalized instruction. Khan Academy addresses ethical concerns around data privacy and bias by implementing strict data protection policies and continuously monitoring its AI models.

AMZN.O

Amazon built an AI tool that helped to process a mass number of job applications and find top candidates. The AI system trained on resumes over 10 years—largely from men, which tend to be the largest applicant pool. The AI tool, therefore, learned to penalize resumes that contained the word “women’s.” Amazon quickly scrapped the tool.

Easy Ways to Get Started

L&D teams should begin by developing a strategy for how to use AI, how to manage data, how to disclose AI usage to learners, and who will have access to specific tools. Understanding that many organizations are still in the experimentation phase, I recommend starting with tools that are already in the workflow. Whether or not

you realize it, many of the tools you use are AI enabled (for example, Microsoft Office 365, Google Workspace, Canva, and Zoom). Get comfortable using the AI features in those familiar tools for small projects while documenting the benefits and risks observed.

If your organization does not have policies and procedures around the use of generative AI, work with your legal and IT departments to get approvals to experiment with free trials or credits offered by leading AI platforms. Practice extreme transparency regarding your activities and invite feedback from peers across functions to foster organizational learning and surface concerns early. If you are a department of one or work in a smaller company with no dedicated legal team and limited IT staff, ask for guidance on the acceptable use of AI within the organization. In such a circumstance, you may need to educate leadership on the pros, cons, and risks. Take the time to read the fine print for every application you would like to propose.

Once you are ready, start small, balance innovation with oversight, and move slowly but steadily to ensure you capture lessons learned, risks, and ROI metrics.

No Code, No Problem

No-code tools can be a good way to start with AI (bearing caution in mind). They democratize access to augmented intelligence through simple drag-and-drop interfaces, so anyone who already uses productivity tools on the market (such as Microsoft Outlook or Articulate Studio) can use them. Here are some tools to consider.

Learning text generation. With AI text generation tools, such as Copy.ai, Jasper, Writesonic, and Rytr, teams can quickly produce draft content, video and audio scripts, summaries of instructional materials, and informational texts for their offerings, reducing the level of effort for content production.

Rapid course creation. For accidental instructional designers, departments of one, and small learning teams, AI tools can create course and performance support assets with the click of a few buttons. Use tools such as Coursable to generate a completely curated course from a prompt; Dunno can generate assessments; and LectoMate makes job aids that include key points, flashcards, mind maps, and quizzes by ingesting existing course materials.

Interactive presentations and videos. AI video and presentation tools such as D-ID, Synthesia, VEED, DeepBrain, Descript, and 7taps produce interactive videos and presentations from text or a simple prompt. Use those applications alongside text-generation tools to create rapid and engaging lessons. Speech recognition features facilitate presenting scripts or slides without having to hire talent, thereby reducing the overall time and cost of production and making it easier for smaller learning teams to create high-quality learning in less time.

Intelligent tutors. One of AI's most talked-about potential uses is intelligent tutors. Some available tools include Mobilecoach.com, Tutor.ai, Unschooler.me, and Adaptive Academy.

Learning data analytics. No-code AI-enabled data analytics tools such as DataRobot assist learning teams with drawing strategic insights from their learner data without having to write a single line of code. The platforms analyze and visualize collected data such as learner completion rates, assessment scores, engagement rates, and behavioral analytics, which helps learning teams synthesize data into actionable tasks.

Start small, balance innovation with oversight, and move slowly but steadily.

AI Automation

As generative AI has evolved, society has witnessed the introduction of AI automation tools, such as Zapier and Make. Those tools integrate AI into existing workflows by connecting two systems—AI and your existing tools—by defining triggers for events that then kick off actions among different applications.

Examples of automation you can experiment with using automation plug-ins include:

- Creating automatic training delivery summaries that you can share with learners

Artificial Intelligence Pilot Project Tips

Running focused pilot projects is a great way for learning teams to gain hands-on experience with artificial intelligence without high-stakes risks. To ensure your pilots will result in wider AI success:

- Start small. Focus the scope on a single use case and limited learner cohort.
- Set measurable goals. Target specific metrics around efficiency, engagement, and satisfaction.
- Assign project leads. Dedicate skilled staff to guide the pilot and share findings with project stakeholders.
- Involve stakeholders. Get input from all affected teams during the pilot.
- Gather feedback. Survey learners and stakeholders on the AI experience.
- Evaluate rigorously. Analyze pilot data, success metrics, and feedback to shape a larger rollout.

Well-planned and executed pilots build organizational knowledge, refine processes, identify pitfalls, and generate buy-in for scaled AI adoption.

- Developing automatic action steps based on knowledge level to reinforce learning
- Analyzing survey response sentiment and generating a report that you save to a repository
- Translating a video or audio file automatically to create a meeting transcript that the program emails to attendees
- Adding a learning project request to an intake workflow that adds the project to a list application such as Trello, assigns a readiness score, and identifies the level of effort

Ethics, Privacy, and Security

Now that we have covered the *what*, *why*, and *how* of generative AI, let's examine the ethical concerns, privacy risks, and security threats to consider. Understanding the risks will empower you to create mitigation strategies against them from the start—not only to meet fast-evolving regulatory requirements but also to protect your business and earn consumers' digital trust.

Ethics Concerns

If you have used any of the vast, and growing, number of generative AI tools, you may have noticed that they have a propensity for lying or making things up. You may laugh or scoff at the errors and lies in jest when you hear about them, but there is a big difference between using generative AI for personal experimentation versus using it in a business setting. Ethical AI is designed and used to respect

human values and rights, such as individual rights, non-discrimination, and nonmanipulation.

Generative AI has many ethical concerns—including bias, misinformation, and authenticity.

Bias. Generative AI is only as good as the historical data serving as its training base. And let's face it, human history is full of biases. That means that a generative AI tool may produce content that reflects the biases present in the training data, which could lead to the creation of harmful content, such as hate speech or propaganda.

Misinformation. Generative AI tools, if used inappropriately, can create satire or parody; false context or connection; and misleading, manipulated, impostor, or fabricated content.

Authenticity and transparency. Generative AI systems can create content that is indistinguishable from human-created content, leading to lack of clarity on the source of information.

In its study on Stable Diffusion, a text-to-image generative AI tool, Bloomberg discusses how generative AI models are more biased than real-world data. According to the research article, as the use of text-to-image AI grows, people could artificially generate up to 90 percent of internet content in the near future. Biased models do not simply perpetuate harmful stereotypes; they also have the potential to encourage unfair treatment, such as in policing. In fact, the US government and several international governments, such as those in Japan, the UK, and India, are considering proposals to safeguard against the biases baked into advanced AI models.

Before integrating generative AI into the L&D workflow, answer these questions:

- Who is responsible for the ethical use of generative AI—the AI provider, the AI model trainer, or the content creator?
- How do we prepare to introduce generative AI into the workflow?
- How do we ensure we are transparent about the use of generative AI in our content creation and daily operations?
- What are the potential unintended consequences of using generative AI?
- How do we ensure that the generative AI tools we use do not harm individuals or groups within our organization?

Privacy Risks

The Center for AI Safety published a paper on the catastrophic risks of AI and grouped them into four categories: malicious use, AI race, organizational risks, and rogue AIs. The main privacy risks from a business perspective are:

- **Data collection.** Generative AI systems collect large amounts of data to train their models. That data includes personal information such as names, addresses, and phone numbers.
- **Data misuse.** Once collected, the data is at risk for misuse by hackers or other malicious actors. For example, it could create misinformation or deepfakes.
- **Data breaches.** Generative AI systems are vulnerable to data breaches, which could lead to the unauthorized release of personal information.

When using a public generative AI tool, read the tool's fine print.

Even if you only enter a small amount of information about your company or project, public AI tool providers reserve the right to use your inputs and the generative AI outputs the system provides you with to train and improve current and future models of the AI program. A

huge risk exists that a competitor or bad actor could gain access to the data you provide—just by using the same generative AI tool provider. It is your responsibility to protect sensitive data from misuse or unauthorized access.

When using a public generative AI tool, read the tool's fine print and answer these questions:

- What happens to my prompts once I input them into the generative AI tool?
- Who maintains ownership of the information that I put into the tool?
- Is the tool safe for commercial business use?
- Will the AI provider use the information I input to train current and future models?
- Does the provider have a business or enterprise version of the application I should evaluate instead?

Security Threats

Just like any other technology, generative AI is plagued with vulnerabilities to security threats. In a Salesforce study of 500 senior IT leaders, 54 percent of respondents shared that for an organization to successfully use generative AI, it needs to have enhanced security measures to protect the business from cybersecurity threats.

Most learning functions acquire generative AI capabilities via third-party vendors or integrated products rather than building the technology in-house with their engineering and IT teams. By mapping out the different generative AI applications and use cases across the learning organization, L&D can better evaluate the potential risks.

Data breaches. Generative AI systems use and store large amounts of data, which hackers could steal if not handled properly. That data could train new AI models to attack other systems inside and outside of your organization, hold a company ransom, and put employees and customers at risk of identity theft.

Adversarial attacks. Hackers design these programs to fool AI systems. For example, they may attempt to secretly attack hidden backdoors into a model for an internal AI tool so that specially crafted inputs trigger malicious behaviors.

Data poisoning. This is an attack designed to corrupt the training data for an AI model by inserting malicious text, images, or other content, which causes the model to learn biases or generate toxic outputs.

Let's face it, human history is full of biases.

Defending against security threats requires an organization to think proactively and reactively because generative AI is still new, society does not yet understand all the vulnerability points. Learning teams using generative AI tools must ensure their companies have a cybersecurity plan in place to monitor for anomalies, robust data security plans, and strict access controls for generative AI tools deployed within the organizations' network.

Conclusion

Generative AI marks a new era of possibility for learning teams that goes beyond what other technologies, such as augmented reality and virtual reality, promised in the past. After years of incremental innovation in the L&D space, this disruptive technology promises to unlock the elusive goals of personalized, scalable learning that have felt like a pipe dream for industry professionals. However, the L&D industry must counterbalance hype and optimism with thoughtful strategy and monitoring.

Learning teams should pilot generative AI in ways that augment human expertise while proactively managing risks by establishing policies, evaluating tools systematically, and maintaining oversight of vendor relationships. With accountability and transparency, your team can realize AI's benefits while protecting privacy and learner experience.

To take a balanced approach:

1. Start small, learn fast. Run controlled generative AI pilots focused on high-value use cases. Rapidly gather user feedback to refine your solutions before scaling.
2. Maintain the human element. Keep instructional designers and learning curation experts involved in curating and reviewing AI content; blend personalized AI with human support.
3. Demand responsible AI from vendors. Vet providers thoroughly; require transparency and ethical design principles. Continuously monitor tool outputs for bias or misuse.

With the right AI strategy, generative AI can help learning teams increase their impact, relevance, and value within a business. Generative AI calls on our creativity just as much as we do on the technology itself. By complementing AI capabilities with human strengths, a new era of L&D can emerge.

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Artificial Intelligence Tool Evaluation Worksheet

This worksheet guides learning teams through the process of thoroughly evaluating and comparing potential artificial intelligence tools against key criteria to identify the best option. You can revisit the worksheet to track performance after deployment.

Identify Key Capabilities

Review your learning team's AI needs and desired use cases, then mark capabilities as appropriate.

- ☐ Text generation
- ☐ Image generation
- ☐ Simulation creation
- ☐ Adaptive learning
- ☐ Assessment building
- ☐ Analytics and reporting
- ☐ Other

Research Vendors

Gather information on a vendor's history, clients, and reputation.

1. **Vendor** _____
 Company history _____
 Client examples _____
 Reputation _____
2. **Vendor** _____
 Company history _____
 Client examples _____
 Reputation _____
3. **Vendor** _____
 Company history _____
 Client examples _____
 Reputation _____

Evaluation Criteria

For each vendor, assess how it meets the below criteria.

Accuracy of generated output. Does the vendor have a statement of documented output accuracy? If so, what is the rate of accuracy?

- Vendor 1 _____
- Vendor 2 _____
- Vendor 3 _____

Artificial Intelligence Tool Evaluation Worksheet (Cont.)

Customization and control. Does the vendor allow for customization? If so, does the vendor or an internal engineer make the customization?

Vendor 1 _____

Vendor 2 _____

Vendor 3 _____

Data storage and management. Where does the vendor store data? Who owns the rights to the data? How does the vendor use stored data?

Vendor 1 _____

Vendor 2 _____

Vendor 3 _____

Ease of use. How difficult is it to use the tool? Does it require specialized skills?

Vendor 1 _____

Vendor 2 _____

Vendor 3 _____

Ethics and responsibility. Does the vendor have a documented ethics and responsibility manifesto? Where?

Vendor 1 _____

Vendor 2 _____

Vendor 3 _____

Pricing and integration. What are the pricing options? Is the AI tool stand-alone or does it work with other technology?

Vendor 1 _____

Vendor 2 _____

Vendor 3 _____

Security and compliance. What security controls does the vendor offer? Who is responsible for lost data?

Vendor 1 _____

Vendor 2 _____

Vendor 3 _____

Support and training. What support plans and training does the vendor offer? Is there an additional cost?

Vendor 1 _____

Vendor 2 _____

Vendor 3 _____

Recommendation

Weigh the criteria based on your chosen priorities and make an evidence-based recommendation.

Artificial Intelligence Project Planning Checklist

This two-part checklist helps L&D teams plan for and facilitate an artificial intelligence project.

Step 1. AI Preparation Checklist

Designate an owner for each of these tasks, marking each with the individual's initials.

- ____ Identify key stakeholders. Conduct cross-functional meetings and working sessions.
- ____ Document working session outcomes. Record decisions, issues, action items, and next steps.
- ____ Focus on key items early. Prioritize foundational tasks such as goals, requirements, and capabilities.
- ____ Define success metrics. Create two to three goals; explain how you plan to achieve those goals and milestones.
- ____ Create an implementation plan. Call out key milestones that you aim to achieve.
- ____ Establish governance. Implement an oversight model and policies for ongoing AI system management.
- ____ Communicate to stakeholders. Create a reporting template.
- ____ Monitor and adjust. Review metrics after deployment to optimize and enhance AI integration.

Step 2. AI Project Planning Checklist

Complete the suggested tasks as necessary. Customize as needed.

Project Definition

- ☐ Define the problem you want to solve with AI.
- ☐ Determine project goals and success metrics.
- ☐ Research whether AI can help address the problem.
- ☐ Develop a project plan with a timeline and the necessary resources.
- ☐ _____

Data Collection

- ☐ Identify data sources.
- ☐ Collect training data and validate quality.
- ☐ Annotate or label data, if needed.
- ☐ Split data into training, validation, and test sets.
- ☐ _____

Model Development

- ☐ Select AI/machine learning models and frameworks to try.
- ☐ Pre-process and clean data.
- ☐ Train models with different parameters.
- ☐ Evaluate and compare models on test data.
- ☐ Fine-tune model hyperparameters.
- ☐ _____

Model Deployment

- ☐ Determine minimum performance prior to deployment.
- ☐ Integrate model into the application or system.
- ☐ Develop a monitoring system to detect model drift.
- ☐ Create a plan to retrain the model with new data.
- ☐ _____

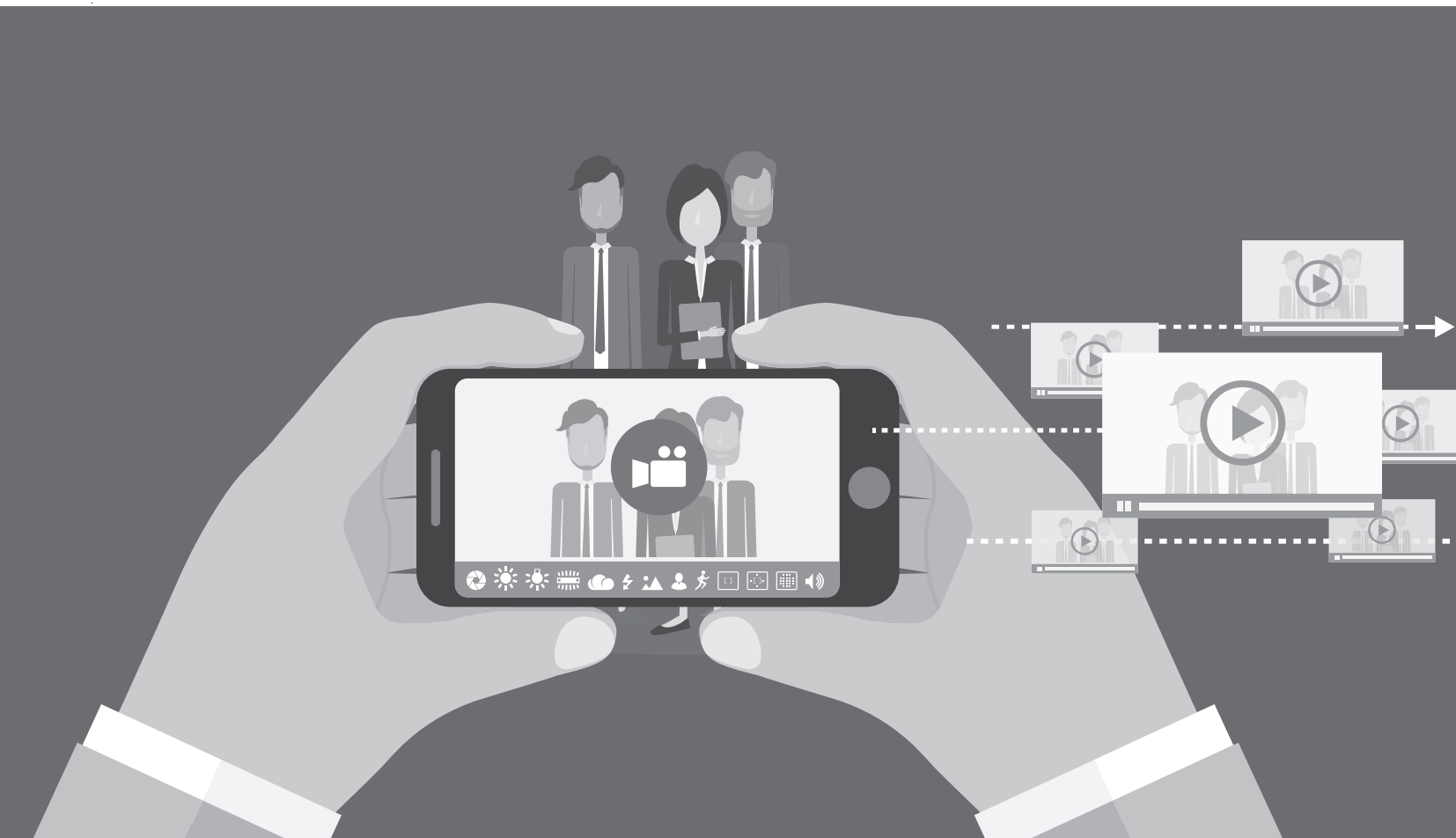
Testing and Iteration

- ☐ Develop a plan to continuously test the model with new data.
- ☐ Implement a system to get user feedback on model performance.
- ☐ Retrain the model periodically with new data.
- ☐ Repeat the model development cycle to improve performance.
- ☐ _____

Communication

- ☐ Document and store your team's work for knowledge sharing.
- ☐ Create presentations to explain your work to stakeholders.
- ☐ Discuss and document ethics, biases, and other concerns with the learning team.
- ☐ _____

And Action: Start Rolling With Mobile Video



AND ACTION: START ROLLING WITH MOBILE VIDEO

AUTHOR

Matthew Pierce

Matthew Pierce is an experienced instructional designer, training manager, speaker, and multimedia creator. At TechSmith Corporation (creators of Snagit and Camtasia), he leads creation and development of the TechSmith Academy and Camtasia Certification programs. He has been involved with creating instructional and marketing videos for more than a decade.

Content Manager, Learning Technologies

Justin Brusino

Editor, *TD at Work*

Patty Gaul

Managing Editor

Joy Metcalf

Production Design

Scott Rodgerson

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When it comes to introducing new process updates and ideas to others in the workplace, training videos are one of the most effective ways to disseminate information. While using videos to train and retrain talent is not a new industry trend, it has become increasingly popular, and the demand for video creation and accessibility is higher than ever across industries.

When you break it down, it is easy to see why the use of video continues to grow. Not only does video communication reduce the need for travel and lowers training costs for the company, it also keeps employees engaged and accommodates different learners because it combines both audio and visual elements. According to a TechSmith study, 67 percent of employees are better at completing tasks when information includes text with images (screenshots) or video rather than by text alone.

Within the past several years, mobile device cameras have become more capable and versatile thanks to significant technology innovations. With improvements like more megapixels, wider apertures, brighter flash, and faster focusing, the ability to capture quality video and images is more accessible than ever.

Even though technology has advanced, the skills of many in the L&D field continue to lag in video. This issue of *TD at Work* is intended to help talent development professionals leap into this exciting new possibility for training and learning professionals. I'll cover:

- things to consider before you begin to shoot video
- how to decide what to shoot
- factors to consider when developing your video project, such as the length of the video segment
- important elements of shooting video, specifically around audio and video.

START WITH GOOD PLANNING

The first step to creating any video—whether with a mobile device, digital single-lens reflex (DSLR), or high-end camera—occurs well before you pick up the camera. Planning a video requires some additional consideration when shooting with a mobile device. Without preparation, you may find that the quality of what you recorded falls short of expectations.

Properly planning such videos takes time and effort. The good news: With a bit of experience, you should be able to recoup that investment while shooting and editing your video. Let's break down some of the essential elements to include in your planning process to improve the effectiveness of your mobile video.

Scripts

Scripts are critical to video creation. They enable you to plan the concepts behind your mobile video and help ensure the information is presented clearly and concisely. Information accuracy and conciseness is key, not because people won't watch long videos (they will if the information is relevant and interesting to them) but because tolerance for nonessential information tends to be low. That's not to say you can't include information, develop a story arc, or forgo other techniques. But simply be mindful of the video's flow and make sure it keeps viewers focused on the main points you want them to learn. While you're writing the script, don't be afraid to get all your thoughts and ideas down in the initial stages, but be ruthless in cutting and trimming your work until only the essential pieces are left.

Storyboards

With your script finished, you're ready to start storyboarding. Storyboards help you visualize the project before getting into production. You should create storyboards that will provide clear guidance to each scene you're going to record. A good storyboard will provide you with a sense of camera placement, the distance of the camera from the subject, and any action that may be happening in the shot. Using as many frames as necessary, visually map out what your video will look like, even if it's just with stick figures and simple drawings.

If time is limited and you already have a clear vision of what your video should look like, you can skip the storyboard. However, if you do, make notes about what you want to see and how it should look to avoid missing something while recording. Storyboards can be helpful for not only realizing what to shoot but also for pitching concepts to others who can then provide feedback on ideas and the material before you spend valuable time filming.

B-Roll

Another critical element to plan is the b-roll you're going to gather. B-roll is supplemental footage intercut with the main shot to help convey the information in a more engaging way. It is often thought of as video footage but can include still images, photographs, animations, charts, infographics, and so forth.

For example, your main video footage may be a sales manager talking about using a customer retention management program, while your b-roll may include shots of someone inputting information into a system or screenshots of the program. Or maybe you have a shot

that shows a salesperson talking on the phone. I recommend including a b-roll that conveys location to the viewer. This could include a shot of anything, ranging from a business's sign to someone in an office setting or the outside of a building.

Be mindful of the video's flow and make sure it keeps viewers focused on the main points you want them to learn.

B-roll is essential for helping to keep video interesting. It helps fill in gaps within the narration. It also shows viewers the things being talked about. Because video is both a visual and auditory experience, make sure that visuals are supporting what is being discussed during the video. Even if you're planning on creating a talking-head-style video, plan to grab some b-roll that can help establish that person's credibility and support her narration.

Workflow Plan

The final step in mobile video preparation is to create a workflow plan for everything surrounding the shoot—from files to shooting to editing—and storage. For instance, when working with mobile devices, you'll need to plan the video-creation process.

Keep in mind a few aspects. First, when shooting video with a phone, think about the files. Answer these questions before you begin shooting:

- Will your mobile device have enough memory for the shoot?
- Do you have a way to capture the audio, such as an external microphone?
- What device and programs will you use to move the files off your mobile device?
- Where will you store the files so they aren't lost and they'll be easy to work with?

Next, you'll want to think about the editing process:

- Do you want to edit the footage, and if so, what tools are you going to use?
- Do you need to include other assets in the video, such as images, logos, slides, or other visuals?

Other considerations include thinking about and planning for the physical space you'll be recording in:

Checklist: Prepping to Shoot With Your Mobile Video Device

Before getting ready to shoot with your mobile device, take a few minutes and use this list to ensure everything is in order and ready to go. Troubleshooting and problem solving on the fly is at best, difficult, especially when you may be missing key moments or opportunities to capture the perfect video.

- ❑ Check your battery level. If it's low, charge the battery fully or carry a power source with you.
- ❑ Check your storage space (memory). If you are low, delete apps and back up and remove images, videos, and other media from your device.
- ❑ Check your video settings. Are you capturing the resolution and number of frames per second that you intend? If not, adjust as needed.
- ❑ If you are using a third-party app to record with, check to make sure that your app is up-to-date and compatible with your mobile device. If you are filming soon, you may want to wait to update the app until after you record, unless the update will solve a particular app problem.
- ❑ Set your device's orientation so you can record horizontal video.
- ❑ Put your device on airplane mode to save battery.
- ❑ Make sure you have a way to capture the audio from your device or with another device. If using another device, check its battery and storage as well.
- ❑ Check that you have enough natural light or other light sources for a clear video.
- ❑ Ensure that the device is on a tripod or stabilized during recording.
- ❑ Confirm that the microphone is plugged in, and check to ensure it's capturing sound.
- ❑ Ensure that the location is free of hazards.

- How are the acoustics in the room? Are there external noises you need to consider? Are there echoes?
- What kind of light does the room have? Are there windows, fluorescent overheads, or other lighting sources? What's the best way to film given the available lighting?
- Is the space ready to record in or does it require some setup?

Even if you are an experienced creator, it only takes one or two small missteps to derail the entire process. As the old saying goes, “An ounce of prevention is worth a pound of cure.”

CREATING ENGAGING VIDEO

Now that you've thought about the many logistical elements around preparing your mobile video project, consider how to engage and instruct your audience with the video you capture.

Whether you're using a DSLR camera or your mobile device, if you're not thinking about wowing your audience, your video will fall short of achieving its intended outcomes. If your audience isn't engaged with the content, they likely won't even get through the video, let alone retain the information that was in it.

You must consider a few key elements to create an engaging mobile video: relevant content, authenticity, video length, simplicity, and good video techniques.

Relevant Content

Relevant content is vital to making a video engaging. With extremely busy workplaces, impending deadlines, and overwhelming workloads, relevancy has become more important than ever when creating content to disseminate information. And it spans far beyond skill-based content.

Relevancy relates to viewers' needs or desires to learn about a topic. For instance, if you're in the middle of working on a project and need to understand how to add an animation to a PowerPoint slide, a video on this topic will be highly relevant. Whether a video includes training information for a new hire, sales strategies for a member of a sales team, or information on how to fix a plumbing issue, relevancy is a driving factor on how likely viewers are to watch and engage with the content.

As a video creator, you need to step back and consider viewers' needs to better understand what information will be relevant to them. Look at your audience carefully and decide what content you need to include

and—arguably more importantly—what you don't need to include.

Highlight the video's most relevant and compelling information within the title and description to help viewers decide whether to watch. Further, the information surrounding your video should accurately reflect the content. A TechSmith study found that the main reason (35 percent) people stop watching a video is because the content does not deliver on the expected information.

To help improve relevancy, focus your topic. Generally, it's better to have multiple videos for multiple topics, or you risk diluting the relevancy of the topic that is of most interest to viewers. One exception to this is an overview video, where the goal is to expose viewers to as much information as possible.

Authenticity

In addition to relevancy, many of the best videos are ones that convey information authentically. What qualifies a video as authentic varies. As a general guideline, ask yourself, “Is the video staying true to who I (or my company) am as a brand?” If you have a brand that is playful or fun, you don't necessarily want to stray from that. If you have a brand that is part of a more serious industry, it's still OK to show who you are.

Reflecting Brand and Culture

As noted in this issue, it is important to reflect your organization's brand and culture in the videos you create. I work at a software company, which—like many—is a fun place to work. When I make promotional videos for our conference talks, I try to incorporate that fun into the videos. For example, in one video I created—*TechSmith's Matt Pierce & Danny Wittenborn at ATD TechKnowledge 2018*—I jump into the shot and animatedly join my colleague Danny. And at the end of the video, Danny and I share a high five-fist bump. Be sure to think through your company's brand and culture and ensure that you've accurately reflected this in your videos. See the References & Additional Reading for a link to the video.

Trust is a fundamental component of learning. The audience needs to trust that the information in the video is factually accurate. You can build trust with your viewers through your content by showing them what things are really like. That's not to say you need to include b-roll footage of the half-dozen empty sparkling water cans shamefully piling up at your desk, but you should make sure what you're portraying on screen is faithful to the experience of who your company is and stays true to its values.

Further, this doesn't mean videos aren't effective tools for covering serious subject matter. Even in those situations, the personality of your people and your organization should shine through. The key is to determine the best person to deliver the message so it will resonate with your audience. Get someone to be on camera or provide the voice that viewers may recognize as an authority or expert on the subject at hand.

Relevancy is a driving factor in how likely viewers are to watch and engage with the content.

In addition, find ways to connect with the audience, even if it's after the video wraps. For example, I saw a company create a short blooper reel for the end of a video. The company said staff loved this part. They valued the realness of the mistakes and the funny outtakes, and the blooper reel served as a reward for viewers watching the full video. This is one simple and fun way to make a connection and keep viewers interested.

Video Length

There is much debate about the optimal video length. The reality: Time is a secondary factor. More important than length is making sure that the right content is available for and presented to viewers. If that content takes two minutes to illustrate, that's great. If the topic is more complicated and requires 10 minutes, that's fine too.

The bigger issue than length is making sure the video is focused on one topic or subject. Many new video creators try to produce videos that cover multiple

topics. By keeping your video focused, you'll not only help reduce the video length but also ensure that you're keeping the material relevant to your audience.

Simplicity

Video is often seen as a complex medium to create in, but there's a lot to be said about keeping your videos simple. You don't need to develop the next Hollywood blockbuster to help your audience understand a new concept. When you find yourself considering the use of expensive gear, special effects, or anything else that is going to increase complexity, it is worth stopping to ask yourself whether the complexity is going to add to the video's overall effectiveness.

There's no doubt that you should apply the "keep it simple" principle, especially early on in your video-creation experience.

Good Video Techniques

The final element to creating an engaging video is good technique. While the quality of your camera and other production equipment affect your video's overall image and sound quality, that pales in comparison to using effective video techniques. Once you start using your mobile device as your video camera, remember that its convenience won't substitute for having an overall understanding of what makes a good video. In the subsequent sections, I delve into the practical techniques you'll need to know to create a mobile video.

GETTING TO KNOW YOUR MOBILE DEVICE

With the increasing photographic capabilities of mobile devices, the need for expensive, high-end professional cameras is reduced, especially when first testing the video-creation waters. Mobile devices are a great way to get familiar with a camera's basic features and to get a feel for setting up different shots and angles that produce certain effects.

Several different devices are available that fulfill video-creation functions, and it's not practical to cover them all (nor do I want to stir up a debate on which platform is better). Regardless of your preference, you need to learn the nuances of your device. Your first step is to read the user manual or watch a video. You may already know many of the tips this will provide, but you may also learn to do helpful things such as set the focus point by holding the screen. You may also learn tips about setting brightness, zooming, or turning on an alignment

grid. Don't underestimate the power of spending a quick 30 minutes familiarizing yourself with your equipment's basic features before filming.

Mobile devices are highly intuitive, and we rely on them for everything from a quick Google search to counting our steps. However, it is important to recognize their capabilities and limitations to determine how to use them optimally.

Pros and Cons for Video

A famous saying in photography that holds true is "The best camera is the one that is with you." No camera, no shot. While the convenience of having a camera at your fingertips doesn't guarantee the best quality, sometimes just being able to capture what you need is more important.

That said, mobile device cameras have come a long way in terms of quality. Manufacturers continue to innovate mobile camera technology, pushing the capabilities of the small lens and sensor to impressive new benchmarks year after year. Despite technological advances, mobile device cameras still have some shortcomings. For example, they continue to require a lot of light. With a regular camera, you can manually adjust aperture settings to optimize for whatever lighting conditions in which you're shooting. Mobile devices, however, are much more limited in manual optics settings and customization.

Additionally, mobile cameras are great for medium and close-up shots, but they are ineffective with distance and depth. If using a mobile device to record, you'll usually need to move closer than you think to frame and organize the shot while still capturing all its details. When you shoot with a DSLR or high-end video camera, you can record your subject in focus and keep the background blurry, a technique called *shallow depth of field*. Although some mobile devices can mimic this ability in photos, they aren't yet able to do so in videos.

Still, mobile devices have the distinct advantage of being an all-in-one video tool. Depending on the apps you use, you can shoot, edit, and share from one device. If you're looking to move quickly, this can be a huge boon in ensuring your video sees the light of day. With mobile devices, you can also add or use apps that will affect the overall output or the look and feel of the video. These apps, including the native apps, may enable you to easily change the video resolution (sizes like 1,920 or 4K), the frame rate (number of frames per second, usually 30, 60, 120, or more), or other features that can affect video quality.

Front Camera/Selfie vs. Back Camera

Once you know your device better, it's time to review the various filming choices you'll need to make. In today's world of streaming video and selfies, it's common to use the front-facing camera (the one just above your screen). If you're shooting solo or want the vlogger (video blogging) look, it's a good option. It helps you film yourself, and you can easily see whether you are on or off camera. However, the front-facing camera's quality tends to be lower than the back camera.

As you start looking to film, consider who or what will be on camera and, if possible, opt for the back camera. Although there are exceptions to the rule, make sure you've thought through how the selfie video will look to your colleagues, boss, and audience.

Resolution 1080 vs. 4K

Most modern smartphones will enable you to record video at a resolution of 1080p, or high definition. While 1080p has been the industry gold standard of acceptable resolution for a long time, many cameras now enable you to record videos in 4K, or ultra high definition, which has four times the number of pixels as 1080p. 4K videos also have some distinct advantages apart from picture quality, like the large resolution size, which is nice when editing because you have the flexibility to zoom in if you're editing the video at 1080p. The downside is file size. It's hard to know the exact file size of a video. But, as an example, my iPhone lays out a nice comparison of file sizes for one minute of video, which you can find by opening Settings, selecting Camera, and then selecting Record Video.

Even though there are benefits to recording at higher resolutions, be mindful that if you have limited storage space, it's possible to fill your mobile device before you finish recording.

Focusing

With most mobile devices, you can set or lock the focus by touching and holding a point on the screen. This ensures that your camera is properly focused and sets the exposure for what you are trying to capture.

Adjusting Exposure

Before you hit record and after you've set your focus, look at adjusting your exposure level. If your image is too light or too dark, adjusting the exposure can help compensate and improve the picture. Although it can't fix every problem, it can help make some situations much better.

Resolution Chart

Resolution	Frames Per Second (FPS)	Approximate File Size Per Minute
720p HD	30 FPS	40 MB
1080p HD	30 FPS	60 MB
1080p HD	60 FPS	90 MB
4K	24 FPS	135 MB
4K	30 FPS	170 MB
4K	60 FPS	400 MB

If you're unsure, try adjusting the exposure up and down to see what looks best. But if you are going to be shooting multiple takes or in multiple locations, you will want to visually match how the pictures look. This will be a challenge even without adjusting for exposure, yet doing so should help you get closer.

Zoom

One of the biggest mistakes with using a mobile device—whether taking a picture or shooting video—is not positioning the camera close enough to the subject. In most cases, your mobile device should be closer than you think. Don't be afraid of taking a few steps closer.

Some newer devices have optical zoom capability, up to a point, which maintains the quality of the image. However, most mobile devices on the market are outfitted with digital zoom.

Audio

Recording audio and video with your mobile device is more difficult than just hitting the record button. Some mobile devices may be equipped with one or more microphones that record relatively well, but the microphone's placement—and the distance away from the subject—can affect sound quality.

Using the built-in microphone for simple recordings is fine, but having a separate microphone, or one that you can use with the phone, will make a dramatic difference to the overall audio quality.

Battery and Memory

It's important to watch your battery level. Recording video is taxing and can drain the battery quickly. Be sure to have a charger handy. If you're able to, find access to an outlet to charge your device while recording. If no outlets are available, consider purchasing a portable battery pack, especially if your phone will be the primary recording device.

Memory is another factor to check before tapping record. Imagine being in the middle of shooting a take and your device stops recording because the memory is full. Check your device and, if possible, free up as much space as you can, especially if you plan on recording at a larger resolution. Remember, 10 minutes of video at 4K with 30 FPS is 1.7 GB of data.

Apps for Better Videos

As you get to know what your device is capable of, don't forget what it's great at—running apps that extend its native capabilities. The camera apps that come with your device are useful and will generally suffice for most projects. Additionally, a variety of other apps are available that can enhance and extend your device's capability.

The features available in apps will vary but could, for instance, enable you to adjust white balance temperature and tint or control the focus and shutter speed. Having access to third-party developer apps will give you more customization and control over your video quality. This will help your videos look and feel exactly

the way you want and will ultimately make them look more polished and professional.

If you decide to explore downloading an app to augment what your device can do, consider investing in a paid app. There are numerous great free apps that are worth trying, but paying a few dollars to get the premium features may be worthwhile. If you find yourself unsure about which app to pick, look closely at the reviews, read blog posts and articles from individuals who use the apps, and try the free or trial version when available.

When all is said and done, if you learn what your device is capable of and how its features work, you'll be well on your way to making better mobile videos.

SHOOTING PRACTICES

Good video creation isn't all about the device. Michelangelo may have had great paintbrushes, but multiple factors and techniques made his paintings better. Good video techniques or practices are essential for you to keep viewers watching and learning. Let's explore these further.

Vertical vs. Horizontal Video Debate

It may sound trivial, but the way you hold your camera makes a difference. Most people in general hold their mobile device vertically. This won't make video unusable, but it doesn't fit into many situations. On most sites, this causes black bars to appear when playing back the video. It also makes it harder to edit together more than one video if they aren't also shot vertically. The exceptions—and times you may want to use vertical video—are when creating live videos or videos specifically for Facebook or Instagram, which cater to vertical videos.

If you're undecided about which way you want to shoot your video, here are a few additional considerations.

- Think about how you want to frame the video; with vertical video, it's difficult to frame more than one subject or to show content around your subject.
- Look at how your end video will fit with the rest of your content.
- Determine the video dimensions—you'll want to make sure viewers don't have to scroll to see the entire video.

Although there are exceptions and reasons you may choose to shoot vertical video, your primary and go-to format should be horizontal.

What to Look for in a Third-Party App

Many third-party apps are available to assist you with your video creation, including some that are free. However, it can be confusing and tricky to know which app will best serve your purpose. So how do you know which app to download?

While difficult to answer that question specifically, you can use these questions to determine whether the feature set in a particular app is worth the investment.

- What feature or capability are you missing?
- Do you want the ability to see what is in focus?
- Which part of the video lighting is too dark or too light? (Some apps offer different features for both shooting and editing.)
- Does the app integrate into your workflow?
- Are you going to easily get your footage from your camera to where it needs to be? (This may be more difficult than you think, depending on the app and your end destination.)
- Is the app intuitive? (Some apps have numerous features and amazing bells and whistles, but if you don't know how to use them, those features aren't helpful and could lead to more stress and difficulty.)

Finally, look for apps that release updates and fixes. By their very nature, apps need updating, whether to fix a bug or to stay compatible with the device's operating system. The app doesn't need to be updated every day, and you don't want the developers frequently changing the way it works, but you do want to know that it will work when you need it and not crash or have a glitch that keeps you from capturing the perfect take.

Steady Shots

One challenge with shooting any video, especially with a mobile device, is keeping it still. It may seem obvious that you need to keep your camera steady. Shaky video is hard to watch and can have the negative impact of

occasionally making viewers nauseous. Several tools can help you achieve stillness.

Tripods

The best way to stabilize your device is to use a tripod. There are many different options for tripods, ranging in cost from inexpensive to hundreds of dollars. You don't have to buy the most expensive model, but keep these factors in mind when choosing one:

- The tripod should have a spirit level so you can level your camera, even when placed on uneven surfaces.
- The whole unit should be sturdy and not wobble. The neck on cheaper tripods is not always snug, meaning that anytime you touch the camera to set focus or even to press record, the camera will wiggle. Depending on the conditions you're working in, you may also find that wind can affect less-stable models.
- If you're worried about the weight of your tripod, solid, lightweight tripods are available. Typically,

however, lighter, higher-quality tripods are more expensive. Cheap, light tripods are also available, but they typically aren't sturdy.

Stabilization Setting

Another option to ensure you shoot steady video is to check your mobile device or app for stabilization settings. The stabilization that these programs offer won't fix major problems, but it should help with minor vibrations. Stabilization digitally helps to remove some of the shakiness from your camera and is usually worth turning on.

Holding

If you're in a situation with no tripod and no good way to set your camera on something, hold your device. The challenge is that inevitably you will move the camera. The goal when holding your camera is to reduce movement as much as possible, especially small, shaky ones.

Checklist: Getting Yourself or Others Camera Ready

Before starting filming, ensure that your main subject (including yourself, if you are filling that role) is ready. Use this checklist to ensure the subject looks best.

- ☐ Advise the subject to wear clothes appropriate for the message or setting.
- ☐ Ask the subject to avoid wearing clothes with tight patterns, such as stripes or checks.
- ☐ Suggest that the subject apply makeup. If the subject doesn't typically wear makeup, consider using rice paper to reduce shine from oils on the skin.
- ☐ Instruct the subject as to where you'd like her to look. For interviews, you may want the subject to look at the interviewer. You may also want to instruct the subject to not look at the camera.
- ☐ Instruct your subject to sit up straight and not slouch. This will make him look better on camera.
- ☐ If your subject is standing, instruct her to not rock or sway.
- ☐ If your subject talks with his hands, instruct him to contain any big gestures and to keep from moving his hands too rapidly.
- ☐ If your subject will be answering questions, ask her to state the question as part of her answer. For instance, if the question is, "What is your favorite color?" the subject should say, "My favorite color is"
- ☐ Have the subject arrive early to prepare and ask any questions he may have.
- ☐ Turn off phones or put them on airplane mode to avoid distractions, buzzing, or ringing.
- ☐ Have the subject remove items from her pocket that may be distracting.
- ☐ Ask the subject to drink water throughout the day prior to the interview to help avoid a cotton-mouthed feeling during the filming.
- ☐ Ask the subject to use the bathroom, check his teeth and hair, and adjust clothes prior to starting recording.

One way to reduce movement is to limit how far away from your body you hold your mobile device. Many people taking pictures or filming will instinctively hold their camera up, out, and away from their bodies so they can see the screen clearly. Although most mobile devices are fairly light, the further away from your body you hold the device, the more difficult it will be to hold still, especially over longer periods of time. One option is to press your elbows against your side. Then, keeping your elbows locked to your sides, adjust the height of the camera while keeping it close to your body.

This position may feel and look a bit awkward, but it can help reduce—not eliminate—the amount of unintentional movements and shakiness.

The Importance of Light and Lighting

As previously mentioned, a mobile device camera's sensor size is smaller and tends to let in less light. When you're outdoors shooting with lots of sunlight, this isn't an issue and videos usually look great. When shooting indoors, though, without the right amount of lighting, your videos will look grainy or too dark.

Lighting is an important topic and not one I can cover in full detail in this issue of *TD at Work*. However, it's critical that you have just enough light. You want your video to look natural, but to accomplish this, you will likely need to add a light source or two. A wide variety of lighting options are available for purchase that will make a noticeable difference without breaking your budget. The typical light kit gives you three lights for a traditional three-point lighting setup.

Ideally, all your lights will be the same temperature or color. For instance, try to avoid shooting with fluorescent lights overhead and a floor lamp with a yellow (warm color) bulb. Mixing colors will look strange.

You can use natural light via windows, but it's best to avoid shooting with the subject standing directly in front of the window. You can use that natural light to illuminate the individual you are filming, even by using a large piece of white paper—such as a poster board or foam core board—to reflect the sunlight onto your subject. Be mindful that if you are using natural light, as the sun's position changes, it's likely your video lighting will too.

If the idea of using lighting feels overwhelming, don't stress. Remember that your mobile device generally requires more light. And if you're unsure whether you have enough or too much, shoot some video and see how it looks.

Recording Audio

A key part of working with mobile devices is making sure you're successfully capturing audio. This is another critical component of creating a successful video. Depending on what you're trying to accomplish, the built-in microphone in your device may not provide the quality you want or need. I don't usually advocate purchasing anything unless it's essential, but in most cases, having another way to record audio with your device will be well worth the expense.

One reason you'll want to consider using a microphone is so that you can put it close to your subject. You'll probably notice that your mobile device may have one or more microphones built in. Their placement is typically designed for speaking on the phone or recording selfie-style videos. These placements are not ideal for capturing clear, quality audio.

Microphone Options

Several microphone options are available, including microphones that you can plug directly into your device. These come in a variety of shapes and styles. The type of microphone you purchase for your mobile device should focus on your most common use case. If you plan to record numerous interviews, you may want a lapel microphone, which attaches to the interviewee's collar. If you'll be recording videos on the go, a shotgun or directional microphone may be easiest and most beneficial.

Another key part of working with mobile devices is making sure you're successfully capturing audio.

If you don't want a microphone that plugs directly into your device, you can purchase a digital recorder, such as the Zoom H4 or Tascam DR-40. These devices enable you to plug in an external microphone and capture higher-quality audio. Oftentimes, they also have built-in microphones. I have successfully used a mic like these to record several interviews and podcasts. The biggest challenge is making sure the microphone, whether built-in or external, is close enough to your subject and placed well to record his voice.

Microphone Tips

When deciding on what type of microphone to use, consider these factors. If you're using a microphone that plugs into your device, determine whether it will interfere with your ability to plug your mobile device into a power source. Additionally, if you capture the audio on a separate device and recording, you'll have to sync up the audio to match your video, which will require some editing.

Regardless of the microphone or the device you're using, be mindful of recording in a noisy environment. Even the best microphone won't be able to eliminate background noise. A noisy environment will ruin the best recordings.

Framing Shots

The composition of your video—or the way you frame your content—plays an important role in whether you clearly convey your message to viewers. As you prepare to record video with your mobile device, take into account these concepts. They apply to almost all video-creation tools, but because of mobile devices' limitations, good framing becomes even more important.

Rule of Thirds

The rule of thirds, while less of a rule, is a good guide for helping you determine where to align your subject. When filming, most individuals will naturally frame the subject directly in the middle of the screen. The rule of thirds suggests that you use the third of your frame to line up your subject.

Position your camera so the main subject is to the left or right of center. Additionally, have your subjects' eyes aligned around the top third. If you're unsure about using this technique, many devices have a grid you can turn on to see the thirds of your screen. See the sidebar for additional guidance.

The rule of thirds isn't just for framing speakers. You can also use it as you shoot backgrounds. For instance, you may decide to place the horizon or some feature of the background along one of the horizontal third lines. Keep in mind, though, that the rule of thirds isn't an absolute. It's worth learning and using generally, but it can be helpful to experiment with a variety of placements. Play around to find which ones work well for your video and what you're trying to convey.

Backgrounds

The background of whatever you're recording is important. For talking heads or speakers, it's usually best to have a neutral background. Unless the background is

conveying something significant to the audience, you don't want it to distract from the message or information that the subject is communicating.

However, there are two instances where a different background is advantageous:

- to help establish a location or sense of authority—for example, a reporter with a government building in the background immediately sets a tone for what she is talking about
- to set the tone—for example, an employee is discussing the company culture in a space that exemplifies that culture.

Make sure the video background is not distracting or overly busy. Such distractions can potentially make the video difficult to watch. Busy backgrounds are also hard to light, and, in editing, if something has moved, it may be difficult to match up multiple shots.

Headroom

Be sure you pay attention to headroom in your shots, particularly when you start lining up your shot and preparing to record. Leave enough space between the top of the subject's head and the top edge of the frame so the individual's head isn't cut off. It is also possible to have too much headroom, which is undesirable. The goal is to keep your audience focused and paying attention to your subject.

Zoom With Your Feet

It's worth reiterating that you don't want to zoom too much with your mobile device. If you need your subject to fill more of your frame, zoom with your feet, not your device. That is, move closer—really close, if necessary. You'll find that you not only have more precise control, but you will also keep the quality of your image high.

Remember to keep your device as stable as possible. If you need to zoom in as you're recording, make sure to avoid unnecessary wobbling, which can cause motion sickness for your viewers.

Recording Your Mobile Device Screen

Although I've focused on your device's camera, your phone can offer numerous content options—everything from PowerPoint presentations to apps and websites. In fact, learners consume a good portion of training content via their mobile devices.

If you haven't explored the option yet, both Android and iOS devices enable you to record your device's screen content. Depending on the operating system you're using, you may need to—or want to—download an app to enable this functionality.

Rule of Thirds

The rule of thirds is a well-known guideline in photography. It also works well with visual design, including video. The idea is that you divide your screen by thirds, both vertically and horizontally. You then use each section for alignment and framing your subjects.

There isn't one way to use the rule of thirds. To gain inspiration, you could apply the rule by:

- lining up your subject's eyes with the upper-horizontal third and have her body standing along one of the vertical lines
- aligning the horizon with the lower horizontal line, if you are showing a background or a scene where the focus isn't on an individual.

In addition to using the lines, use the intersecting points, where each of the lines of the grid meets, to help create points to focus your image. Some consider these intersecting points sweet spots. Use them to play with different alignments and setups. The goal is to ensure viewers are drawn to look where you want them to pay attention.

Keep in mind that the rule of thirds is a good concept, but it's not always practical—and it's not the only way to align a video or image. It's popular because it's easy to understand and, if applied well, helps create interesting results. However, you can consider other layouts, such as the golden ratio or Fibonacci spiral, which provide a variety of ways to shape the image inside your video. See the list of references for more information about these layouts.



Image: rawpixel on Unsplash

One benefit of this is that it eliminates the need for a main on-camera subject, but it enables you to still demonstrate the mobile experience as it really is. Even if this isn't your primary content, it can be a nice supplement for demonstrations, training programs, and onboarding purposes, such as showing how to submit time off from your phone.

If you're using a screen recording in conjunction with other footage, make sure you have your device's orientation set to match that of the other recordings. Some editing software will enable you to make a screen recording look like it was filmed on a device. This enables you to offset the different orientations and bring consistency to the overall video.

CONCLUSION

Mobile devices have changed the way we access, create, and think about video—including how we train. Anyone can create videos, but making effective and engaging videos can be challenging.

To create successful videos, remember and follow these three main principles:

Practice, practice, practice. Shoot a lot of video. Practice your techniques and experiment with framing, moving, and using the tools you have at your disposal. Shoot video at different times of day and in different locations. Get familiar with how light, sound, and other factors impact what you create.

Get to know your device. Whether this is your first time using the mobile device or you've been using it for as long as you can remember, spend time checking and optimizing your settings. In the process of writing this issue of *TD at Work*, I decided to adjust some settings to shoot video at 1080p and 60 frames per second. I've always been worried about file size and having enough memory, but I was impressed with the quality and outcome and wished I had adjusted the settings for previous videos.

Learn more about video techniques. Take courses, watch videos; and spend time watching films, television shows, and other video content with a critical eye. Don't necessarily watch for the content, but watch for how the creators frame scenes. Watch for the various elements that are included to help tell the stories. Look at how light and color come into play and how these change to affect the mood and tone of the production. After you've gathered some ideas, try applying them to your own work.

Remember: You don't have to let your device determine the quality of your production. You likely already have a camera within your device that is more than capable of shooting video. These powerful devices can help you convey your message and create video training content for your presentations, learning modules, marketing, and more.

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Mobile Video Start-to-Finish Guide

Ask yourself these questions and confirm you have taken the appropriate steps while creating your videos—from preparation and pre-production to device preparation to shooting and postproduction. These considerations are especially important as you first begin to use mobile video in your training projects. They will help you get—and stay—on track.

Video Preparation

In advance of filming, answer these questions:

- Who is your audience for this video?
- What is the goal of the video?
- How will you measure the success of the video?
- Where will you host the video?
- In addition to the content you record, what other elements do you need to include in your video (for example, screencast or graphics)?
- Who needs to review and approve the video?

Pre-production

Complete these steps during the pre-production phase:

- Create a script and storyboard.
- Invite key participants to participate in video creation; include whomever will be on camera.
- Scout locations for shooting the video; go about the same time of day that you plan to record.
- Note any noise sources that you will need to remove.
- Note visuals in the space you will need to change (including adding elements to the scenery or removing unwanted items).
- Plan how, when, and who will provide video reviews following production.

Device Preparation

Before you begin to shoot, follow these steps, which will reduce the likelihood of an unfortunate incident during shooting:

- Ensure your mobile device is fully charged and you have an external power source (electrical outlet and charger or portable power source).
- Remove unnecessary photos, videos, and apps from your device to ensure you have enough memory to record your video.
- Adjust the capture settings to meet your needs, either setting for a lower resolution or lower frames per second for smaller files or increasing resolution and frames per second for higher-quality video.
- Clean the camera lens.
- Make sure you are familiar with the various features of your camera and know how to adjust them as necessary.

Preparing to Shoot

These tips will help you ahead of shooting. As you develop expertise in mobile video, they will become second nature.

- Have a tripod and a way to connect your camera to it.
- If you don't have a tripod, find a place to set your device or hold it close to your body.
- Level your camera.
- Confirm you have your script, storyboard, or other materials to help during the shoot.
- Put your device on airplane mode to minimize interruptions and notifications and to preserve battery life.
- Prep the location so it appears the way you want it to on camera.

Mobile Video Start-to-Finish Guide (Cont.)

Audio

Good audio is important to an engaging video. Follow these tips:

- Do your best to ensure the environment is relatively quiet.
- Use an external microphone or one that connects to your device.
- Confirm that the microphone is plugged in and has power (if needed).
- Place the microphone close to the subject and pointed or adjusted to best pick up the subject's voice.
- Turn off any external sources of noise, as possible, such as fluorescent lights or heating or air conditioning.
- Ask everyone around you to silence their phones.

Shooting Video

Complete these steps for successful filming:

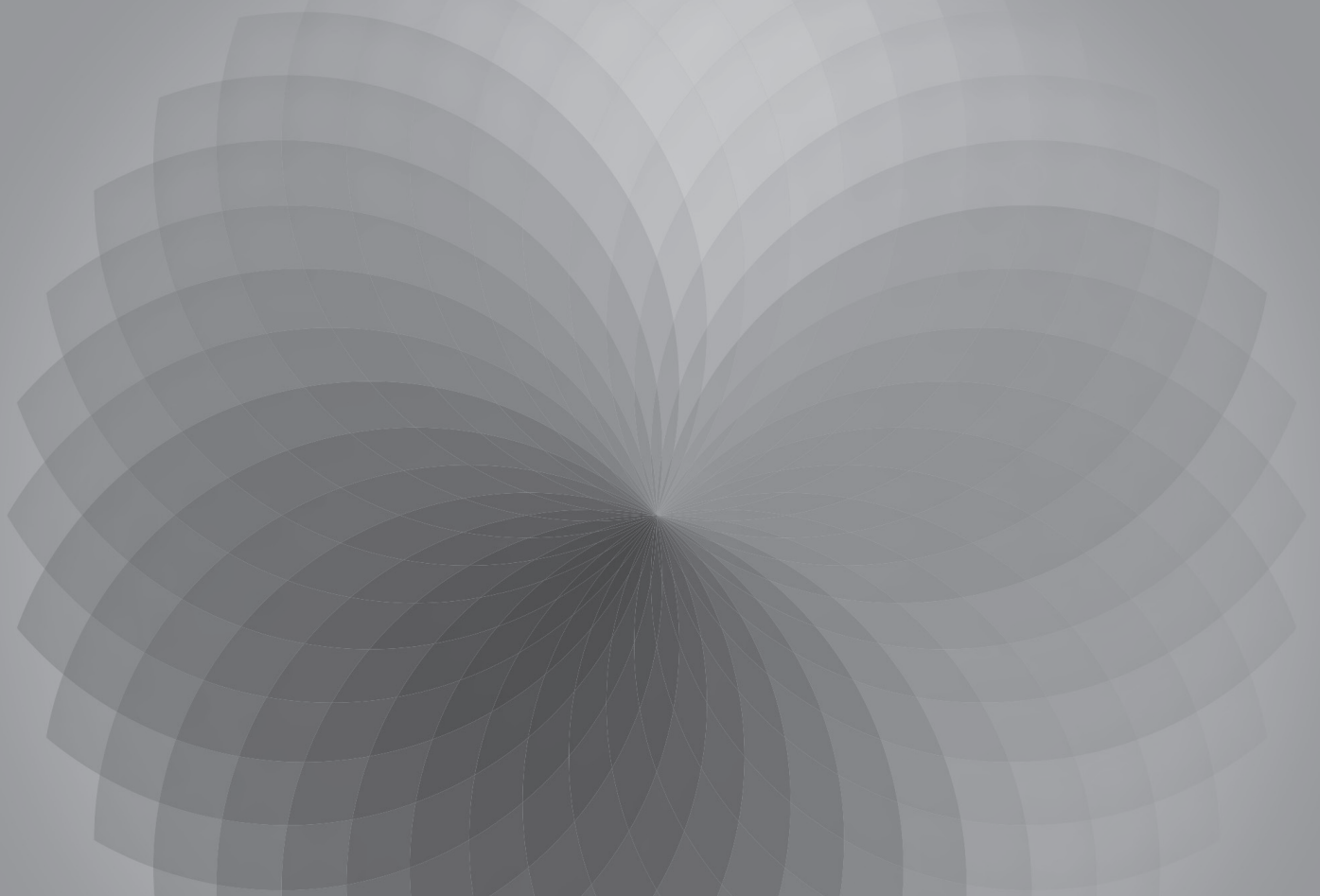
- Check that the subject is prepared and understands what is expected of her, including reviewing the script.
- Ensure your camera is close enough to your subject.
- Certify that you have framed your shot appropriately (think rule of thirds or another approach).
- Ensure that you have added extra lighting, where necessary, to enhance the video.
- As needed, record multiple takes.
- Record takes from different angles or distances to provide options during editing.
- Don't forget to hit the record button.
- Record b-roll.

Postproduction

Here are steps to take during the postproduction process:

- If you are editing the film on another device, transfer the files from the mobile device.
- Save frequently.
- Start organizing your main clips and create a rough cut of the story or message you want to create.
- Refine and edit your clips, removing anything that isn't helping to convey or move your message forward.
- Add in your b-roll to add clarity and make your video more seamless.
- Add effects to the video.
- Enhance your sound (such as removing background noise or adjusting volume levels) to improve the video quality.
- Add titles, lower-thirds, or other graphics to add polish.
- Save your video in a shareable format, usually as an MP4 file.
- Seek feedback throughout the process.

Welcome Neurodiversity



WELCOME NEURODIVERSITY

AUTHOR

Beth McCormack

Beth McCormack is a global talent development leader in the renewable energy sector. She has extensive experience coaching C-suite executives and top organizational leaders in a wide variety of industries. McCormack is the founder and principal coach at REAL Strategies Cooperative and a contract coach for Bravely. Her professional passion is working with and advocating for leaders with attention deficit hyperactivity disorder.

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Editor, *TD at Work*
Patty Gaul

Managing Editor
Joy Metcalf

Senior Graphic Designer
Shirley E.M. Raybuck

Helen, Jamal, and Imani work at a prominent tech company. Helen is a consumer researcher in the marketing department; Jamal is a data scientist in HR; and Imani is a finance manager. Helen is admired for her cutting-edge ideas and drive to take on new and different projects. Her energy and willingness to jump into the unknown inspires her team. But when Helen plans how to execute her ideas, she gets overwhelmed and loses steam.

Jamal is a valued member of the HR team because of his ability to quickly see trends in data. Recently, he helped the organization predict and divert a potential staffing bind. However, his co-workers often complain that he is not friendly and does not participate in team lunches.

Imani loves her role on the finance team and enjoys thinking of new ways to save the company money, but she is often slow at her job because she is continuously rechecking her work for possible mistakes.

Helen was recently diagnosed with attention deficit hyperactivity disorder (ADHD), and she has no idea how to ask for help. She doesn't

even know what she needs help with specifically, but she feels ill-equipped to reach her potential. Jamal has autism spectrum disorder and has been told he has social challenges. He is unsure what to do with that information. Imani was diagnosed with dyslexia in elementary school and works diligently to ensure she does not make mistakes in her work, which often leaves her exhausted.

Helen, Jamal, and Imani are fictional composites of neurodiverse individuals I see in my coaching practice or have interviewed in my research on neurodiversity in the workplace. Stories are often somewhat similar among each diagnosis and the individual's desire to minimize their neurodevelopmental differences to assimilate to the world around them. Yet, each is special and interesting and has clear strengths that both they and their employers are not maximizing.

Approximately one in eight people in the workplace has a condition or diagnosis that puts them in the category of neurodivergent, according to a 2019 *Work Design Magazine* article. The term *neurodivergent*—meaning different brain—emerged in the late 1990s from sociologist Judy Singer and was popularized particularly in the disability rights movement with specific reference to autism spectrum disorder. It is estimated that only 50 percent of individuals with neurodivergent brains know that they have a cognitive difference from those who are neurotypical, the *Work Design* article reports.

Neurodevelopmental differences are often known as invisible disabilities, meaning the challenges people face may not be outwardly apparent. Most publications include these diagnoses or conditions when referencing neurodiversity: autism; ADHD; obsessive-compulsive disorder (OCD); Tourette syndrome; and learning differences such as dyslexia, dysgraphia, and dyscalculia. See the Neurodiversity Diagnoses sidebar for definitions and prevalence. Many other diagnoses can fall under the neurodiversity umbrella as well.

Statistically speaking, there is a strong likelihood that your organization currently employs individuals with neurodivergent brains. Based on the workplace statistic mentioned above, an organization of 20,000 employees may have as many as 2,500 neurodivergent employees. And of those 2,500, it is possible that as many as 1,250 have no idea that the struggles they are having in life and at work

are due to a neurodivergent brain. The question then is: Are you and the company taking the steps to maximize their effectiveness and employee experience?

It is possible you may have a gold mine of exceptional talent in your organization and don't even realize it. If your neurodivergent team members are not theoretically sitting in the right seat on the theoretical bus, they may not realize it either. There are multiple reasons it will benefit you and the organization to build a strategy for leveraging the strengths of your existing neurodiverse employees and attracting neurodiverse applicants into roles well suited for their special abilities.

In this issue of *TD at Work*, I will cover:

- Why employers should include neurodiversity in their diversity, equity, and inclusion strategies
- How to build inclusion by removing barriers for neurodiverse employees through accommodations, individualized development, and support
- Why companies should actively recruit individuals with neurodivergent minds to strengthen the business

In short, I will provide thought starters, information, and tools for people leaders and talent development professionals to better understand neurodivergent people and help them and neurotypical people together create a strong, productive, and healthy organization.

Expand Your Inclusion Strategy

Chances are you know at least one person in your workplace, social life, or family who is considered neurodiverse. It is possible you are neurodivergent yourself. When looking at the prevalence, consider that for decades, many people were not diagnosed—or at least not properly diagnosed. While it looks like these disorders are on the rise, it is probably more so the case that more people are learning about and acknowledging their cognitive differences. Parents of children diagnosed with certain cognitive differences are also receiving their own diagnoses later in life. Critics suggest that children are being overdiagnosed, but the reality is that society is closer to getting it right than previously when children were just thought to be naughty, slow, or weird. As a result, there are many maladjusted adults in the workplace struggling to thrive.

A new wave of young adults entering the workforce with neurodivergent diagnoses are accustomed in educational institutions to having accommodations and individualized support plans in place. Baby boomers, Gen X, and older millennials who are considered neurodivergent are less likely to have received a formal diagnosis until adulthood and often only then as a result of a child or grandchild receiving a diagnosis, because many forms of neurodiversity are genetic. Gen Z and the next generation—Gen Alpha—are the first generations in which correct diagnoses are more prevalent, and interventions are starting as early as elementary school.

As previously mentioned, a neurodivergent brain is an invisible difference that many neurodiverse individuals work hard to conceal. The effort they put into concealing cognitive differences can be exhausting, draining, and often demoralizing as they struggle to cope in a world built for neurotypical people. Finding ways to remove barriers and obstacles for neurodiverse employees to thrive and shine may serve as the strongest retention tool an organization has. A company may never fully know the

prevalence of this underrepresented group in it workforce; therefore, an inclusion strategy should consider all types of brains. As with all underrepresented groups, the competitive business advantage is rooted in inclusion—not assimilation. I propose a three-pronged model for building inclusion in your organization for neurodiverse employees: accommodate, individualized development, and support. Use the template in the Tools & Resources section to formulate your own inclusion strategy using this three-pronged approach.

Accommodate

The Cambridge English dictionary defines *accommodate* as a verb meaning to give what is needed to someone. You can accommodate employees with cognitive differences in numerous ways. Companies spend hundreds of millions of dollars per year on employee engagement initiatives. A decade ago, talent development professionals were learning about the impact of active engagement and retention on productivity and profitability. Now

Neurodiversity Diagnoses

Many publications include the following diagnoses and conditions when referencing neurodiversity. However, many others exist.

Diagnosis	Description	Prevalence in the US
Autism spectrum disorder	Lifelong developmental disorder that affects communication and relating to people	5.6 million Americans
Attention deficit disorder/attention deficit hyperactivity disorder	Executive function disorder with symptoms such as inattentiveness, impulsivity, and excessive motor activity	10 million American adults
Obsessive-compulsive disorder	Chronic condition classified by intrusive or unwanted thoughts, feelings, or sensations that lead to repetitive actions or compulsions	2%–3% of Americans
Tourette syndrome	Disorder that causes uncontrollable movement and vocal tics	300,000 American children
Learning differences	• Dyslexia—affects the ability to read, write, spell, and speak • Dyspraxia—affects motor skills • Dysgraphia—affects fine motor skills needed to write • Dyscalculia—affects the ability to understand numbers and math	• 30 million Americans • 5% of children • 5%–20% of American children • 7% of Americans

Sources: *Forbes*, CHADD, US Centers for Disease Control and Prevention, American Psychiatric Association, Tourette Association of America, The Reading Well, Understood, *ADDitude* magazine, Dyscalculia.org

companies are measuring engagement as a standard business practice and are still struggling to engage and retain workers. It is time to think about individualized retention efforts. Top-tier private and public K-12 education institutions in the US, for example, are tapping into this idea.

Chances are you know at least one person in your workplace, social life, or family who is considered neurodiverse.

American schoolchildren diagnosed with autism, ADHD, and other learning differences have access to legal accommodation frameworks such as 504 plans (named after Section 504 of the Rehabilitation Act of 1973) or individualized education programs (IEPs), which are established to help those children thrive in general education settings. Children gain those services through testing and needs assessments. A well-implemented and well-executed 504 or IEP benefits them, their teachers, and their schools because of clear guidelines, accommodations, and building self-advocacy in the students. Neurodiverse members of Gen Z and Gen Alpha likely have more exposure to such frameworks than previous generations. An employer's efforts to accommodate existing neurodivergent workers will give it a proactive advantage in welcoming future generations of neurodiverse talent along with an inclusion-centric approach to employee engagement.

It is important to understand that the diagnoses under the neurodiverse umbrella are protected under the Americans With Disabilities Act. Never assume someone is neurodivergent, and never ask. Neurodivergent individuals have varied degrees of comfort with disclosing their disability. It is your responsibility to be compliant with offering a reasonable accommodation process to employees seeking support. A great place to start is reviewing the list of clarifying questions from the Job Accommodation Network

website (askjan.org), a nonprofit association that offers confidential guidance on workplace accommodations and disability employment issues at no charge. Consider a proactive approach of identifying general accommodations for neurodiverse employees that you offer to all employees to assist those who are not comfortable officially disclosing their disability.

The Job Accommodation Network has an extensive list of accommodation suggestions and products for each neurodivergent diagnosis. Here are some examples of accommodations by category:

- **Assistive technology** solutions include speech-to-text software, alternative keyboard and mouse, audio-assistive technology, captioning services, and predictive text.
- **People resources** solutions include a peer social mentor, behavioral coach, executive function coach, and project manager access to assist with project scoping.
- **Cognitive function support** solutions include time-management apps and software, digital planners, project management software, alarms, and reminders.
- **Physical environment** solutions include noise-reducing acoustics and access to noise-canceling headphones, light-dimming ability, air purification and filters to reduce smells, and cubicle tops.
- **Sensory outputs** include solutions such as handheld fidgets, adjustable-height desks, alternative seating options, and subscriptions to music services.
- **Policies** include deadline flexibility, modified corrective action process, flexible work schedule and workday, access to brain breaks, and additional transition time between meetings for change tolerance.
- **Stress and mental health** solutions include access to therapy (ideally, specialists in the relevant diagnosis) or an employee assistance program, mindfulness and calming apps, and support animals.

The leadership team may have concerns about costs associated with offering accommodations; however, often what's good for one is good for many. My son was diagnosed with inattentive-type ADHD in early elementary school. He struggled to stay seated and still in the classroom during lessons. His school-provided case manager recommended he use a wobbly stool during

Enhanced Neurodiversity Inclusion Organization Benefits

- More deeply engage neurodivergent employees
- Excel in corporate social responsibility
- Lead industry and sector in innovations
- Increase organization operational efficiencies
- Modernize and reinvigorate training programs
- Build retention and morale
- Attract best-in-class talent
- Qualify for tax incentives

class time. The school purchased a small number of stools, and he was able to have one assigned to him. That stool was a game-changer, increasing his ability to focus and stay seated, which had the added benefit of reducing distractions for other students. Teachers began letting other children use the stools when available. The school found the stools were so effective in classroom management and engagement that the parent teacher association purchased more for any child to use.

If you build a library of resources and accommodations at your company, you may find that individuals who are neurotypical also benefit from access. Many accommodations come at zero cost, and according to the Job Accommodation Network, “employers surveyed reported a typical cost of \$500.”

Individualized Development

You are likely familiar with personalized development planning for staff and know that not all employees want the same thing. Some want to eventually rise to the C-suite; some don't like managing other people and are more comfortable working on projects. Appreciation for employees' individual professional development goals can help you understand and appreciate individual development plans for workers who are neurodivergent. Once again, look at what K-12 schools are doing to support neurodivergent students to get a sense of what is possible in the workplace. Explore IEPs as you think about removing obstacles for neurodiverse individuals.

IEPs and IDPs

An IEP consists of learning goals and school-provided support to help a student master those goals. A committee responsible for ensuring the student's holistic development then reviews and updates the IEP on an annual basis. See the Sample Individual Education and Workplace Plans sidebar. Note: That is one format; school districts can take different approaches. Included with the sample IEP is an example of how you can reimagine the plan for the workplace. You may find some of the components are similar to those in IDPs.

IDPs traditionally include career aspirations, current gaps in skills, SMART (specific, measurable, achievable, relevant, and time-bound) goals to bridge skills gaps, and key performance measurement indicators. IDPs often identify and include supporters such as a direct supervisor or mentor. Combine elements of IEPs and IDPs to create a more holistic individual inclusion and development plan by connecting accommodations and support that an individual needs along with their career development goals. Taking a few extra steps with your current IDP can increase engagement among both employees who are neurodivergent and neurotypical. And employees who are neurodiverse and had IEPs or 504 plans in school may benefit from a similar plan as they navigate the workplace.

Universal Design for Learning

When more students have IEPs or 504 plans, teachers are required to provide individualized classroom experiences. As a result, many school districts seek to provide classroom curriculum that is inclusive of all learning styles and cognitive abilities for students who are able to learn in a general education classroom the majority of the time. Numerous US school districts have adopted universal design for learning as their curriculum development methodology, though the method does have its detractors. Anne Meyer and David Rose initially created UDL in the mid-1980s. It has three guiding principles:

- Provide multiple means of engagement, the *why* of learning. That means engaging learners by offering choices and adjustable challenge levels.
- Provide multiple means of representation, the *what* of learning. That includes presenting information in

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a variety of ways, especially staying mindful of visual and auditory learning needs and then offering a range of support tactics.

- Provide multiple means of action and expression, the *how* of learning. That enables learners to demonstrate new skills and what they've learned.

Tom Thibodeau, director of online learning at Novak Education, explains three core elements of UDL:

- Similar to providing choices and multiple means of engagement, “variability is the rule, not the exception”—one size does not fit all.

- While the end—the *what*—is the same, there are a range of ways to get there, so provide flexibility.
- Allowing different means of expression—that is, the *how*—can create a space for all learners to become expert learners.

You and your talent development team are undoubtedly challenged with flexing curriculum design to suit all modalities, particularly in current times where some or all your workforce is remote. That already is no easy feat. Considering how to accommodate individuals' various neurological needs may seem daunting. However,

Sample Individual Education and Workplace Plans

This chart lists elements usually included in a school individual education plan and shows information that a sample workplace individual learning plan could incorporate.

	School Individual Education Plan	Workplace Individual Plan
Individual's information	Information about the student such as name, date of birth, grade, date of individual education plan (IEP)	Employee name, date of hire, department
IEP team	Faculty and staff supporting the student's IEP, parents or guardians, student (where applicable)	Employee; manager; HR or talent development team member, depending on organization structure; senior leader
Current performance	Current skills, abilities, behaviors, difficulties, and strengths	• Creative or artistic talent but less agile with numbers • Detail oriented but becomes stressed with tight deadlines
Annual goals	SMART (specific, measurable, attainable, relevant, time-bound) goals to accomplish in a school year, expressed as bite-size objectives	• Complete a course on time management, such as via LinkedIn, in next two quarters. • Work with an assigned project manager on quarterly report to ensure due date is met through proper project scoping.
Progress reporting	Measures IEP team uses to track goal progress	Check-ins at six-week intervals to see whether the individual has made progress; for example, two 60-minute learning modules completed or four reflection entries written. Employee, direct supervisor, and assigned project manager meet after two weeks to review effectiveness of project scoping work for quarterly report.
Services	Breakdown of how, what, where, and duration of specific special education services	For example, mindfulness app, quiet space, scheduling assistance to ensure the individual properly logs new activities
Supplementary aids and services	Breakdown of how, what, where, and duration of specific accommodations or modifications provided	This may look like a coach or employee resource group teammate who can help discuss trouble spots and identify/maximize strengths.
Participation	Time spent in general education classes, activities, and standardized testing	Additional time allotted to building social relationships with peers
Consent	Parent's or guardian's permission to implement IEP	Plan agreement that the employee and manager sign

rooting your curriculum design best practices in UDL may be helpful in addressing your organization's learning needs. As a starting point, consider the UDL guidelines that the Center for Applied Special Technology, a nonprofit education research and development organization, offers.

Support

The third component of building an inclusive workplace for neurodiverse talent is providing support. Accommodations and IDPs are some means, but you can take more intentional steps to ensure neurodiverse employees feel connected, included, and safe. Remember, you will only know whether someone is neurodivergent if they disclose it. Some solutions and ideas may only benefit those who are comfortable opting in. Ideally, workplace solutions should demonstrate that the organization is safe and inclusive, opening the door for more employees to benefit from the support mechanisms you put in place.

Company-wide awareness training. Providing neurodiversity awareness training to leaders and staff is arguably one of the most important things you can do to ensure a robust inclusion experience for neurodivergent individuals. Society is still in the early stages of imagining an inclusive workplace for those who are neurodiverse and neurotypical alike; as such, a limited number of training companies provide awareness training programs. The International Board of Credentialing and Continuing Education Standards has a comprehensive certified neurodiverse workplace training program, for example. You can also explore various online resources to build your own internal training program; however, I advise that you or the content creators you assign be well versed in neurodivergent people's strengths, Americans With Disabilities Act requirements or your respective country's guidelines, disclosure practices, and sensitivity training.

Leadership training. Some employees who are neurodiverse will not disclose it. In the US, it is illegal to ask someone whether they are neurodivergent, and it is not prudent to assume. Check laws in your own country to determine what is appropriate. Offer leadership training that includes all people leaders and HR professionals.

Educate participants on how to handle performance management, ways to align on specific needs for accommodations and development plans, and legal guidelines. Demonstrate that neurodivergence is an invisible challenge that individuals can hide well. Emphasize that leaders should treat all staff with empathy, validation, and dignity.

Employee resource and affinity groups. These groups are great places to build community, awareness, and allyship. Highlight and provide support to neurodivergent individuals by building internal communities within the company. Employee resource groups are more formal groups and often include members who seek to serve in the smaller community, even if they may not personally be part of the underrepresented group. They can also be a support for workers who have neurodivergent loved ones or want to demonstrate allyship to colleagues who are neurodiverse and build awareness throughout the organization. Affinity groups are traditionally less formal than employee resource groups and connect individuals through a common or shared interest. Neurodiverse staff may appreciate a safe space with a group of people who understand and don't require additional education or information.

Mentorship and sponsorship. Identify internal or external people who can serve as mentors to employees who have identified as neurodivergent. The mentors could be more senior neurodivergent professionals or individuals who are neurotypical and allies to those who are neurodiverse. Sponsors serve as champions and vocalize neurodivergent individuals' strengths and accomplishments to help ensure they are connected to all potential opportunities in their careers.

Social peer partners. Your employer may already have an established ambassador or buddy program for new hires to help them learn the company's norms and culture. A social peer partner program is similar—a peer is assigned for a long-term basis to model social norms for neurodivergent individuals with social skills challenges.

External coaches. Provide employees with access to external coaches who specialize in supporting neurodiverse people. These are not therapists; rather they are coaches who help troubleshoot workplace concerns and maximize clients' strengths. Coaching platforms such as

Bravely and BetterUp have professionals who specialize in neurodiversity, and they are affordable resources that help you unlock access to coaches for all employees.

Employee assistance program. Does your current employee assistance program offer therapists who specialize in neurodiverse conditions? In my private ADHD executive coaching practice, I strongly recommend my clients also work with a therapist of their choosing. My clients report a critical difference in care when they work with a therapist who is trained and experienced in their cognitive difference. Autism, ADHD, and OCD are commonly comorbid with depression and anxiety. Stressors such as trying to fit into a workplace designed for neurotypical people exacerbate those comorbid conditions. Keep in mind that individuals who receive a diagnosis later in life may also struggle with overcoming shame from childhood. It is important that staff have access to therapy specific to their needs.

A significant portion of people with cognitive disabilities have above-average intelligence and advanced abilities.

Employee benefits. Sleep, diet, and exercise play a large role in each person's overall well-being; individuals who are neurodivergent are especially adversely affected by and susceptible to poor habits. Sleep issues can be a medication side effect and can be inherent to a busy mind even without medication. Some coaching platforms offer sleep coaches. Consider providing access to sleep studies.

Texture or smell aversion affect many neurodivergent individuals, sometimes leading to an imbalanced diet. In addition, people with ADHD tend to have lower dopamine levels and thus crave sugar and carbs. Provide support via nutrition coaches, access to discounted meal kits, and incentives for healthy eating. Also offer access to nutritional supplements and affordable medications. Many wellness platforms have programs for incentivizing

movement and exercise. Organize group fitness opportunities through local gyms, group hikes or bike rides, or sports leagues such as softball or rowing.

Leverage Neurodivergent Strengths

Once you and your organization have taken the necessary steps toward inclusion, consider intentionally recruiting neurodivergent candidates to fill roles that give them the opportunity to shine and demonstrate their strengths. That not only gives those individuals career opportunities but also can give the business a competitive advantage. In the war for talent and serious tech skills deficits, efforts to hire and support an underserved population may set you up for critical success.

Of the 5.6 million adults with autism in the US, studies estimate 50–75 percent are unemployed or underemployed relative to their abilities and education. Further, according to a 2022 *Forbes* article, nearly 50 percent of 25-year-olds with autism have never held a paying job. Many people with autism hold advanced degrees from reputable universities in areas such as biostatistics, computer applications, engineering, physics, and computational mathematics, indicating their high analytical and problem-solving abilities. Some graduate with honors or other distinctions; some even hold patents for inventions.

Neurodiverse individuals often struggle to fit traditional job profiles because they may possess unusual tendencies or habits, poor social skills, and impulse control, which cause them to do poorly in traditional interviews. They are also often precluded from the interview process due to poor scores on biased pre-employment cognitive ability or personality assessments. If they do make it on board, they may struggle with social norms, which can create static with peers and leaders. For example, people with ADHD are 18 times more likely to be disciplined at work and 60 percent more likely to lose their jobs than neurotypical people, according to Korn Ferry.

Those are troubling statistics; however, all of that is avoidable. Some businesses have figured out how to reap considerable benefits by leveraging neurodivergent people's strengths and superpowers. Their intent is not simply for humanitarian purposes. These businesses are

truly seeking a competitive advantage and have found the path to do so through workers with neurodiverse and special abilities. JPMorgan Chase reports its Autism at Work program participants are 90–140 percent more productive than peers who are neurotypical. Other companies with neurodiversity-at-work programs claim high participant retention rates compared to industry averages, creating a business benefit of reduced turnover costs.

As more people with neurodiverse diagnoses reach working age, there is a concern for their employability. A significant portion of people with cognitive disabilities have above-average intelligence and advanced abilities in pattern recognition, arithmetic, and memory. Individuals with ADHD and learning differences also tend to have strong right-brain tendencies and excel in creativity and innovation. Those with learning differences and ADHD often do better on aptitude rather than achievement assessments. As society becomes ever dependent on technological solutions, there is a strong demand for tech-based skills. Out-of-the-box thinking is necessary for the technology industry for competitive advantage, and that lines up well with many neurodiverse individuals' inherent skill sets.

Recruit

Thorkil Sonne, founder of Specialisterne—a company that works with employers to recruit individuals on the autism spectrum—and Specialisterne Foundation, is a preeminent thought leader on neurodiversity as a competitive advantage. Sonne noticed the exceptional memory and pattern-recognition ability of his son who was diagnosed with autism. That inspired Sonne to launch a software-testing firm in which the majority of software testers have autism because of their exceptional ability to detect patterns and outliers. His pursuit to build an inclusive strength-focused neurodiverse workforce led him to develop the dandelion principle of management. The principle is rooted in how the world sees dandelions—a plant with jagged green leaves and a yellow flower or a puffy white top. They are considered weeds, sticking out of a perfectly manicured lawn. However, dandelions have nutritional and medicinal value, along with entertainment value and good feelings associated with picking one and blowing your

wishes into the wind. That is a metaphor for looking at the strengths of people who are differently abled to take your business to the next level.

You may consider seeking candidates with autism for roles that have high burnout rates among neurotypical individuals.

Think about the business problem your company is trying to solve or the consumer value you are trying to create. If you have a team of neurotypical workers, you may be struggling to think of the next big idea or identify a pattern that gives you a competitive edge. Homogeneous teams can be inflexible and focused on benchmarking to the status quo, limiting their ability to innovate and think creatively. If the company is a startup, it may also be a victim of concentric hiring practices, bringing on people whom leaders already know or who are like them. If you and the organization have taken steps to build an inclusive employer value proposition for attracting neurodiverse candidates, it is time to intentionally seek the skills needed to achieve your business goals.

There are multiple approaches to seeking neurodiverse talent. Companies such as Microsoft, JPMorgan Chase, EY, and SAP lead recruiting initiatives for neurodiversity by offering job postings specifically targeting neurodivergent applicants. Those companies have robust internal programs for identifying and cultivating top neurodivergent talent. Some organizations rely on consulting firms such as Horace Mann Educational Associates, whose Neurodiversity @ Work program places individuals with autism in organizations looking to fill specific roles. Be intentional in recruitment marketing to call out that you are seeking candidates who are neurodiverse. Highlight the ways in which the organization is inclusive and supportive of them.

You may find it lucrative to seek talent in earlier developmental stages. Schools have an annual review

Good and Poor Role Fits for Neurodivergent Individuals

Diagnosis	Good Fit	Poor Fit
Autism spectrum disorder	• Innovative thinking • Attention to detail • Pattern recognition • Independent work • Finding practical solutions • Strong connection to justice	• High social demands • Ambiguous expectations • Demands for short-term working memory • Dealing with difficult customers
Attention deficit hyperactivity disorder	• Continuously changing environment and tasks • Solving interesting and stressful problems • Creativity and original thinking • Social interactions • Entrepreneurial abilities	• Managing details • Repetitive tasks • Sedentary, requiring stillness • Isolation • Strict deadlines and schedules • Administrative tasks
Obsessive-compulsive disorder	• Attention to detail • Negotiable deadlines • Clearly defined rules and expectations • Artistic outlets	• Roles that may trigger intrusive thoughts • Strict deadlines • Situations where ritualistic behaviors may be on display • Lack of private space
Tourette syndrome	• Roles requiring concentration • Creative design • Music and art • More individual interactions • Private workspace or work from home	• Places with environmental contaminants that may trigger tics • High stress • Long hours with no downtime
Learning differences	• Visual arts • Innovative and entrepreneurial skills • Sciences • Creating and building	• High degree of reading, writing, and math • Repetitive and sedentary tasks • Managing details

process for students on an IEP or 504 plan. Some states will invite outside agencies, with parental approval, to attend the transition meetings when the student moves from middle to high school. For instance, in Texas, the Texas Workforce Commission can provide representation at the meeting to help the family decide on high school course schedules that align to specific employment paths. Organizations from the private sector may not have direct access to students and families; however, this is uncharted territory worth exploring. Start by reaching out to the special education department of your local school district to discuss options.

The IEP and 504 plans do not follow students to college. Section 504 of the Rehabilitation Act of 1973 requires colleges and universities to provide accommodations, but often that does not mean a formal plan.

Some colleges and universities have support programs for neurodiverse students. Bellevue College in Bellevue, Washington, has a program called Neurodiversity Navigator that helps students with autism, and corporations can provide donations and sponsorships. It is encouraging that programs like that exist to support neurodivergent individuals, but there is still so much opportunity to target and engage future talent for your company through higher education channels.

Most of the structured recruitment and support programs today are aimed at providing opportunities to people on the autism spectrum. It may be beneficial for your company to tap into those resources to recruit for roles requiring detailed analysis, pattern detection, and repetitive tasks. You may consider seeking candidates with autism for roles that have high burnout rates among

neurotypical workers. For example, a role with repetitive tasks or continuous data review may become boring to a neurotypical individual, but someone with autism may find comfort in the predictability of the job.

There are not currently as many dedicated resources and programs specifically catering to recruiting individuals with ADHD or learning differences such as dysgraphia, dyscalculia, and dyslexia as there are for those on the autism spectrum. ADHD is the most common diagnosis among neurodivergent brains. Countless resources are available to help people with this diagnosis to assimilate and cope, yet few resources are available to intentionally bring these individuals into roles where their strengths will shine. People with

ADHD do well as entrepreneurs and innovators, but there are likely roles you currently need to fill where someone with ADHD would be a great fit. In my ADHD executive coaching practice, I have many marketing professionals as clients, for example. Strengths of individuals with ADHD are often high energy, resilience, hyperfocus, thriving under pressure, and curiosity, to name a few. See the Good and Poor Role Fits for Neurodivergent Individuals sidebar for more examples of role fits for neurodivergent candidates.

Consider these avenues as you put together a neurodiversity recruitment strategy:

- Identify the business problem to solve or the competitive advantage the company is seeking.

Case Study: Microsoft Neurodiversity Hiring Program

Microsoft is a leading example for neurodiversity hiring programs. The technology company began its program in 2015 as a small pilot to attract individuals with autism spectrum disorder; the program has grown to support all types of cognitive differences under the neurodiversity umbrella. According to Microsoft, its neurodiversity hiring program is “an extended interview process that focuses on workability, interview preparation, and skill assessment.” The amount of time in the process helps leaders see multiple dimensions of a candidate while allowing the candidate to be immersed in what it is like to work for Microsoft.

Candidates begin by applying through the company’s inclusive hiring website. If candidates’ skills are a match, Microsoft invites them to a multiday in-person or virtual group hiring event. The first day is a casual meet and greet in which candidates meet each other and program team members in a group setting. They then participate in small-group team-building exercises through the Microsoft game *Minecraft*. During that time, the tech giant evaluates candidates on their collaboration and teamwork abilities.

On the second day, candidates participate in individual mock interviews with program team members. They receive feedback in real time so that they can immediately apply that constructive advice. The mock

interview gives candidates a preview of the interview structure. Candidates also meet with Microsoft employees who were hired through the program to learn more about how those individuals are thriving and growing at the company.

On the third day, candidates play *Minecraft* and solve tasks that dig deeper into showcasing their skills. The fourth day consists of interviews with managers from different teams. All interviewers are trained in neurodiversity, and Microsoft provides job coaches as needed. Candidates have extended breaks between each interview for rest and recuperation. The program team provides each candidate with necessary accessibility accommodations.

Following the interview process, Microsoft contacts all candidates within a two-week timeframe. Those who do not receive an offer receive clear and direct feedback on skill areas they need to develop.

Candidates who receive and accept an offer then go through a structured onboarding process. Managers and teammates receive neurodiversity training ahead of each new hire’s start date. Microsoft assigns each new hire a job coach who offers guidance and support throughout the individual’s first year. Each new hire also has a community mentor from the employee resource group who oversees their acclimation to the company’s structure and cultural norms.

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- Align the job description skills to neurodivergent people's common strengths.
- Contact special education programs at local middle and high schools for the talent you may want to invest in with the future in mind.
- Partner with colleges, universities, and trade schools for internship and employment opportunities.
- Consider building a neurodiversity hiring program based on other organizations' programs, or work with a placement firm specializing in neurodiversity.

Interview

Traditional interview practices may unintentionally exclude neurodiverse individuals from opportunities within companies. For example, consider the cartoon, several animals are lined up in front of a desk with a man seated at it. Behind them is a large tree. He tells them, "For a fair selection everybody has to take the same exam: Please climb that tree." One of the animals is a goldfish in a bowl. The cartoon plays off the famous quote: "Everyone is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid." Just as the goldfish in the cartoon is unable to complete the test, a neurodivergent person may not do well in a traditional interview.

Consider a person with autism who is uncomfortable in social situations or struggles to understand ambiguous questions. Consider an individual with ADHD whose resume causes you to question their job stability history. Think about a candidate with a learning difference as they face an online assessment that involves heavy reading. Additionally, interviewers may hold an unconscious bias toward those who think differently or who behave in a way that is counter to expected interview behavior. Before you build an inclusive interview process, start by facilitating leadership and peer sensitivity training to ensure all participants involved in interviews are adequately prepared for a robust and inclusive interview process.

As with neurotypical candidates, a prescreening process is appropriate whether it consists of a skills assessment or a phone screen. Once you have determined the individuals' skills and experience fit the job description, provide them with the opportunity to request accommodations ahead of the interview. Microsoft uses an online

accessibility request form when inviting interviewees into its process. That enables interviewees to benefit from any necessary accommodations for a successful interview and demonstrates the company's awareness of different needs in the process (see the sidebar for an overview of Microsoft's neurodiversity hiring process).

Do not rush the interview process. Avoid a panel-style interview in which the interviewee must face multiple individuals at one time. That can create unnecessary anxiety for the candidate. Note, a panel-style interview is different from a group interview, where multiple candidates come together for a discussion, a strategy Microsoft uses. Group discussions provide a more informal and relaxed atmosphere, encouraging the candidates to be themselves. Consider implementing other project-based components where candidates can demonstrate their creativity, innovation, and additional talents. Your ultimate goal is to create a safe interview environment that will coax forth neurodivergent candidates' creativity and natural talents. The time you spend enabling that will pay for itself in the long run.

Conclusion

The ideas presented in this issue of *TD at Work* are just a small selection of ways to serve the 12.5 percent of neurodivergent people in the US workforce. It is my hope that this issue has provided some thought starters for you to begin exploring building an inclusive workplace and leveraging neurodivergent employees' strengths. Those individuals need your support to experience a safe, respectful, and inclusive work environment. It will take your and the organization's intentional effort to support, accommodate, and provide individualized development. Once the company has its foundation, values, and actions rooted in a truly inclusive workplace, it will reap the benefits of the skills and talents that exceptional neurodiverse talent offer.

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Neurodiversity Inclusion Strategy Assessment Worksheet

Use this worksheet to assess your company's strategy for including employees who are neurodivergent. Answer the questions to determine next steps to provide a more inclusive workplace.

How do the organization's mission, vision, and values support investment in your neurodivergent workforce?

Accommodations

What tools and resources do you have in place to serve neurodiverse employees?

Review the Job Accommodation Network's list of accommodations for neurodivergent individuals (askjan.org). What are some tools and resources you can implement immediately and plan to add in the future?

Individual Development

How can you adjust your current L&D offerings to remove barriers and include variability and flexibility?

What are ways you can create and build individual development plans to ensure inclusion for all employees?

Support

Do you have employee resource or affinity groups? Does your company provide access to therapists or coaches?

How will you educate leaders to support neurodivergent direct reports? How will you foster an inclusive peer environment?

Other Actions or Notes

Individual Inclusion and Development Plan Template

Provide this template for leaders to use with individuals to align on strengths, support needed, and goals. They should discuss and update the plan on a regular basis (at least quarterly) to ensure each employee with a plan receives the appropriate support to address their current needs.

Name:	Plan date:
Position title:	Time in position:

Employee to complete

My unique strengths include:	I thrive in the workplace when:

I tend to struggle with these skills:	Work is stressful for me when:

My two personal development goals for this year (expressed as SMART goals):
1.
2.

My two performance goals for this year (expressed as SMART goals):
1.
2.

Individual Inclusion and Development Plan Template (Cont.)

My career goals (expressed as positions, accomplishments, or both):

In the next 1–2 years:

In the next 3–5 years:

Accommodations or support services I would like to receive:

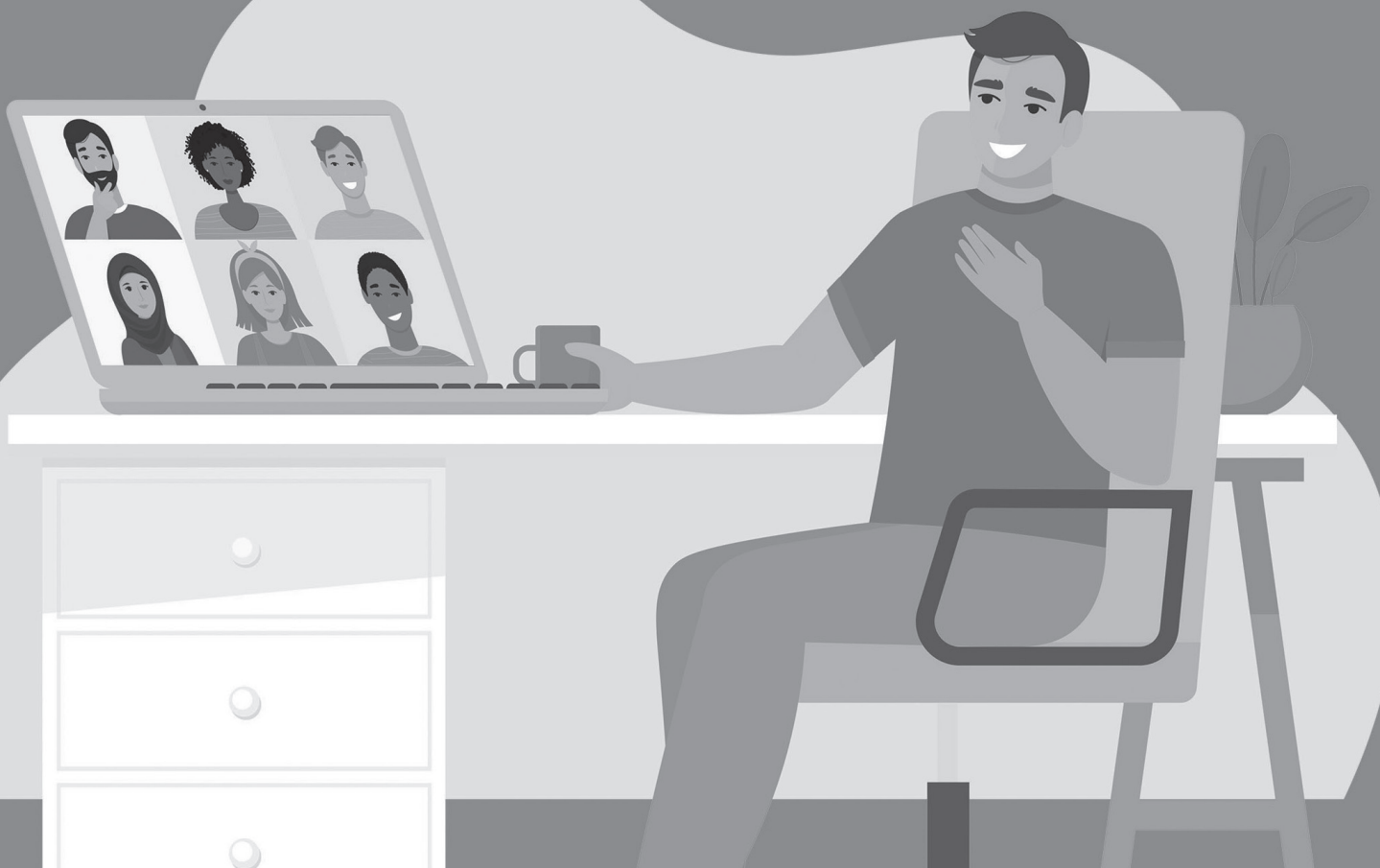
Leader to complete

Include development commitments, timelines, and resources you'll provide, additional support partners to involve, and any other relevant support.

I will support _____ by doing the following:

- 1.
- 2.
- 3.
- 4.

Onboard New Hires Virtually



ONBOARD NEW HIRES VIRTUALLY

AUTHOR

Sharlyn Lauby

Sharlyn Lauby is an author, writer, speaker, and consultant. She has been named a top HR digital influencer and is best known for her work on HR Bartender. Lauby is the author of *Manager Onboarding: 5 Steps for Setting New Leaders Up for Success* and *The Recruiter's Handbook: A Complete Guide for Sourcing, Selecting, and Engaging the Best Talent*.

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**Content Manager,
Instructional Design**
Eliza Blanchard, APTD

Editor, *TD at Work*
Patty Gaul

Managing Editor
Joy Metcalf

Senior Graphic Designer
Shirley E.M. Raybuck

Whether it's temporary or long term, remote work has been gaining in popularity.
Prior to the COVID-19

pandemic, Global Workforce Analytics estimated that approximately 4 percent of US employees worked remotely. During the pandemic, the Pew Research Center estimates that up to 70 percent of employees are working from home.

While the pandemic has forced many organizations to allow individuals to work outside the office, employees' desires as well as organizational productivity will be the drivers for long-term telework.

The transition to remote work no doubt has its challenges for companies and employees alike. But it can be easier for established employees because they at least already have a relationship with their employer and should understand the expectations for their role and work. What about for new hires? How do they join a new organization, learn the company values and mission, and demonstrate their skills and productivity all while working outside the office?

From virtual interviews to a virtual start date, companies have a lot to navigate. For talent development professionals, that means pairing

their onboarding program with virtual learning to create a virtual onboarding program.

In this issue of *TD at Work*, I will:

- Discuss the value of onboarding as well as the benefits and drawbacks of virtual learning.
- Detail how to use ADDIE to develop a new virtual onboarding program.
- Explain how to redevelop an existing program.
- Outline managers' roles in virtual onboarding.
- Advise on how to gain—and retain—stakeholder buy-in for your program.

This issue will equip you with practical guidelines for designing a virtual onboarding program, including tips for activities that can make the program engaging and effective and ways to incorporate virtual components into an existing onboarding program.

The Value in Onboarding and Virtual Learning

Onboarding programs, whether in person or virtual, are valuable for two reasons. First, they help employees become productive more quickly. According to a Brandon Hall Group research brief, organizations with strong onboarding programs are known to improve productivity by more than 70 percent.

Second, onboarding is valuable for employee retention. In a Korn Ferry survey, 98 percent of responding senior leaders said that structured onboarding programs are the key to employee retention. How does onboarding make that possible? As new hires who participate in such a program become productive faster, they engage with the company while seeing how their work affects the business's bottom line. That connection makes them more likely to stay with the organization.

Regardless of whether companies are fully remote, fully in person, or a hybrid of the two, their onboarding program will play a critical role in how new hires get started. Further, whether by choice or as a byproduct of the pandemic, employers are learning how to incorporate virtual components into their recruiting strategies and other aspects of organizational culture. That includes onboarding.

You may be able to develop a primarily virtual onboarding program or incorporate virtual learning

Think about how to bring many different types of learning into the virtual experience.

activities into an existing program. But as with any change, it's essential to look at the advantages and disadvantages of virtual learning so you can design a program that leverages its strengths while at the same time manages disadvantages.

Virtual learning advantages. Virtual learning offers participants flexibility in terms of where and when they consume the program content. That can be valuable for employees who work second or third shifts. Today's technology also enables you and learners to track progress—employees are able to see where they are in their onboarding journey.

For detailed content, you can prerecord the material to ensure that all participants receive consistent information. And if your company hires in high volume, you can use virtual onboarding to scale the transfer of information without sacrificing quality.

Virtual learning disadvantages. For participants to benefit, they need to understand and feel comfortable with the technology you are using with the program. Learners also must have the discipline to stay engaged with the content and not become distracted. And managers must provide employees with the support they need to participate—and not get tugged in a different direction during learning time.

Your challenge: Think about how to bring many different types of learning into the virtual experience. Variety will be a key component to learning engagement.

Choosing a Design Model

When it comes to designing a virtual onboarding program or reworking an existing one, you have many instructional design models available to choose from. For this discussion, I use ADDIE (analyze, design, develop, implement, and

evaluate). Since it was initially developed in the 1970s at Florida State University for military training, talent development professionals have used the model for program design. That said, as you set out to work on your program, pick the model that works best for you. And remember that instructional design best practices still hold true for a virtual onboarding program.

Starting Fresh

If your company doesn't have any type of onboarding program or your current one isn't worth salvaging, it's time to create one. This is where ADDIE comes in.

Analyze

First, assess the current environment. Ideally, for this analysis, gather relevant data and information to help you understand where the company currently is and where it wants to go in the future.

Be objective. While you may have your own ideas about what needs to happen, the analysis is about gathering objective data and information. Leave any preconceived thoughts and biases aside. Otherwise, it's possible the assessment won't give you a clear picture of the problem and solution.

Keep it brief. Assessments don't have to be lengthy, resource-heavy activities. Balance the need to conduct a thorough, objective assessment with the time and resources available. Simply put, if it is too in-depth, you could run into resistance and unnecessarily waste time and resources during this phase. And that can hurt your project later.

Think of the assessment as a traditional gap analysis. If done well, the process of conducting the assessment will help you gain organizational buy-in.

Four Questions

In *Needs Assessment Basics*, Deborah Tobey and Beth McGoldrick outline a straightforward, four-question approach to conducting a learning assessment.

1. **What are the organization's needs?** Identify what the company needs in terms of operating the business successfully. Some survey participants will be able to answer this question quickly and

without hesitation. Others—especially if the company is in the middle of a restructuring, merger, or acquisition—may have to spend more time on it.

2. **What are the performance needs?** Once you know what the company needs to be successful, translate that into performance standards. Again, some companies may have these defined, while others may have to create them. If your company is doing any type of reskilling or upskilling, it's possible that some but not all positions will be affected.
3. **What are the learning needs?** Performance standards tell you what employees need to learn. While

The ADDIE Model

Analyze: Assess your organization's current environment. Reach a consensus on the project's goals and an understanding of what's currently happening. Then conduct an audience analysis.

Design: Create program objectives that align with the project goals you've identified. Then determine how you will measure outcomes.

Develop: Focus on developing the program. Identify the methods, and create content for participants and facilitators.

Implement: This is the most visible step in the process. During implementation, you roll out the program to the target audience. Sometimes organizations will include a pilot program, where a select group goes through it and offers feedback before the program officially launches. That is a great way to get feedback and buy-in.

Evaluate: In this final step, collect data and information about the program from participants, managers, and senior management. Use that to adjust content and implement future updates. Also, be sure to share how the program is meeting its goals. Additionally, anecdotal information can be useful, especially when combined with postprogram data. Evaluation data and information can justify the case for budget dollars and more resources.

new hires do not need to know everything on the first day or even in the first week, prioritize learning—especially as you think about the virtual onboarding program design.

4. **What do learners need?** Finally, what knowledge, skills, and abilities will you provide via learning, and which KSAs should employees know prior to joining the company? Coordinate the specifics of this question with the talent acquisition team and hiring managers. What learners should know coming in should become part of the organizational talent acquisition strategy. For KSAs they learn on the job, determine which they must learn in the onboarding program and which can serve as future learning opportunities.

Survey Participants

Next, identify whom you will survey.

Senior management. Depending on the company's size and structure, it's possible that senior management will not have firsthand knowledge of performance standards. But they certainly will want a say on the

organization's needs and possibly on the KSAs new hires should know versus receive via a training course.

Operational managers. These individuals ultimately will be a part of the onboarding delivery team. Getting their buy-in is essential. They may not know the technical L&D jargon regarding performance standards, but they will know what it takes for employees to be successful.

HR. Understanding HR's expectations in terms of hiring and developing talent can help shape your onboarding program. Those expectations may even be the impetus behind the organization wanting the new program. Be sure you are on the same page with the HR team and that their actions and yours align with business goals.

Current (and past) employees. Current employees can provide insights that talent development and operational managers are unaware of when it comes to doing the job. Further, although you won't be directly surveying past employees, review their feedback from exit interviews and see whether that sheds light on weaknesses you need to address via the program.

Survey Methods

Survey Method	Benefits	Considerations
In Person	- Body language is visible and can offer additional insights. - The interview can be more unstructured and allow for follow-up questions.	- The interviewer needs to be skilled in reading body language. - Interviews can be time-consuming.
Videoconference	- Body language is visible and can offer additional insights. - No travel or meeting room is required.	- The interviewer should be skilled in making the interviewee feel comfortable in a videoconference format. - Technology can pose challenges.
Phone	- The interviewer can benefit from hearing voice inflexions. - The interview can be more unstructured and allow for follow-up questions.	- Interviews can be time-consuming. - Sound quality or connectivity issues could pose challenges.
Electronic or Paper	- Although structured, open-ended questions are an option. - Allows for greater feedback from a larger group.	- Requires structured questions and little opportunity for follow-up. - Response rates could be low.

Each participant group brings a unique perspective to the discussion about new-hire learning. Survey each for feedback. However, you do not need to survey each group the same way. (See the Survey Methods chart for advantages and disadvantages of various tactics.)

At the end of the analyze step, you and your company should have an understanding of what you want new hires to learn during the virtual onboarding program. The KSAs that a new hire learns should align with company goals and the new hire's job.

Example: A small, local engineering company wants to create a virtual onboarding process for new administrative staff. The talent development leader poses the four questions and ascertains these needs:

- **Organization's need:** employees to understand the business (engineering) and their value proposition to clients (possibly agility, because this is a small company)
- **Performance needs:** administrative staff working with several engineers (creating less hierarchy and more agility) and some cross-training; administrative staff cross-training in accounts payable, accounts receivable, payroll, and HR
- **Learning need:** new hires onboarding for their primary job first and then starting cross-training within six months
- **Learner needs:** access to the appropriate systems and possibly attendance at a workshop on accounting basics or HR law

Design

The answers to the needs assessment questions are your starting point. Now it's time to take that information and begin turning it into a program by designing the program's parameters. Note, you are not developing the content in this step. Rather, you are establishing objectives.

The A-B-C-D approach is a proven method for writing program objectives:

- **Audience**—the people who will attend the program (new hires)
- **Behavior**—the outcome of attending the program (ability to complete specific tasks)
- **Condition**—any aids or assistance provided during the program (such as a manual or buddy)

- **Degree**—the learners' level of competence after completing the program (such as percentage of performance standard)

Example: A company is developing an onboarding program for new sales representatives. One program objective is that sales reps initially should be able to sell 40 percent of their monthly goal with a buddy's assistance and the company's product manuals. After six months, the sales reps should be able to sell 75 percent of their monthly goal using only the product manuals. At one year, the sales reps should be able to sell 100 percent of their monthly goal.

The Manager's Role in Virtual Onboarding

In a traditional onboarding program, HR handles orientation and the new hire's manager is responsible for onboarding, including welcoming the new employee to the team, helping them learn their job, and making sure they become productive.

For virtual onboarding, those responsibilities may change and another individual may take over some of those tasks. For example, the manager may have traditionally been responsible for training new employees on how to complete their time sheet, request time off, and submit an expense report. In the virtual program, you may choose to roll that information into an online learning session that the payroll and HR departments lead.

Instead, the manager may now be responsible for sending a welcome message and gift to the new employee's home. The manager may also record a video demonstration of important processes, rather than having the new hire shadow another employee.

The manager continues to play a significant role in virtual new-hire onboarding. As you design the program, clearly define the manager's role and ensure that role enables the manager to build a positive working relationship with their new employee.

Virtual Components

After you have identified the objectives, determine how much of the program can and should be virtual. Depending on your organization and the employee's role, it's possible you cannot make the entire onboarding program virtual. Consider these three types of activities:

Activities that must be done in person. These are not activities that are nice to do in person. Rather, they are ones that cannot be done except in person.

Example: A new hire must demonstrate that they can safely operate a piece of company equipment to be approved to do so on the job.

Activities that can be in person or virtual. Although you may prefer to conduct activities in person, these ones you can lead virtually without significantly sacrificing quality or effectiveness.

Example: Before an employee can demonstrate that they understand how to use company equipment, they need to watch a demonstration, which they can do so virtually via video.

Activities that should be virtual. Sometimes organizations miss an opportunity to offer educational consistency by conducting activities in person that are better suited as virtual.

Example: The new hire must take a short quiz about the equipment before demonstrating their ability to operate it safely. With an online quiz, the employee has flexibility to complete the test when ready. In addition, with all new hires completing the quiz online, you can more easily report aggregate test scores.

Keep in mind that virtual onboarding content doesn't have to be stuffy or even in one format.

Determine the required onboarding activities and the categories they fall into. Reach out to managers and employees for creative inspiration. Sometimes activities that may initially seem like they can only happen in

person could happen virtually. For instance, if it is common practice to take a new hire out for lunch on their first day but that is not feasible, send the new hire a pizza and ask them to join you for a virtual lunch via videoconferencing. Or if you can't have something delivered, send a gift card for the employee to use when desired. As you think through the design aspects, ask whether the activity can be accomplished virtually and how.

Develop

It's time to develop the program's content. Today's technologies have paved the way for virtual content that falls in four categories: videoconferencing, videos, self-learning, and collaboration. Keep in mind that virtual onboarding content doesn't have to be stuffy or even in one format. Incorporate variety. Doing so can be both effective and fun. The hard part is choosing the format for the content you want to deliver. One way to decide is by determining the ideal delivery method.

Videoconferencing. Use videoconferencing for such onboarding aspects as a virtual buddy and mentoring, webinars, and other virtual interactions. Many companies like to pair new hires with a buddy who welcomes the new employee and remains accessible for questions. Buddies can connect virtually via videoconferencing as well as email and messaging platforms.

HR can conduct new-hire benefits sessions via videoconferencing. Doing so also enables the new hire to have a spouse or partner present to hear about the enrollment options.

Further, you can record webinars or microlearning sessions on various topics—from ethics and anti-harassment to expense reports and email etiquette—and use them for additional new hires who join the company or to send to current employees who need a refresher.

Videos. Smartphones and tablets have helped usher in an era where you no longer need to be a professional videographer to make videos. You can film them using smartphones and use casual backgrounds while maintaining credibility. However, that doesn't mean your videos can be fuzzy, grainy, or inaccurate.

When you are filming in-house videos, ensure you have quality sound—that can make up for other lower-quality elements. Also ensure that the individuals you

Find an On-Camera Balance

In the office, meetings can overwhelm a given workday. A few years ago, in an effort to reduce the number of meetings employees were required to attend, some organizations started creating “no meeting” days. Basically, it was a policy that prevented meetings on a designated day of the week. Facebook, for example, was one company that adopted such a policy for Wednesdays. The company found that having no meetings enabled employees to work remotely as well as focus more on their work and productivity.

As with working in an office, working remotely isn't without its challenges. One of those is camera fatigue. As more people work remotely, they are spending more time on camera. Companies and managers want remote workers to feel a part of the team, so they do that by incorporating ways to see virtual team members. However, as with too many meetings, that additional time on camera creates a level of burnout.

Keep that in mind as you develop virtual onboarding and incorporate activities that don't require new hires to be on camera. You and your organization may even want to make it a company-wide policy to have no-camera days, when employees aren't required to turn their web cameras on. By reducing the amount of on-camera time, new hires will be more willing and excited to engage in a collaborative activity because they aren't already burned out.

are filming have had time to practice. You want them to be casual and comfortable.

Use videos to welcome new hires and help them begin to acclimate to the culture. Consider filming several colleagues in their home workspaces. If the new hires will come into the office at times, you may also want to consider filming a tour of the office.

Self-learning. These components can include assessments and reading assignments. Often, organizations retain a lot of reading materials that employees never

read because, in practice, the companies rely on individuals to convey that information in person. For example, instruction manuals sit on a shelf because managers tell employees how to operate the equipment. The same goes for safety guidelines because a safety manager explains what to do in case of an emergency.

Send electronic copies of information for new hires to access. As an added benefit, they will be able to access those virtual guides anytime they need to. In your virtual program, ask new employees to read information about a product or service. Then ask them to review the company website and its history. Depending on the new hires' role, you may want to ask them to read a book related to the industry. I once worked for an airline, and it asked me to read a book about the history of the transportation industry.

If you assign reading or watching something, ensure you have a way to confirm the new hires completed the activity, such as a quiz, a conversation, or other follow-up.

Think of the self-learning concepts for new hires as similar to those for long-time employees. For example, many organizations give employees the option to take an assessment so they can develop career goals. Following the assessment, employees may have the opportunity to listen to a webinar, watch a video, or read a book that expands on their assessment results. The components overlap and complement each other. Similarly, virtual self-learning components can set the stage for future learning for new hires.

Collaborative activities. Virtual collaborative activities can include scavenger hunts, interviews, and team icebreakers. A creative way to establish camaraderie is through virtual icebreakers. Another common activity that's effective in building relationships is an interview. Ask new hires to interview different people in the organization—provide a list of the individuals, including those with whom the new employees will collaborate regularly. That gives them the opportunity to learn about other roles within the organization, and that gives the interviewee an opportunity to meet the new hire and learn about their experience.

Don't overlook the element of fun when developing virtual components. Scavenger hunts or trivia quizzes could serve that purpose. With input from senior

leadership and operational managers, develop a list of items new hires should find on the internet, such as specific information about the organization from the company website or even a competitor's site and product information. If new hires find all the correct answers, they win a prize.

And be mindful of camera fatigue that comes with virtual activities. To keep new hires engaged, consider how you will prioritize when individuals need to be on camera and when they can have breaks.

Onboarding programs are successful because the information they convey is relevant, valuable, and current.

Implement and Evaluate

Implementation and evaluation are the most visible steps of creating your virtual onboarding program. In a traditional ADDIE design, they are two separate steps. However, for virtual onboarding, you can combine them by building a feedback mechanism into the implementation process. As you implement and evaluate your program, you will better understand whether the technology you're using and the particular modalities are the best ones for the learning content. Are learners staying engaged? Is there an appropriate mix of modalities, such as video and self-learning?

Pilot

Before you launch, consider conducting a pilot, where you deliver the program to a test audience. Pilot programs are an effective way to both preview the content and gain buy-in and feedback. Often, the test audience comprises operational managers who have a stake in how the final program will benefit their department. However, you may want to involve multiple stakeholders for each component.

Another appropriate stakeholder to pilot your new program is relatively new employees. Do they feel the

new content would have helped in getting them up to full productivity sooner? Using multiple stakeholders reduces the burden on just a few individuals to relay feedback on the entire program and generates more buy-in.

Modular Approach

Phases or a modular approach to implementation is a good way to roll out program components without overwhelming the organization or you and your team. There's no rule that you must develop and launch all program activities at the same time. Prioritizing a development and implementation schedule that enables you to release the onboarding program components in phases may be more valuable to new hires and easier for you. Doing so also enables you to evaluate sooner and even make adjustments earlier in the process.

Feedback

Build in mechanisms to gather feedback on the program. One option is Kirkpatrick Level 1 (reaction), which typically follows the onboarding orientation session. It's designed to get new-hire feedback about the session.

Check-ins are another option. These short surveys (sometimes just one question) enable you to touch base with the new hire. You can send the questions electronically or ask them during a call or virtual conversation. If your organization has an HR information system, applicant tracking system, or learning management system, a check-in feature may already exist in the software.

End-of-program surveys are another option. They help you determine whether you are lacking important information or whether new hires need guidance in other areas.

Think about what you will do with the feedback you gather as well. Create a schedule for discussing updates with stakeholders and another schedule for updating content. Onboarding programs are successful because the information they convey is relevant, valuable, and current. With a virtual program, you may be able to update individual components rather than the entire overarching program. Regardless, have a plan for gaining appropriate buy-in and then updating the course.

Example: An organization is working on a series of webinars for new hires focused on ethics and

Get and Keep Buy-in

The adage “If you want that project to succeed, you must get buy-in from key stakeholders” is true. But equally important, you want to get the buy-in and then maintain it. During conversations where you are asking stakeholders to buy in to the project, are you articulating what “support” means and asking what it takes to keep their support?

The last thing you want is to start working on a project only to discover that your stakeholders are no longer on board. That could happen for a variety of reasons that have nothing to do with the project itself. For example, business goals may shift, budgets and resources could be reallocated, or key staff members may need to focus in a different direction.

By keeping stakeholders engaged with the project, it's possible to maintain the staff and resources allocated to the project. If redistribution of resources needs to happen, the stakeholders may be able to help prevent the project's full demise. Follow these steps to secure and retain stakeholder support:

- Identify the best champions for the project. Let's face it: Some stakeholders are better at lending support than others. Part of a project's success is choosing the right champions or sponsors. Are they respected in the organization? Are they known for getting things done?
- Ask whether they are open to hearing about the project. Supporting the project must be their prerogative because their professional capital is on the line.
- Pitch the idea using business research and value to the organization. Include the rewards as well as any potential obstacles and challenges. Your project champions will want to know this.
- Relay expectations for their role, and get their commitment. That ties into the prior step—as you explain the project, convey where you believe they will provide the most value.
- Ask what you need to do to keep their commitment. It could be as simple as sending regular reports or meeting with them occasionally. Or it could be more, such as incorporating a component into the project that they feel strongly about.

conflict-of-interest policies. It has piloted the series, received excellent feedback, and launched the full program. After completing the program, new hires take a short survey about the experience. The talent development team begins to notice that new hires are using the survey to inquire as to how to ask questions or raise issues about employee benefits. Although this is unrelated to the webinar series, the feedback indicates that new hires want to know about their benefits. That information may prompt the talent development team to reprioritize its launch schedule to more quickly roll out a virtual benefits enrollment meeting. And if the virtual benefits meetings or modules are already available to new hires, the talent development team then should review how it is communicating details about those benefits to ensure new hires have the information they need.

Redeveloping an Existing Program

There's no need to build a new virtual onboarding program if you already have one that is well designed and successful for in-person delivery. However, just because it works in person doesn't mean it will be effective for remote employees. Review the program and think about ways to rework the existing components into virtual ones. You may be ready to add new elements to the program, and this is a good time to do so.

While it may be tempting to think that revising an existing onboarding program is easier than starting fresh, that's not always true. The advantage to creating a new program is that you are starting with a blank slate and everything is on the table for consideration. For an existing program, you and the company already have an

Buddy vs. Mentor

As you design your virtual onboarding program, consider whether you and your company want to incorporate a buddy program, a mentoring program, or both.

Buddy programs are designed to help new hires socialize with the new workplace and culture. An in-person buddy will often conduct an office tour and introduce the new employee to others. Buddies traditionally are not responsible for training or for offering career advice. Virtual buddies can still fulfill a similar role. While an on-site visit may no longer be necessary, the virtual buddy can meet with the new hire, talk to them about the company and culture, and facilitate a virtual meet and greet with other colleagues.

Mentoring programs are designed to help employees with their career, both personally and professionally. A mentor should have the skills and resources to provide the new hire with career guidance. It's possible the new employee will need some training to assume and successfully perform in their role. Virtual mentors can meet with new hires in much the same way they would in person but taking advantage of videoconferencing software to do so.

established way of onboarding. As you begin to rethink the delivery mechanism, you may encounter others who say, "But we've always done it this way." Gaining stakeholder buy-in during the redevelopment process will be critical to ensuring you have the resources you need (see the sidebar Get and Keep Buy-in for tips).

The ADDIE process for redeveloping your program will mirror that of developing a new one. However, for the analysis, you do not need to do a full audience assessment in addition to a needs assessment. Your audience hasn't changed. Rather, what is changing are your company's onboarding content needs and the delivery method.

To get started, ask: What content is missing? What do we need to revise or improve? Which content components should become virtual? You may already have a list of content to address. However, go through each aspect and, as

detailed above, consider whether certain activities must remain in person and which can transition to virtual.

For example, instead of an on-site breakfast with the CEO, you may rework that into a virtual "Ask Me Anything" session. You may also transition the buddy system into a hybrid one that offers both in-person and virtual buddies, depending on whether the new hire will work at times in the office or fully remote.

Note, it isn't as simple as swapping out in-person activities for virtual ones. Rather, you need to ensure that any new or revised elements fit and meet your program objectives. You should already have established goals for the onboarding program. For any new components you add, be sure to define objectives. For example, in addition to a new-hire buddy system, you may want to add a virtual mentor later in the onboarding process, say after the employee has been on the job six months. This virtual mentor component will have a different goal than the buddy system, which is meant to welcome new hires and orient them with the company and culture. The goal with the mentor program, for example, could be to ensure that new employees are growing and developing now that they have their footing in their role. The virtual mentoring could also aid with retention.

Once you have determined goals for the new content components, ensure they align with the program objectives. It's easy to get caught up in thinking about new or fun virtual elements to add as you rework your onboarding program, such as the virtual scavenger hunts mentioned earlier. Those activities have a defined purpose—such as for new hires to start building relationships with other team members or to learn more about company products and services—and that aligns with the overarching onboarding program objectives.

Finally, as you move through the ADDIE steps and rework your existing program, don't overlook technology. Is your aim to use the company's existing technology? If you were designing a new program, there's a strong possibility you would first design the program and then acquire the technology to deliver it. However, if with revising the program you aim to only use technology the organization already has, then you must first understand what your options are. Also keep in mind who in the company knows the technology well. You

may want to reach out to those individuals for further assistance while you are developing the program.

Conclusion

Virtual onboarding—similar to remote work—isn't a trend. Virtual workplace activities will continue to grow in popularity. The possibilities and benefits that come with remote work, including an expanded talent pool, are ones companies shouldn't disregard.

Already we have seen several large companies assert that they will continue to allow their employees to work virtually even after the pandemic subsides. According to Mercer, 94 percent of employers surveyed said that productivity was the same or higher since employees began working remotely.

Further, according to an onboarding article from Apollo Technical Engineered Talent Solutions, nearly seven out of 10 employees will stay with a company for at least three years when it has a good onboarding program. And in our ever-increasingly technology-driven world, virtual is not only acceptable but expected.

Embrace the advantages virtual learning offers, and start building your virtual onboarding program. Gain buy-in and gather feedback throughout the process and use that to grow and expand the program to meet organizational and new hires' needs.

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Remote New-Hire Onboarding Activity Checklist

This checklist provides activities that a new hire can complete during onboarding. Incorporate this list into your virtual onboarding program, or use it as a starting point to designing the program. These activities do not require significant resources.

Prior to First Day

- ☐ **Connect with manager.** New hires often have lots of questions about what's going to happen on their first day and week. The manager can schedule a quick phone or video call to go over the employee's schedule and answer questions.
- ☐ **Sign paperwork.** Consider using the time ahead of the new hire starting to have them complete necessary employment paperwork.
- ☐ **Meet buddy.** New hires may appreciate connecting with their buddy prior to starting to gain reassurance that they've made the right decision to join your company. Have their buddy reach out and make an introduction.

First Day

- ☐ **Connect with HR.** If an orientation meeting is not scheduled, have HR connect with the new hire and review pay, benefits, and other relevant information.
- ☐ **Learn about the company.** Assign the new hire reading or videos to watch to learn about the company, your products and services, and important policies and procedures. However, don't fill their day with only reading and videos. Break up the time up with opportunities for human interaction.
- ☐ **Meet their team.** Ask the new hire's manager or buddy to introduce them to the team of individuals with whom they will be working. Ideally, this should not be part of a work meeting. Rather, take the pressure off and help everyone relax over a virtual coffee or lunch.

First Week

- ☐ **Set up their office.** Even if the new hire has already established their designated remote office space, they may receive new necessary company equipment or gain access to files and share drives. Have them take time to get organized and familiar with their new setup so they can be most productive.
- ☐ **Attend learning sessions.** Task the new hire with participating in virtual learning sessions, as needed. This could include courses relevant to their role—for instance, a communication skills workshop—as well as company-wide required training on such topics as anti-harassment.
- ☐ **Meet other new hires.** Introduce the new hire to other new employees. This provides all of them with an opportunity to interact and gives them a greater sense of the company culture.
- ☐ **Check in with HR or their manager.** Have the new hire check in virtually with their manager or HR. Find out how they are doing and whether there's anything the company can do to make their transition smoother.

Tools & Resources

Virtual Onboarding Modality Planning Template

A strong virtual onboarding program offers a mix of activities and doesn't task new hires with sitting in front of a computer screen for long periods of time completing paperwork or watching e-learning modules. Use this template to plan out learning activities that use a variety of training methods to meet your learning objectives.

Example

Training Method	Purpose	Primary Person	Notes
Virtual instructor-led training	Receive an explanation of employee benefits.	HR	This should be done on the first day.
Informal coffee meeting	Acclimate to organizational culture.	Virtual buddy	Buddy reaches out to new hire on the first day or even before the new hire starts, but this get-together may occur midweek.
Videos	Understand the company vision and mission.	HR	
Audio recordings	Listen to communication best practices module.	Manager	
Support tools	Learn how to fill out time sheets.	Manager	
Coaching	Learn best practices for the department.	Teammate	
Scavenger hunt	Learn about organizational products and services by reviewing the company website and competitors' websites.	Manager	
Computer protocols	Access different computer drives and other tools used in the organization.	IT	
Interview	Meet teammates.	Manager	Manager provides new hire with contact information, and then the new hire interviews colleagues via video. They can do this later in the first week.
Assessment	Complete possible learning path or course.	Manager	Do this later in the first week.

Virtual Onboarding Modality Planning Template (Cont.)

Template

Training Method	Purpose	Primary Person	Notes

Secrets to Successful SME Projects



SECRETS TO SUCCESSFUL SME PROJECTS

AUTHORS

Sarah Wakefield

Sarah Wakefield, the author of *Technical Training Basics*, is an instructional design manager for Schlumberger Limited, where she works with subject matter experts to create high-profile training solutions. She facilitates ATD's Essentials of Working With SMEs to Develop Training program.

Patty Murdock

Patty Murdock is technical training manager of instructional and media design for Schlumberger Limited. She has co-authored and co-presented technical papers on training methods for the Society of Petroleum Engineers and conducted workshops for the Society for Technical Communication and the Association for Talent Development.

Community Manager, Learning & Development

Amanda Smith

Editor, *TD at Work*

Patty Gaul

Managing Editor

Teresa Preston

Production Design

Iris Sanchez

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Dealing with subject matter experts (SMEs) is one of the most important competencies of a technical developer. This competency is essential, but it can be challenging. A successful developer is able to produce results within this sometimes frustrating relationship.

If you're reading this issue, chances are you have some stories to tell about great SMEs and those who were a bit difficult. Let's be honest here: We can't do our jobs without our SMEs, but we all want to know how to make it easier to work with our SMEs. What if the secret is in how you approach them before, during, and after the project?

We believe the key to working with SMEs is in how you prepare for each of these three project stages and how you apply the information you have at your fingertips. This issue will provide you with strategies for communicating with different SMEs throughout the life cycle of a development project.

In this issue of *TD at Work*, you will learn:

- the three main phases of your collaboration with SMEs
- the types of SME personalities best suited to different types of projects
- how best to work with SMEs during each phase of the project: before, during, and after
- what to do when things don't go according to plan.

THREE MAIN PROJECT PHASES

Think about the three main phases of the project: before, during, and after. Sometimes, they might look like this:

Before

- You have one month's to one day's notice that a project is coming your way.
- You enter into a stakeholder meeting knowing zero about the project or people involved.
- You have some information on the project, but everyone seems to think your role is

instructional designer, graphic artist, and SME—all rolled into one convenient person.

During

- Missed deadlines reign above almost all other challenges.
- The SME doesn't seem to have time to devote to project development.
- The SME has decided he needs five to eight people to review each development step of the project, which confuses the objectives, fragments the work, and stretches the time required.

After

- The debrief meeting to discuss project challenges, areas of improvement, and successes doesn't seem to happen.
- The debrief meeting happens but is a gripe session.
- There is no opportunity to ask for referrals within the organization or future work if you are a contractor or consultant.

We are here to help you manage and change these typical scenarios. Using a few tips and processes, you can change the outcomes during all three phases. Let's look first at the stage before the project.

BEFORE THE PROJECT

Before development officially begins, you will undertake some important tasks, including choosing a SME, holding a kickoff meeting, and writing a scope of work statement.

Choosing a SME

Deciding which SMEs will be assigned to a project is an important decision. This can affect the success and eventual duration of a project. (It also can affect the mental health of a developer.) The book *Technical Training Basics* explains that a good SME:

- has knowledge of the subject
- uses good communication skills
- is available

- has experience designing a course
- possesses knowledge of adult learning
- admits when he or she “just doesn’t know”
- is connected
- is neither too general nor too detailed
- is decisive
- cares.

Essentially, these characteristics can be pared down to three main areas: knowledge, availability, and personality. Knowledge will be domain specific. Availability is whether the estimated project development hours fit within the SME’s daily, weekly, and monthly schedules. And personality directly relates to the SME’s interpersonal communication skills.

The Kickoff Meeting

Once your SME is chosen, it’s time for the project kickoff meeting. The kickoff meeting should follow these steps:

1. Explain what’s in it for the SME.
2. Establish your credibility.
3. Explore adult learning.
4. Describe what to expect.
5. Complete a risk mitigation analysis.

Explain What’s in It for the SME

Framing the project correctly, or describing “what’s in it for them,” is a critical step when working with SMEs. Gather all the information you can on the SME before the initial meeting. Look for the SME’s involvement in other learning projects, along with people he has worked with before. Try to find some areas of commonality—previous training experience, jobs held, university attended, or even hobbies. Ask others in the organization what they know about your SME.

The goal of this SME reconnaissance is to help you highlight how working on the project will benefit the SME. The project usually moves more efficiently if the SME is totally invested in the outcomes.

Think about this question to determine the WIIFM, or “what’s in it for me,” for your SME: How will your SME personally benefit from this training being complete? Some answers to this question might be:

- formally being recognized as an expert
- having to answer fewer questions via email
- fewer issues requiring late-night troubleshooting
- fewer mistakes made in the field
- a better-performing organization
- learning a new skill set (instructional design).

It also is worth thinking about some potential barriers to WIIFM, and, more important, how you will overcome those barriers. For example, a SME may see sharing her knowledge as reducing her own expert status or job security. In that case, it would help for the SME to be able to see her name prominently on the project. You could frame the project benefits with statements like these:

- “This is a way for everyone to see you were the main contributor for this course.”
- “People will be impressed that you are willingly sharing your knowledge.”
- “After this class is finished, you will be able to avoid time wasters and spend your time troubleshooting the most important and complex issues.”

Establish Your Credibility

The next step of the SME kickoff meeting is to establish your credibility. You are the mysterious instructional designer, and your clients and SMEs may not be quite sure what you do. It is your job to explain and defend your field of study and establish credibility with your colleagues.

You should answer this question about yourself: What value do I bring to the development team?

The answer to this question functions as your own personal value statement. If you are creative, detail-oriented, knowledgeable, and so forth, mention this along with your instructional design qualifications. Specifically:

- Answer the question “What value do I bring to the development team?”
- Mention certifications you may hold (CPTD, PMP).
- Send articles, whitepapers, or any writings to the SME in advance of the first meeting.
- Direct the SME to completed work via an internal link or provide portfolio information in advance of the first meeting.

SME PROFILES: WHO WOULD YOU PICK AND WHY?

Three SME profiles we see a lot are what we call Busy Betty, Skeptical Sam, and Overly Complex Olive. We will describe them and explain which SME we would pick for three separate project types: immediate need, multiple SMEs, long term.

- Busy Betty cannot say no. She wants to help, but she has spread herself so thin that she is not helpful to the process. When you ask Betty questions, she is typically performing another task and not giving you her full attention.
- Skeptical Sam had a negative experience with training and now needs to be coaxed into cooperation. Sam is notorious for answering a question with a question.
- Overly Complex Olive has been an engineer for so long that she has forgotten how to discuss a topic in simple terms. Olive is notorious for setting records for long answers using the most complicated words available.

We recommend working with Busy Betty for projects that must happen now, right now. You might think she is too busy, but truly, she brings these skill sets with her for development:

- organizational skills
- speed
- laser focus when face-to-face.

The ability to organize and multitask, plus the speed needed to produce now will appeal to Betty's capabilities. The implied importance of the learning project will be a positive for her. Always, always work with this SME type in a face-to-face environment. If you must use a communications platform, be certain you have video capability or Betty will be instant messaging a colleague during your development meetings while also possibly walking the dog or taking a jog in the park.

Skeptical Sam is a great choice for projects with multiple reviewers. He can be your point person to manage them and bring the content back to you fully validated and ready for instructional design strategies. We see Sam as having these main qualities:

- forcing a defense to added content
- detail orientation
- career-long support for those he has worked well with.

Sam will insist that a reviewer defend each content change, which will probably decrease late-stage revisions. Sam also brings an eye for detail to the project; otherwise, he would not be able to answer each question with another question. Convince him that he can come out a winner from working on this project and truly listen to his knowledge. Skepticism can fade into complete support once this SME understands the value you bring to the learning domain.

At first thought, it might seem strange to you, but Overly Complex Olive will work best on a long-term project and as a solitary SME. These qualities are her main contributions:

- complete command of the topic and a love of sharing knowledge
- enjoyment of linear concepts of charting and graphing
- preference for working alone.

A long-term project will suit Olive's need to communicate complicated concepts in great detail. She wants to share her knowledge, but she may not work well with multiple SMEs. She will appreciate high-profile projects and understand their importance. We suggest long-term projects because the time she dedicates to the content will be lengthy—but needed for a large project. Work with her long enough, and she eventually, with your help, will simplify her language.

- Have an advance handout to send prior to the first meeting describing your team role, have it with you at the meeting, and have a slide deck to use as a visual while you explain.
- Be prepared to show an example of your work during the first meeting.

Explore Adult Learning

The next step in the kickoff meeting is to make sure your SME has some understanding of adult learning and instructional design. Depending on your SME's familiarity with adult learning, you may do anything from holding a two-day learning session to simply providing a list of the research and references that support adult learning principles.

If your organization performs measurements or audits related to best practices for adult learning, briefly introduce those items at this point. The idea that the organization will hold routine training audits on adult learning can bolster your argument for incorporating principles for adult learning into the training product.

Although you will need to plan for how long to spend on the topic of adult learning in the kickoff meeting, it can be helpful to have a few versions

of material available to supplement this portion of the meeting as required.

Set Expectations

Setting expectations is one of the trickiest—yet most significant—portions of the kickoff meeting. Defining the instructional design process, job duties, roles, and timelines are all under the “establishing expectations” umbrella. If there is one thing we can tell you that we hope sticks, it is that you must communicate, communicate, and then communicate again.

When you are setting expectations for the instructional design process, use visuals. Many of us in this field love our words—but many SMEs simply see black squiggles on the page. We can use visualizations to help them understand the process in the same way we use visualizations in our learning material. Make it clear that the SME brings the technical, or subject-specific information, while you bring the learning strategy to place that material in a deliverable for learners.

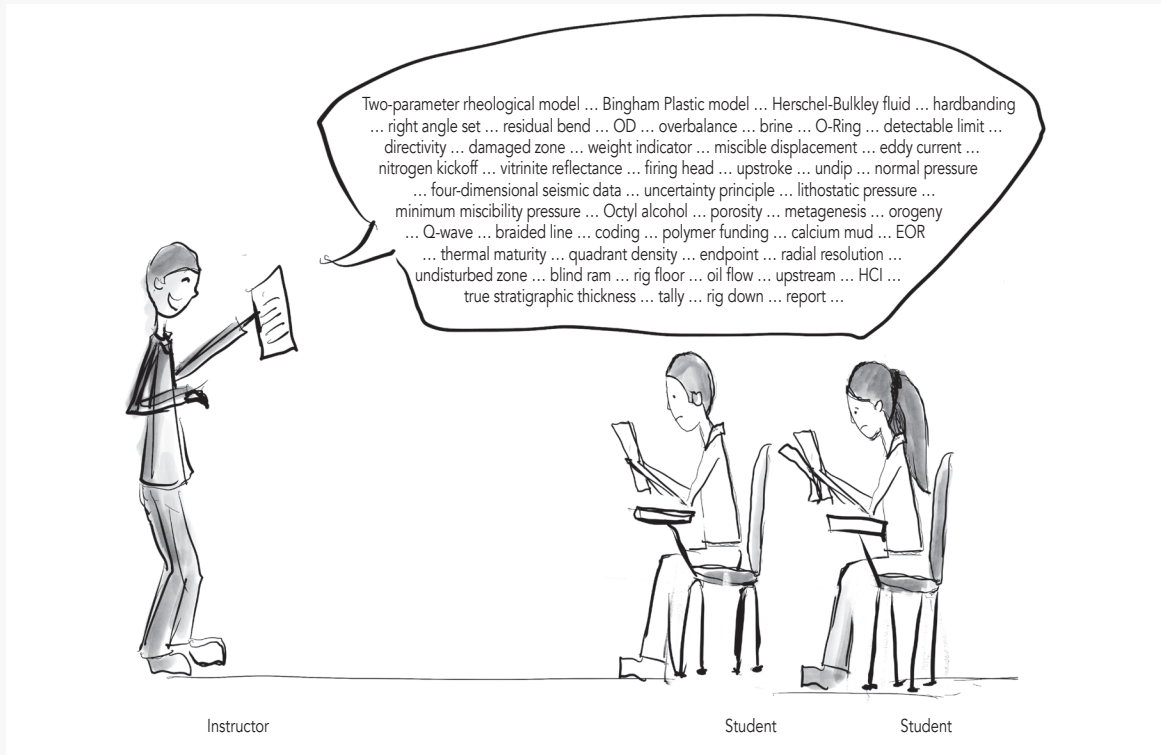
If you don't feel comfortable about your design process, we advise you to document it and get

HOW YOUR SME SEES YOU



WHY WE NEED TO EXPLAIN ADULT LEARNING

If our SMEs don't understand best practices related to adult learning, our classes may end up looking like this.



comfortable immediately. It is almost impossible to describe the design process if you are not completely knowledgeable about how it works in your organization.

Use a RACI (responsible, accountable, consulted, informed) matrix or chart to make it clear which tasks belong to each of you. List the tasks for each step or section of the model you are using and let them guide your RACI matrix. This also will keep things moving smoothly later in the project as deadlines approach.

A RACI chart will likely change based on the dynamics of your individual organization. See the Sample RACI.

Caution: A RACI chart can become incredibly detailed to the point that you cannot move the work forward. It also can become a place where your SMEs want to spend time discussing each aspect and how they fit. If you suspect your SMEs might fall into this trap, use the RACI only to make high-level tasks clear. Stay away from enumerating every single task detail.

BE VERY CAUTIOUS ABOUT THROWING A SPECIFIC DUE DATE ON A PROJECT. THIS CAN BACKFIRE ON YOU.

Timelines are another critical area where we need to set expectations. How often do you face unrealistic deadline expectations? If you experience this problem, you are not alone.

The Chapman Alliance Research Study, *How Long Does it Take to Create Learning?*, provides some good information on time and cost, but keep in mind this research was conducted in 2010. We have more delivery methods today and are probably quicker as an industry; however, the study provides a good benchmark for the production hours spent to develop training with a variety of delivery methods. Keep this one handy in your toolkit of information for SMEs on a new project and for describing what you do.

Here are some additional factors to consider when defining a timeline:

- Is the SME dedicated to the project? That is, has the SME's schedule been cleared of competing projects?
- Is the project on the SME's performance objectives?
- Does management support the project?
- Has the budget for the project been officially approved?
- Is the content for the course relatively stable and easily defined?

If your answers are yes for all of these items, congratulations. You can probably build an accurate timeline for development.

If you answered no or not sure for any of these questions, you need to build a buffer of additional time into your anticipated timeline.

Be very cautious about throwing a specific due date on a project. This can backfire on you. For example, Juliette, the instructional designer, declares that the project will be complete on August 10. However, Wyatt, her SME, does not supply Juliette the information she needs until August 9. Juliette obviously cannot turn around the course in one day. But Gentry, the stakeholder, only remembers that August 10 was the day Juliette promised the deliverable.

Most forward-thinking stakeholders will understand the situation; a few will not. They will only point at you and to the final deadline that wasn't met.

To avoid this, you can change the way that you provide your timeline. Provide your timeline based on the number of hours or days required after you receive different pieces of information, edits, and so forth.

For example, instead of Juliette saying, "The project will be finished August 10," she should say, "The project will be finished 21 working days after we receive all of the edited content from Wyatt."

Mitigate Risk

Identifying and mitigating risk is the final step of the kickoff meeting. Highlight any risks to the

SAMPLE RACI

Use a chart like this to establish roles and expectation for everyone involved in the learning project.

Task	Stakeholder	Instructional Designer	SME	Project Manager
Organize kickoff meeting	C	A	C	R
Develop scope of work	A	R	C	C
Complete training needs analysis	C	R	C	A
Create design document	I	R	C	A
Provide content	I	A	R	I

R=Responsible, A=Accountable, C=Consulted, I=Informed

project. Talk with your SME about how he wants to handle each of these risks if any should occur. Create an action plan for each risk. Use the Tool & Resource at the end of this *TD at Work* to do so.

You should come prepared with a few risks you know from experience. But a word of caution: Be careful not to accuse your SME of any of these things; instead, explain that you are mentioning them because they commonly occur across all projects (and industries, for that matter).

For example, Juliette, our instructional designer, might begin by explaining, “I am not saying any of these things will happen on this project; these are just risks that I have often experienced in other projects. I have found that if we talk about what to do about them beforehand, we can reduce the likelihood of

them occurring. And if they do occur, we’ll know how to handle them in a way that matches everyone’s preferences.”

After making sure the SME doesn’t feel attacked, you can go on to explain any risks that you want to highlight.

For example, Juliette might say, “From my experience with other projects, missed deadlines can derail a project. How do you want to handle it if a deadline is missed?” Her SME, Wyatt, might say, “If I miss a deadline, don’t send me an email. Call me right away” or “If I miss a deadline, copy my manager on the reminder. That will allow me to show my manager I’ve been given too many tasks besides the training development.” Now if there is a problem during development, Juliette will know how to communicate with Wyatt.

HOW LONG DOES IT TAKE TO CREATE LEARNING?

Type	Comments	Simple	Average	Complex
Instructor-led training	Including front-end analysis; design; lesson plans; handouts; workbooks; PowerPoint; SME reviews of content to be used during live, face-to-face learning events	22 hours	43 hours	82 hours
Basic e-learning	Including content pages; text; graphics; perhaps simple audio; perhaps simple video; test questions. Note: PowerPoint to e-learning (basically slides with assessment) often falls into this category	49 hours	79 hours	125 hours
Interactive e-learning	Level 1 e-learning content plus 25 percent (or more) interactive exercises; opportunities for learners to perform virtual “try it” exercises; liberal use of multimedia (audio, video, and animations)	127 hours	184 hours	267 hours
Advanced e-learning	Highly interactive, possibly simulation or serious game-based use of avatars; custom interactions; and award-winning caliber courseware	217 hours	490 hours	716 hours

Source: Chapman, B. 2010. *How Long Does it Take to Create Learning?*

If you ask about these tricky situations beforehand, your SME is more likely to respect how you handle them. You can save time because you are communicating according to the SME's preferences.

Scope of Work

After the kickoff meeting, it's time to document your SME agreements in a formal scope of work plan. The scope of work document exists to describe the scope, cost, and parameters of a training project.

Here are some of the items you might include in a scope of work:

- summary
- requestor, stakeholders, and SMEs
- justification, along with project objective
- project launch
- ADDIE model (static)
- course measurement deliverables (static)
- items outside initial project scope (static)
- cost estimates, along with cost detail
- existing resources and known data
- deadlines and milestones
- appendix (static)
- time estimates
- glossary

Don't let this long list scare you. Many of these items remain the same for each project, and they may not all be necessary for every

project. You are mainly recording the origination of the project (requestor, stakeholders, and SMEs); cost expectations (cost estimates, cost detail); deliverable expectations (deliverables, items outside of initial project scope); and major milestones (deadlines and milestones).

A scope of work document can rule the project for you. If you use it correctly, the scope of work will serve as the document of agreement between your department, team, or company and your SMEs. It can help you stay on track during a project, and it can be a valuable tool for communicating with your SME.

DURING THE PROJECT

One surprising aspect of training development with SMEs is that development can look different from project to project. The way you develop a project is determined by the learning delivery method, your organizational standards and guidelines, the existing materials for the course, and your SME's communication style.

There are numerous ways to dig into the development, but keep in mind that the SME may not have participated in your development method (or any learning project for that matter) before working with you. You are now the trainer and have to explain how it all works.

PRELIMINARY AND FINAL SCOPE OF WORK

If you must bill internally or externally for your services, it can be helpful to have an evolving scope of work document. The scope of work may go through a preliminary and a final stage.

- A preliminary scope of work is meant to provide educated guesses about deliverables to secure funding for the project.
- A final scope of work occurs after project funding is secured and a more in-depth analysis of training needs is complete.

If your work processes require preliminary and final versions of a scope of work, communicate this to your SMEs. Making it clear in the beginning of the project how you expect the scope of work to evolve will save you time and heartache as you proceed through the project.

Rapid Prototyping vs. Detailed Drafting

We all know our learning needs and business needs dictate our eventual learning delivery method. But how do we get to that final deliverable in the most efficient way? This brings us to the discussion of rapid prototyping versus detailed drafting. This decision is important because it can make you more efficient.

There are a couple of ways you can look at development strategy when working with a SME. Of course, your strategy still is based on the ADDIE model (or the many derivatives of it). But your choice of rapid prototyping versus detailed drafting defines what happens during that development step of ADDIE. It determines whether you will need more time up front creating an almost-complete draft or whether you will create a rapid prototype that you spend a lot of time testing and refining. Most L&D professionals prefer the latter, but there are positives and negatives to both approaches.

The Tool & Resource at the end of this issue of *TD at Work* will help you decide when to use rapid prototyping and when to use detailed drafting.

Rapid Prototyping

Karla Gutierrez, in her blog post, “The Ins and Outs of Rapid Prototyping for e-Learning,” describes rapid prototyping as an instructional design approach that combines the design, developmental, and evaluation phases. This nonlinear approach produces a sample working model that is a scaled-down representative version of the whole course.

University of Kansas Professor Steven Tripp suggests three main situations where rapid prototyping is best:

- when there are complex factors or content that makes prediction difficult
- in content areas where you have experience but are dissatisfied with a conventional method
- with new topics where you have little experience to guide you.

The upside with rapid prototyping is that your SME can quickly see the direction you are taking the project. You can check that your design meets

the SME’s vision and addresses the business need. The SME is able to see the skeleton of the project, and the two of you can come to agreement on vision, goals, and even objectives. It lends itself well to the collaborative process.

If stakeholders and SMEs change their minds frequently or have trouble agreeing, the rapid prototype works best. You can more easily modify the skeleton than you can a detailed draft.

The rapid prototype is helpful, too, for SMEs who don’t understand instructional design. The SMEs have a visual to show, rather than just tell them about the deliverable. That is, SMEs can see a basic mock-up, or skeleton, of their final deliverable. This visual helps prevent misunderstandings about scope and deliverables at the beginning of the project (or at least greet these issues before they get out of hand). There is less waste of time for all team members.

The downside of rapid prototyping is that your SMEs can quickly see a basic mock-up, or skeleton, of their deliverable. Wait, is that a misprint? No, the same things that make rapid prototyping a plus for SMEs also can be a negative.

Some SMEs will be unable to see the rapid prototyping for what it is versus what it is not. A rapid prototype is a skeleton of the final deliverable, but it is not the final product. If SMEs don’t realize the prototype is just a prototype, they can be upset with the quality of the project. No matter how much you try to explain it is a skeleton or a mock-up, some SMEs can’t get over the unpolished look. This is the biggest barrier for using this method.

Detailed Drafting

Detailed drafting involves creating an almost-finished first draft for your SME. This draft is mostly complete aside from a few small details. For the detailed drafting choice to be successful, you, as an L&D professional, must be confident in your analysis and design step.

If the analysis and design step requires many stringent approvals and it is not likely that there will be a large change of content or scope mid-project, then this is a good choice. This also is a good choice when you have worked with the SME previously and have agreement on working patterns and preferences.

THE UPSIDE WITH RAPID PROTOTYPING IS THAT YOUR SME CAN QUICKLY SEE THE DIRECTION YOU ARE TAKING THE PROJECT. YOU CAN CHECK THAT YOUR DESIGN MEETS THE SME'S VISION AND ADDRESSES THE BUSINESS NEED.

You have the potential for less waste if the parties can come to an agreement up front on specific objectives, topics, an instructional design plan, and all other details. If expectations can be set and clarified, this choice may be the best.

Unfortunately, however, with detailed drafting, you may waste much more time if the project team changes scope or objectives in the middle of the project. If you are aware at the beginning of the project that this project group typically changes direction often, then detailed drafting is probably not for this particular project.

Once again, our advice is to communicate, communicate, and then communicate again. Have a step-by-step procedure or process, including screenshots and plenty of graphics, for your specific development platform or method. Explain exactly what you want and how you want to see it on the document or software you are using. The rapid prototype model is usually your best choice except in those rare cases when you are dealing with a SME you don't think will be able to imagine the fully finished product.

Editing and Other Processes

You've figured out which development method you need to use, and now you want to describe the editing process to your SME. How do you communicate this? This is another area where you need to lead the SME and decide on an editing process that works within your development model. Your communication of these guidelines is important because it can affect whether the edits get finished quickly or whether they sit for weeks on your SME's desk.

The first choice to make for going through the edits with your SME is how to communicate:

synchronous reviews or asynchronous reviews?

More times than not, a synchronous review is ideal, especially the first time a review is held with a SME. Holding a live meeting either in the same physical space or virtually will be your best approach.

In rare cases, if you've previously worked with the SME, you can send the edits out, but accompany the email with a quick phone call to explain expectations.

Other things to do when going through edits with your SME:

- Provide good and bad examples of edits.
- Describe what is required of the SME.
- Include a due date (putting it in the header of a follow-up email is helpful).
- Reinforce why the due dates and deadlines are important.
- Thank the SME for her time and involvement in the project.

If you discuss these items live with your SME, you also should reiterate them in a follow-up written communication (for example, email or a note in your project management software).

Let's check in on Juliette and Wyatt again. A few weeks have passed, and now they are in the middle of the project. The development is progressing but all of a sudden Juliette senses there is some sort of derailment happening. Wyatt seems to have lost interest in the project over the past few days.

Juliette decides to call Wyatt and find out if there are issues or if he has just been busy on other tasks. Juliette asks how things are going and whether he has had the time to look at the most recent round of information she sent as a PowerPoint file four days ago. Wyatt says he has, but he doesn't see much difference from the content he sent her a week ago. Juliette brings the file up in the instant messaging/video meeting tool and describes the changes as they look through the content. They come to agreement on the revisions.

Wyatt does not quite understand the impact his input makes on the project. He also does not fully understand why they are using PowerPoint as a development tool. Juliette decided PowerPoint was the most efficient method to use for this portion of the project but didn't quite explain the new process to Wyatt.

The point here is to guide the SME through your reasoning and describe the success that can come from the two of you collaborating on this project. The SME brings the technical knowledge expertise, and you bring the learning expertise.

When Things Go Wrong

Even our best-laid plans can go wrong. What are some steps you can take when things don't go the way you would like during development? Let's investigate.

SME Misses a Deadline

It is painful, but it does happen. We have other projects that suddenly take priority, illnesses, and a huge listing of other reasons. When our SME misses a deadline, there are a few choices to make on what to do next:

- Ignore it. We all make mistakes and have intervening responsibilities. The SME may have missed it but will get it done soon.
- Call your SME and explain the consequences of the missed deadline, specifically that this will affect the overall timeline and affect the project in other ways as well.

YOU NEED TO LEAD THE SME AND DECIDE ON AN EDITING PROCESS THAT WORKS WITHIN YOUR DEVELOPMENT MODEL.

- Formally move back the project completion deadline or decide where you will get the additional time required.
- Inform the SME's manager.
- Inform your manager and provide the actions you have taken.

We have all been here many times, and there are multiple ways to handle it. The main point is that you need to take action. Choosing to ignore a missed deadline makes you vulnerable to the inevitable blame game. It's best to notify those who need to know, counsel your SME on how to get back on track, and continue moving forward. (We also suggest that you don't hold a grudge or dwell here, as it does not accomplish the

objectives of the development.) Just be cautious and stay alert to future deadlines.

SME Changes Scope

Has this happened to you?

Juliette gets a phone call from Wyatt on Monday, explaining that some organizational changes were made over the weekend. His manager's manager, the operations vice president, is new to the position and wants to review all projects. It looks like she won't be able to review the learning project until two weeks from today. Juliette tells Wyatt this will delay the project and affect the final deadline. She asks if there are any topics or areas Wyatt thinks will remain unchanged so they can continue work.

It is incredibly frustrating, but it happens all the time. The scope changes because someone has a bright idea or for unforeseen reasons—like the one described. In either case, this is where a clear scope of work carries weight and impact. Be clear that any scope change has a consequence to the project overall.

In our scenario above, Juliette can send the scope of work to the new VP, introduce herself, and be available for any questions. Perhaps her initiative will call attention to the project and move it up on the VP's priority list.

Scope changes can happen in large and small ways during a project. It is important to always point out scope changes when you see them. Even if ultimately you determine that the change is warranted, it should still be termed a change in scope. The SME can then begin to recognize what it looks like if she attempts to change the scope again in that same project or a future project.

To help you and your SME easily recognize scope changes, remember to post the project objectives visibly on emails, common area whiteboards, and any other logical place for your project team.

SME and Stakeholder Are Not Aligned

Our story continues: It is the following Monday and Juliette receives a phone call from Wyatt. Fortunately, the operations VP recognized the need to move forward with the project thanks to Juliette's email. She has reviewed the scope, and everything seems fine to move ahead.

Unfortunately, Juliette received an email over the weekend from the operations VP with a list of topics she would like to add and remove from the scope. What now?

GUIDE THE SME THROUGH YOUR REASONING AND DESCRIBE THE SUCCESS THAT CAN COME FROM THE TWO OF YOU COLLABORATING ON THIS PROJECT. THE SME BRINGS THE TECHNICAL KNOWLEDGE EXPERTISE AND YOU BRING THE LEARNING EXPERTISE.

In a case like this, it's time to hold a meeting to make sure everyone agrees on how to proceed with this project. Review the project objectives, describe in detail the reach of the current development, and get alignment among everyone involved. A face-to-face meeting or conference call is your best choice here.

If that type of meeting is just not possible, try to document the differences for the project team. Scope changes come in all shapes and sizes and are not always as dramatic as the one Juliette is working with above. Clearly communicate the differences you are seeing regarding the scope and then send to both SME and stakeholder (on the same email), asking for clarification. The stakeholder can respond with the clarification, and the SME has a chance to respond with his point or forever hold his peace. Alert your SME beforehand that you plan to send this email. It doesn't have to be seen as a negative but more as an opportunity for clarification.

SME Disappears

One of the most difficult things that can happen in any project is that the SME is transferred to a different position or, worse, leaves the company. Now what do you do? First of all, don't panic. Maintain your consummate professional viewpoint. Think about the decisions that need to be made and what steps to take:

- Is the project still viable? Should it continue?
- If it is viable and should continue, work with the stakeholder to identify a new SME.

- Insist on a handover. Ask the departing SME to create a list to give the new SME, to include where the files are, the rationale of the organization of technical topics, objectives, and so forth. You also will do this, but sometimes having this come from another SME makes it more powerful. Plus, the former SME can get more into the technical intricacies and subtleties regarding the content.
- Make it clear to stakeholders that the timeline will shift and the project will be delayed. You will need to go over everything with the new SME, from roles to where the project development process currently stands.
- Make a list of every topic you need to review with the new SME. Include project history, analysis, design process, and any specific steps required to complete the project.

Expect the new SME to want to make her mark. Be prepared and think about this when framing the project.

Juliette takes a phone call on Friday from Pam, who introduces herself as the new SME on the project. Juliette is completely surprised and had no idea that Wyatt was being transferred to a new position. She welcomes Pam and suggests that the three of them have a meeting to hand over the project. Pam thinks that is a great idea and begins to describe some new topics she wants to include in the project. Juliette explains that she will compile some information on the project, such as the scope of work, instructional design plan, current timelines, and main accomplishments. Juliette finishes by telling Pam she looks forward to meeting her.

We think Juliette has the right idea here. Pam needs to be sent strategic information at this point. This will give Pam an understanding of the amount of work that has been accomplished and the time that has gone into the deliverables with the current scope and direction.

AFTER THE PROJECT

Your learning project is complete, and the pilot was successful. The SME is happy, the learners

are happy, you are happy, and your work life is good. This may not always be the picture, but with the right SME strategies, you are more likely to achieve all this happiness.

Successful Debriefs

One of the most successful tools for this after-project stage is a debrief session. Rarely do learning projects proceed completely smoothly to a successful outcome. They are normally noisy and challenging. Yet, the outcome and finish can be extremely satisfying. Part of that success comes from knowing how to conduct and participate in a debrief meeting.

A debrief can help you understand exactly what the strengths and weaknesses of the learning project were and how everyone can improve. Your SME and how you respond to him throughout the project and during the debrief can be essential to your success in the learning field. With that in mind, here's what happened to Juliette in a recent debrief.

A DEBRIEF CAN HELP YOU UNDERSTAND EXACTLY WHAT THE STRENGTHS AND WEAKNESSES OF THE LEARNING PROJECT WERE AND HOW EVERYONE CAN IMPROVE.

Juliette was ready for the end of this project. She had dealt with multiple issues during the three months she spent working on the e-learning package, and most had to do with Wyatt, the SME. Wyatt was continuously uncooperative and unresponsive in communications.

At one point, Juliette finally contacted the stakeholder with her concerns. Wyatt began to respond to her requirements, but he was still difficult to work with, no matter what Juliette tried.

Juliette began the meeting with her thanks to the stakeholders and SME. She highlighted the positive moments and stages within the project. Using a bulleted list and presentation software, she provided specific feedback from the learners. She then began listing areas of improvement,

mostly about the SME's errors and shortcomings. "Wyatt rarely responded to my requests for clarification, delaying the project. I don't think he wanted to be there," was one example.

When she finished the areas of improvement, she paused to ask for questions and discussion. The meeting room was silent. What would have been a better approach?

We think Juliette had the right idea by starting with the positive moments. Always celebrate the wins in a debrief meeting. However, she also retained too much control of the conversation. She needed to allow everyone in the project an opportunity to talk about wins from their perspective. Just as it is important to collaborate during the development process, so it is during the debrief.

Juliette truly derailed the debrief, however, when she got to listing the areas that needed improvement. We recommend two things here:

- Compile this list during the meeting. Don't come with a prepackaged list you have determined separately. Definitely come with your own items in mind, but it is best to let all the project members contribute to both areas—wins and challenges.
- When you describe the areas that need improvement from your perspective, use neutral language that mentions what occurred, while leaving the emotion or insults out. "Wyatt rarely responded to requests for clarification, delaying the project. I don't think he wanted to be there" is one way to describe a situation. An alternative description is "Late responses to clarification requests caused project delays. Future projects need defined response times for communication." Now you have identified an issue, the consequence, and an acceptable behavior or solution.

Successful debriefing involves discussing what went well and how things could be improved in the future. We do believe that a debrief meeting after every development project is important for all project team members. This will encourage performance improvement in all areas of the team and also will help your future projects.

When Is the Project Complete?

Some projects seem to have no end. You might think this is a good thing for you and your instructional design team as work continues forward. However, there comes a time when your project pipeline is filling, and you need to move forward. There are things you can do at the beginning of the project that will help you proclaim “done.”

A good example of project continuation is the example of the SME changing positions or leaving the company that we described earlier. You may have to revisit the business need or objectives at this point, even when you are near completion. Stakeholders change, and company priorities shift. We have to accommodate these things and be ready to revisit the statement of work and the

instructional design plan. The best thing to do is to describe to the new project members how your specific model for delivering the material works and, then, stay with the plan,

We find that our SMEs and stakeholders will continue to ask for revisions as long as we allow them to. Make it clear at what point the project is considered complete and describe that in your scope of work and at various project meetings throughout development. Set a timeframe for revisions that make sense for the project content, delivery method, and distribution.

Perhaps your plan will be to use a pilot in instructor-led training delivery courses, make your revisions, and move to finalization with no additional input from your team. Perhaps you see the project through the second pilot stage. You may steer an e-learning project through user

SUCCESSFUL DEBRIEFS: DOS AND DON'TS

Do

- Be prepared.
- Celebrate wins.
- Point out things your SME did well.
- Use descriptive language. Provide specific facts and examples of what the SME did during the project.
- Go over evaluations, student feedback, instructor feedback, test scores, 360-degree surveys, and so on.
- Describe holdups and inefficiencies during the project. Focus on brainstorming solutions rather than attributing fault.
- Stay professional.

Don't

- Allow the debrief to become an out-of-control gripe session.
- Use insults.
- Hide what happened during the project.
- Take over the entire conversation or allow someone else to take over the entire conversation.
- Focus only on the problems.

testing and recruit a set number of students to access it and provide feedback. Describe what the end of the project looks like to your project team and do everything you can to stay with that description. Use the same words you used in your scope of work within the deliverables section and the deadlines and milestones area.

Consider developing a guideline for your organization around the concept of learning project completion. If you already have a development guideline, be certain this end-of-project concept is included. Be specific about the various delivery types you use and explain with precise, specific language what is considered a project ending. Use these descriptions in your scope of work and discuss them during your project update meetings as you explain the remaining steps in your process.

Develop a guideline for reviewing learning material in your organization. This can be a constant struggle, but once established it can help you with your pipeline planning and resource requirements. Manage your pipeline for annual or biennial material reviews depending on the fluidity of the topics and the delivery method.

Another common challenge many of us face is the revisionist SME. The pilot and the project debrief are done. Yet one month later, you get a phone call from the SME telling you that the marketing vice president has a few revisions in the material. What do you do?

Ask yourself these questions:

- Will the revision change the learning experience for the learners?
- Does the revision completely change the objective?
- Does it change the assessment?
- Is there a catastrophic situation that could occur?

STAKEHOLDERS CHANGE, AND COMPANY PRIORITIES SHIFT. WE HAVE TO ACCOMMODATE THESE THINGS AND BE READY TO REVISIT THE STATEMENT OF WORK AND THE INSTRUCTIONAL DESIGN PLAN.

Consider these questions and also ask them of your SME. If the answer to these main questions is no, then explain your guideline (also referring to the scope of work) and tell the SME to send additional information to be considered during the annual or biennial review of the material.

If these constant revisions include grammar preferences or revising an incorrect answer in an assessment and they are ruining your productivity, just say no.

Saying Goodbye and Continuing the Relationship

The project had a few bumps, but overall it was quite successful. Now is the time to say goodbye and set the stage for continuing a relationship with these clients. Where to start?

The debrief is the perfect occasion to bring the project to a natural close. Use this time to thank the team members for the opportunity, again, and also to discuss future project opportunities. If there are a few action items remaining, be sure to communicate this message again when you produce or complete those actions. Ask specifically if there are upcoming projects and if they need you to draft a scope of work for that job.

Again, communicate, communicate, and then communicate again. Keep in touch with the SME after the project is complete and ask about any upcoming projects. The SME will have some advance knowledge of possible future projects and can be your biggest ally for referrals after a successful project.

CONCLUSION

If you follow these tips, your next project is likely to be streamlined and easier to manage, and you will develop an excellent relationship with your SME. The main secret to working well with SMEs is to take the time to view the project from their point of view. Consider your work in terms of the three main stages of the project: before, during, and after.

We encourage you to give thought to the background and preferences of your specific SME on a project. Use the five steps to having a great kickoff

meeting and develop a scope of work that addresses risk mitigation and roles and responsibilities. Remember that you are the instructor for adult learning and instructional design, so it's your job to help your SME understand the reasons behind what you do and what success will look like.

Keep in mind the potential differences in your development approach and how your SME fits within the chosen model. Use your own risk mitigation to think about the derailing possibilities during a project and what actions you will take if they occur.

Finally, get that project debrief perfected in your workflow. Keep a positive, but honest, approach during this meeting, and use the dos and don'ts as a guide. Remember to set expectations about the ending of the project and always ask what's next.

Introduce SMEs to your work and continually remind them in small chunks about the importance of your role and learning. Every communication with them is an opportunity to reinforce a concept or give them additional information about your mysterious world.

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Risk Mitigation Chart

Use this, or a similar chart, to highlight any risks that might deter the project—ones that you can imagine or ones you've faced with similar projects in the past, such as a missed deadline. Talk with your SME about these risks.

Then, come up with a plan of action for how you would handle each snag.

Risk	Mitigation/Action Plan

Rapid Prototyping vs. Detailed Drafting

This chart serves as a handy guide to when to use rapid prototyping in your instructional design project and when to use detailed drafting. Whether you choose one or the other will depend on your SMEs and your relationship with them.

Use When	Rapid Prototyping	Detailed Drafting
SMEs are new to the design process.	X	
SMEs are seasoned.		X
The SME or team is likely to frequently change the project's scope.	X	
The team has difficulty with visualization.	X	
The instructional designer is confident in analysis and design steps.		X
Expectations are clear and the scope of work is defined.		X

Bring Training to Life With Virtual Reality



BRING TRAINING TO LIFE WITH VIRTUAL REALITY

AUTHOR

Destery Hildenbrand

Destery Hildenbrand is an extended reality solution architect with Intellezy. He has more than 17 years of experience in training and development and seven years focusing on immersive technologies. His primary focus is helping organizations plan, design, and develop engaging learning experiences through immersive technology.

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**Content Manager,
Technology Application**
Alexandria Clapp

Editor, *TD at Work*
Patty Gaul

Managing Editor
Joy Metcalf

Senior Graphic Designer
Shirley E.M. Raybuck

T raining teams are always looking for ways to engage learners and improve delivery and information retention.

They do so in a variety of ways, such as online learning modules, virtual classrooms, instructor-led sessions, and multimedia. However, direct practice or live-action walkthroughs can be missing in training programs. Those are vital because they enable learners to connect the information with action.

Consider the 70-20-10 model, which is based on the principle that 10 percent of the learning process happens in the classroom, 20 percent happens informally, and 70 percent is experiential and comes from practicing the skills. That 70 percent could be via a step-by-step procedural process or a crucial conversation with a leader or co-worker.

Although ideal, the 70-20-10 model is not always practical. What if the skills are dangerous, such as operating an open pit

mine or oil rig? What if they are expensive to re-create because they involve costly equipment or you can't replicate locations and procedures?

Because of the potential hazards learners may face, sometimes as L&D professionals, we cannot send learners into the field to start practicing. Yet, we need to equip them with the necessary skills to do their job well. That's where virtual reality comes in.

This technology stands out for experiential training because it doesn't compromise learners' safety and provides the direct practice learners need. VR is versatile—we can re-create dangerous or harsh conditions for practicing such skills as operating complex, heavy machinery as well as office settings or shopping centers for customer service skills practice.

In this issue of *TD at Work*, I will:

- Review the different versions of extended reality.
- Detail the skills and team members necessary for creating VR programs.
- Explain the process for developing VR content.
- Explore case studies for using VR for learning.

Reality Check

While VR has been around since the 1960s, it has only recently found itself in a more prominent consumer position, thanks to improvements in the hardware and

software market. According to data that analytics company ARTillery Intelligence collected, the demand for VR is projected to grow to more than 12 billion by 2024. ARTillery also points out that an estimated 23 percent of households now own or use a VR headset.

Before I delve into the ways you can use this technology for L&D, let's review the foundational knowledge of what VR—or, more accurately, CGI VR—is and how it fits into the immersive technology landscape, which is often referred to as extended reality. XR is the umbrella term that groups VR, augmented reality, mixed reality, and 360-degree video. It's helpful to know the similarities and differences between those technologies because they each can provide solutions for different types of learning problems.

CGI Virtual Reality

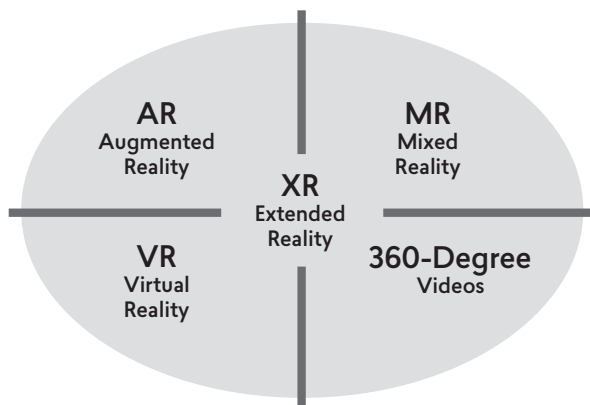
With CGI VR, a person is completely immersed in a VR world via a headset. They are transported to another time or place with the ability to explore and interact. CGI VR experiences can simulate working on an oil rig, take users into an open pit mine, put them on a busy street performing at an on-site utility location, or enable them to have an office conversation with an artificial employee. The possibilities, places, and interactions are customizable to your organization's learning needs.

An essential distinction of CGI VR from other immersive options is that it is an entirely computer-generated virtual space. VR experiences rely on high-end graphics and visuals to be as true to life as possible when re-creating scenes. Even with that ability, they are still distinguishable from a live environment. Developers and 3D artists create VR environments with the authoring and design tools often used in video game design.

Use cases: Consider these cases when you may want to use CGI VR as part of your learning portfolio:

- The process, procedure, or skill is dangerous to practice in the real world.
- The cost of traveling or using tools in training is high. CGI VR provides reusable, high-dollar process training for a fixed cost. Think in terms of refilling or replacing extinguishers after training or taking a tool or machine off of the production line.

Figure 1.
Extended Reality Technologies



- Training requires exceptionally specialized environments, such as simulating a walk on Mars, diving with a submarine, working on an oil rig for repairs, or refueling an aircraft in-flight.
- The task is repetitive and requires consistent, repeatable actions before the learner executes the steps correctly. Those may be soft skill conversations, properly assembling a widget, or landing a plane.

I can't emphasize enough that when considering CGI VR as a learning solution, this learning modality is most beneficial when used to fit into one of these or similar use cases. CGI VR experience works best not as

CGI Virtual Reality in Practice

While I don't recommend using CGI VR as a stand-alone application in any field, there are many industries where this type of training can be beneficial as part of a learning package. For example, these industries are using immersive reality:

- Construction for project and assembly visualization
- Automotive for vehicle repair and virtual dealership tours
- Aviation for repair work and training for hard-to-see components
- Field service for remote assistance and guidance
- Military and defense for military training, such as communicating and managing stress in combat situations and real-time recognition
- Insurance for claim handling and inspection simulation
- Healthcare for working with patients with dementia and for surgery practice
- Corporate for leadership training and soft skills development

Those use cases and industry examples are just some of what's happening with CGI VR today. The list is not meant to limit what is possible nor exclude any industry or use case. Rather, it is intended as a stepping stone when thinking of how CGI VR can be a valuable addition to your L&D portfolio and keep building from there.

a stand-alone application but as part of a blended learning solution as a way to practice skills or as a means of active learning reinforcement.

Augmented Reality

AR is the digital overlay of information onto the real world. AR can include any type of media you would put into an e-learning module. The technology keeps users in the real world. Most AR experiences are built for mobile devices because those devices are readily available, contain consumers' necessary components, and align with users' capabilities and adoption. According to consumer data company Statista, in 2021, there were 800 million mobile AR users versus 410,000 AR headset users globally.

AR experiences are most effective when providing needed information at a specific time or location. For example, if a user needs help transitioning from one step to the next in a process, AR can provide guidance and identify a safe pathway for doing so.

Use cases: Use AR as a performance support tool or as a means of accessing guidance from others when in a remote location. For example, workers can scan a code to find step-by-step instructions. Or they can use AR glasses or other smart technology for remote guidance, such as to troubleshoot a problem.

Mixed Reality

Mixed reality has the same capabilities as AR but enhances the digital overlay experience by recognizing and interacting with the world around the user. Mixed reality is an evolution of AR that relies on environmental recognition—such as walls, floors, or other objects in the room—to enable digital content to appear more naturally in the space.

Use cases: MR experiences can bring a user's environment to life with new furniture or seeing whether a new TV will fit on the wall or enabling a person to try on an outfit with a specific pair of shoes. As a learning tool, MR provides a more interactive, deeply engaging experience.

360-Degree Video

Also called VR or sometimes *immersive video* (more on that next), 360-degree videos—sometimes shortened to 360 *video* or even 360—are recorded with a specialty camera and then stitched together into a sphere. They include all

sides and angles of the recorded area, putting the user in the middle of the video or image with content all around them. 360 videos can be immersive when the user wears a VR headset, or users can watch the videos via a mobile device or webpage.

Use cases: 360 video is an excellent option for virtual tours, immersive storytelling, and high-level hot spot interactive engagements.

CGI VR vs. 360-Degree Video

Of all the XR terms, VR is used most inconsistently. Most uses of VR tend to encompass anything consumed through a wearable headset. That leads to grouping CGI VR and 360 videos in the same definition. While they seem similar from a high-level view, it's essential to recognize the fundamental differences between them so you are better prepared and informed when planning your next immersive technology project.

CGI VR is fundamentally different from 360 videos. As mentioned, it is a computer-generated, fully immersive, interactable 3D re-creation of an environment and its objects. It is entirely adaptable to users' needs. 360 videos are immersive, spherical video recordings captured by an omnidirectional camera. The fidelity is high because it is a video of a more realistic environment. However, the experience is limited to that medium. Traditional editing methods provide the length, image, and story you want to convey. With authoring tools, you can add interactive hot spots or additional text and imagery in the scene, but it will always remain a static video.

Users actively participate in the CGI VR experience. Their vantage point is within their control. They can change their viewing angle and location by using a controller. They can pick up, throw, break, repair, or move objects inside the experience and take part in anything happening in the scene.

With a 360 video, user interactivity is minimal. Users cannot physically move around within the video and cannot directly interact with any objects. They cannot pick up, push, pull, or move levers. 360 video enables users to observe the actions happening in the video. The camera placement and capture dictate their role in the story, whether in the action or in the crowd.

Both CGI VR and 360 videos have their place and can enable successful learning depending on your project's needs. To put a final point on the differences, each has a unique development cycle and production efforts. A CGI project will require 3D artists and developers to work together to create the immersive environment; a 360-video project will run like a video shoot with post-production efforts. Likewise, each has different development paths and costs. Keeping those differences in mind is essential to ensure the success of your L&D project and learners' or clients' satisfaction with the outcome.

CGI VR for Learning

To get started with creating VR training programs, you and your team will need specific skills and the right people to bring the programs to fruition.

A typical learning team has 80 percent of the skills necessary to prepare, design, and deliver a VR experience. Those include problem solving; project managing; and planning, designing, building, and deploying learning experiences via various modalities. The remaining 20 percent required to bring the experience to life are additional skills not typically learned in most L&D roles.

- **3D modeling:** creating, animating, assembling, and streamlining environments and assets for use in VR
- **Unity/Unreal development:** assembling the 3D environment and assets into the scene, programming the scenario, and building the end package for deployment
- **Device management:** scaling and deploying the experience to headsets and managing the content
- **Experience API data management:** capturing and ingesting Experience API data into a learning record store and funneling that data into SCORM-ready packages

To create VR programs, you will need the following team members. If your organization has the individuals with these skills, you could fill the roles internally, or you can partner with a vendor.

- **Project manager** keeps the project on track, on time, and on budget.
- **Instructional designer** ensures the learning problem is articulated, drives the experience from start to

finish, and ensures the experience is storyboarded and planned in a way that maximizes the VR delivery medium; depending on the project, you may have more than one instructional designer.

- **Content creator** creates videos, images, branding guidelines, user interface/user experience layouts,

or illustrations; again, depending on the project, you may have more than one.

- **Visual designer** helps craft the overall style or brand of the experience and works closely with the instructional designer and client to ensure the experience achieves the right aesthetic.
- **UI/UX designer** assists in planning how users will interact with the VR experience and researches how it's being done now and what will or won't work within the current plan; this role is recommended but not required.
- **3D modeler** creates models from scratch to represent the necessary environments, objects, and avatars; the individual's tasks may include animations and rigging and light work with the software development kit for assembly.
- **Developer (Unity/Unreal)** primarily works within the software tool; connects the software development kit to the assets and environment from the modelers; and authors the scenarios with movement, interaction, and progression. This individual should have a background in either Unity real-time development or Unreal game development engines. Once assembled, the developer will also export the correct package for use on the designated hardware.

The team will vary for each project. In many cases, one person can fill multiple roles. The most important takeaway is that building for VR requires some skills that your team may not have, so you may need to look elsewhere for that expertise.

VR Tools

In addition to the right skills and individuals, you will need to use a variety of tools to develop the VR program. The software and hardware options I discuss next are not exhaustive; new tools are coming to market all the time, and others are going away. Use this as a starting point and then conduct your own research into what you will need.

Software

Unity real-time development engine and Unreal engine. These are the two main software development

Virtual Reality Terms to Know

Tethered: This is a VR headset that attaches to a computer to function.

Untethered: This is a VR headset that does not require a computer connection.

Three degrees of freedom (3DoF): This indicates that users can move their head up and down, pivot left and right, and look left and right.

Six degrees of freedom (6DoF): This means users can do the same movements as 3DoF and walk around.

Mobile device management: Third-party apps and websites manage mobile device content, including VR headsets.

Haptics: This is feedback in the form of resistance, a buzz, or vibration to indicate an interaction.

Eye tracking: Sensors in the headset track the user's eye position rather than their head movement.

Head tracking: Sensors track the user's head position. The user can look up, down, left, and right.

Field of view: This is the measurement of the visual field inside the headset.

Frame rate: Measured in frames per second, this indicates the number of images shown in a second. Video is typically played back at 30 fps for steady viewing, while VR should run at a minimum of 72 fps to avoid disorientation and motion sickness.

360-Degree Video Creation

While not as immersive as CGI virtual reality, 360 videos are another means of helping reinforce learning. And you can use VR headsets as a mode for users to consume the content. Several tools are available for authoring 360 content, and many are available in software your learning team likely already uses (for example, Articulate Storyline, Adobe Captivate, Adobe Premiere, and CenarioVR).

Unlike for CGI VR, you and your team will handle the entire production process for 360 videos without assistance from a development team. Design the learning plan, capture content using a 360-degree camera or mobile device adapter, author the experience, and then deploy it to the organization.

options. Each tool can use the software development kits needed to build content for the different hardware on the market today.

Codeless authoring tools. These cloud-based tools are new to the CGI VR development space. You can use them to edit VR experiences. They work the same as Captivate or Storyline for e-learning development and require similar skills for editing content. Storyflow by Motive and CoPilot by Talespin are two examples. Storyflow is built by programmers for learning professionals and gives users control over their content. Users can easily create straightforward procedures, branching narratives, or full-blown simulations. CoPilot enables users to create dynamic conversational learning content where learners practice role play with emotionally realistic virtual humans. Both take an existing environment and assets and give users the ability to edit content within the CGI VR environment. Each software option has different strengths and possesses the key behavior for the VR 2.0 workflow (discussed in the next section), enabling learning teams to take control of their content creation and editing in CGI VR without the need to code.

Hardware

Hardware—that is, headset—options for immersive VR experiences can be tethered or untethered. Tethered headsets require a computer to function fully, making for a higher-quality experience. They use the computer's processing and graphics power to run the experience entirely. The quality of the build components for your desktop or laptop in a tethered setup will drive the quality of the VR experience. However, being attached to a

computer limits the user's movement and adds additional cost. Among the tethered headsets currently on the market are the HTC Vive Pro 2, HP Reverb G2, and the Valve Index VR Kit.

Untethered or standalone devices provide a true anytime-anywhere experience when not attached to a computer. Untethered devices are usually cheaper, thus more scalable hardware options for companies. The cost of decoupling is a slight drop-off in graphics and processing power. The main players in the untethered space are the Meta Quest, HTC Vive Focus, and Pico Neo headsets.

Regardless of which type, understand the specifications and keep them in mind when selecting a headset.

Resolution. This is measured per eye in VR headsets. The higher the resolution, the sharper, clearer, and more detailed the objects will be. Low resolution can cause visible pixelization and cause eye strain for some users.

Field of view. This is measured in degrees and indicates how much a user can see in front and peripherally when facing forward. The limit to human vision is 220 degrees of peripheral vision. FOV for headsets will vary. A narrower FOV will appear to close off the scene's edges, like having blinders in place. A wider FOV enables users to see as much of the scene as possible when immersed.

Interpupillary distance. This is the distance between pupils. When IPD is off and the lenses are not positioned correctly, the experience can be blurring and cause discomfort. Adjustable IPD is recommended to ensure maximum user flexibility and comfort.

Refresh rate. Ideally, you want a refresh rate of 90 frames per second to ensure comfort and provide the best headset experience possible. A lower refresh

rate can cause blurriness, disorientation, and general discomfort to learners.

Development Workflows

Before you start your first project, it's ideal to understand the workflow. Whether your internal team or an outside vendor handles production, you will likely follow the VR 1.0 and VR 2.0 workflows. CGI VR programs can be lengthy and, at times, costlier than other learning modalities. But with the correct use case, CGI VR is an engaging and effective way to deliver training that fits.

VR 1.0

This is the common workflow for developing most L&D VR experiences. The L&D team directs the development but typically is not skilled in the development tools necessary to build the VR experience.

The group authors the scenarios as best it can according to the provided detailed plan. Once the development team completes an iteration of the VR experience, the group sends that to you and your learning team for review. You compile any adjustments or updates and send those to the development team to complete. Repeat that flow until you are satisfied with the VR experience.

The flow starts with you and your team conducting a needs analysis and planning a detailed storyboard. From there, the development team assembles the environment and configures the assets for Unity or Unreal. You and your team then handle the rest of the workflow, content authoring, reviewing, and making changes using a codeless software tool.

Maintaining content control of the VR program within the L&D team eliminates the need for costly development cycles. That also keeps you and your team—the most knowledgeable people—in charge of adjusting content. Remember that regardless of how content is authored, you need to work with a development team to create environments, assets, and configurations.

VR 2.0

The most significant difference between VR 1.0 and 2.0 is that 2.0 allows for the L&D team—not the developers—to create and author scenarios. The flow starts with you and your team conducting a needs analysis and planning a detailed storyboard. From there, the development team assembles the environment and configures the assets for use in Unity or Unreal. You and your team then handle the rest of the workflow, content authoring, reviewing, and making changes using a codeless software tool.

Figure 2. VR 1.0 Workflow

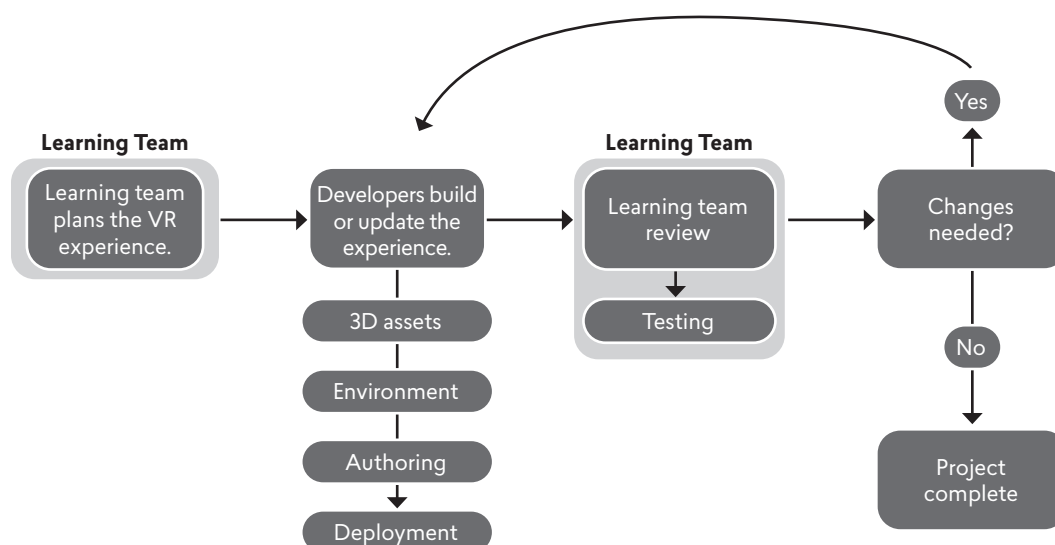
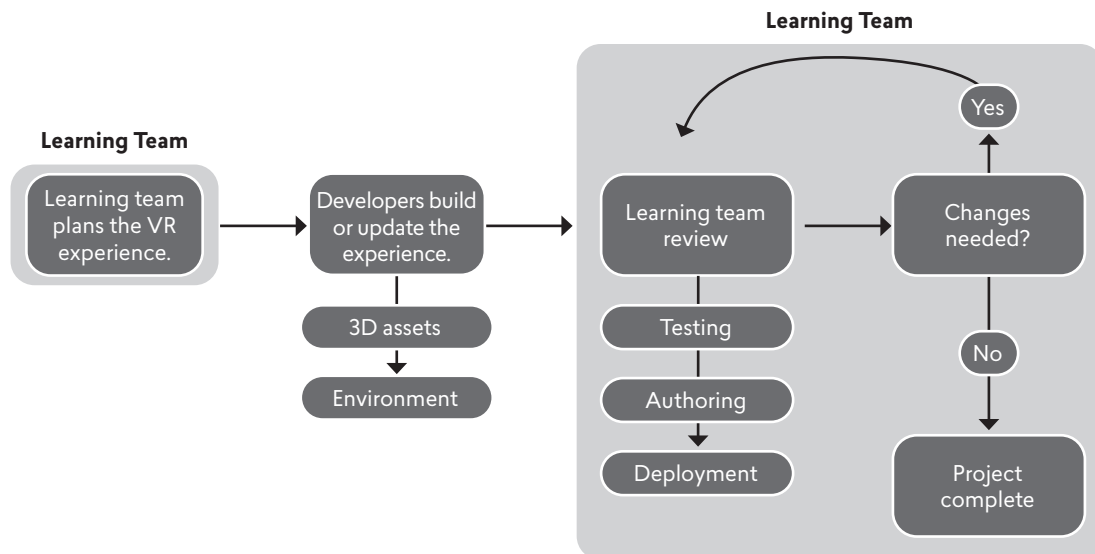


Figure 3. VR 2.0 Workflow



Maintaining content control of the VR program within the L&D team eliminates the need for costly development cycles. It also keeps your team in control of the content, which you know the most about. Keep in mind that regardless of how content is authored, you still need to work with a development team to create environments, assets, and configurations.

Barriers

As with any project, you will encounter barriers that slow or impede your progress. You may have already started identifying some of those potential barriers, including organizational culture issues. Before pitching a CGI VR program to stakeholders, you must fully understand what the technology can and cannot do.

Conduct thorough research. Buy a VR headset and some existing experiences, and explore. Look at the latest studies regarding VR and learning, and familiarize yourself with current trends. Statista, ARTillery Intelligence, and PwC have studies that will help you understand the immersive technology landscape and provide significant case study results (see References & Additional Reading).

There are many factors involved in securing buy-in for VR programs: costs, return on investment, IT capabilities, team dynamics, skill sets, and feasibility—to name a few. Extensive knowledge and research about the technology and tools needed to build and deploy your L&D initiative will help you reduce barriers. So will identifying a need or problem within the organization that CGI VR will solve.

Go into any potential pitch meeting with as much information as possible. If you can't explain why this is valuable to the company, the conversation will be over almost before it begins. Using technology for the sake of technology is a recipe for disaster. It would be impossible to list all potential barriers. Face them as they arise, and work with your team and organization to solve them as they arise.

Case Studies

While I could call out all the benefits of VR for L&D, that may not be enough to convince you to take a leap and try this technology as a learning solution in your organization. Let's look at three case studies so you can see CGI VR at play in the real world.

Hazard Identification: PASS Training

The US Mine Safety and Health Administration, an agency within the US Department of Labor, works to keep US miners safe from illnesses, injuries, and death while also promoting safe and healthy workplaces for them. The mining process is hazardous, and miners must follow a proper safety protocol to stay free from harm. MSHA plays a vital role in developing and enforcing that protocol.

It had a need for customized content on mining safety that was available in different modalities. To meet that need, MSHA, in partnership with the South Dakota School of Mines, worked with a VR vendor to build a VR full-scale mine environment for new and existing miners to explore and identify potential safety hazards safely and repeatedly. In the discovery process, the team explored the necessary elements to make the environment feel realistic, the hazards to include, what those look like in real life, the goals for learners, and how learners would access the experience. During planning, the team determined that the virtual environment would be an open, working rock quarry. The scene would include a large pit with an excavator actively moving rocks into a processor. To provide realism, the team also determined it would include essential details such as the sound of the excavator and the clang of the falling stones.

The team worked with its VR vendor to deliver a single environment with an opportunity for the user to explore and discover potential hazards to practice mining safety measures and increase awareness in a pit mine. The total experience takes users five to 15 minutes.

This technology stands out for experiential training because it doesn't compromise learners' safety and provides the direct practice learners need.

That short length will save miners time in the future and reduce the risk for the mine, helping MSHA continue in its mission to protect miners.

Early results indicate that material retention improved by 32 percent compared to traditional in-person training. One month after training, retention was at 86 percent, compared to 11 percent from in-person training.

Western University: Personal Support Worker Training

Through a grant from the Future Skills Centre, a federal consortium of public and private partners, Ontario, Canada-based Western University developed a VR training program—Be Epic VR—to help its staff care for people with dementia. Standard personal support worker training addresses skills such as feeding, bathing, and moving patients from their beds or chairs. The list of duties for visits can be long and time-consuming, and nurses can have a tendency to be more focused on the task than the individual.

Patients with dementia have complicated communication impairments. For personal support workers to tend well to their patients' needs, they must go beyond the task-focused skills. The Be Epic VR learning program, which has proved to be successful, was converted from an in-person role play using live actors to a VR immersive experience. The VR program uses characters Nala and James as avatars with middle-stage dementia, and conversational artificial intelligence guides learners in place of live actors. The program developed three separate scenarios for assessment, practice, reflection, and evaluation.

The conversion has led to flexibility in delivery times, locations, and scalability. Further, the format enables personal support workers to practice any time they can and anywhere they have a Wi-Fi signal. This unique medium and approach enables them to practice and fail without consequence.

Ken Blanchard Companies: Building Trust Training

Trust is critical in the workplace and is especially crucial between managers and their direct reports. Trust can increase employee performance and retention, spur creativity and innovation, and expand collaboration. The

CGI VR experience works best ... as part of a blended learning solution as a way to practice skills or as a means of active learning reinforcement.

Ken Blanchard Companies—a global management training, consulting, and coaching company—partnered with a VR platform vendor to develop the Building Trust training program, a safe place for supervisors and employees to practice developing and restoring trust.

Learners use a VR online simulation to have realistic conversations about common workplace exchanges with a virtual team member and boost their confidence in trust building. The program has two modules—one to help learners recognize trust issues and another to rebuild trust. Learners can use a VR headset or stream them on their computer.

Conclusion

To start your VR journey, take into consideration the information in this issue as well as via other resources. Take your time, and involve as many stakeholders as possible—especially early on in the process—and get their feedback. Weigh the following factors to begin the conversation with your team and broader organization.

Is VR the right approach? A Nielsen global survey found that nearly two-thirds of respondents are routinely turning to technology to help manage and simplify their lives. The same study also uncovered that more than half are willing to look at immersive technology to assist them. VR provides a unique way to experience, engage, and learn through a hands-on approach. But it's only as good as the problem it's solving. Before you pursue VR as a training solution, identify the problem you want to solve, and determine whether VR is the right solution to address it.

VR brings training to life. Finding an effective and engaging way to approach learning challenges is difficult. VR may be the ideal training solution when you can't easily reproduce training situations, the expense to re-create is extensive, or the skill or behavior you're teaching puts learners in danger.

VR offers effective learning opportunities. According to research, learners who have extended reality experiences complete them faster, retain more information, and develop a stronger emotional connection to the content. Studies show that effectiveness and retention in VR rates are higher than in other learning options. When finished, learners' confidence also tracked higher in soft skills, according to a PwC study.

To put that in perspective, think about a recent training course you developed or attended. Imagine how effective it would have been if you could have created an avatar to converse with learners. What would the training experience have looked like if learners could have grabbed things, moved them around, and explored a new environment?

VR presents many possibilities. With a good use case, the right team, and a vision to improve development opportunities for learners, you can enhance your existing training programs and endeavor to create unforgettable, engaging, and effective future training as well.

I hope that this issue of *TD at Work* has excited you and expanded your confidence in considering VR for L&D. While not every training solution will work in CGI VR, pairing the technology with the proper use case can create a powerful, engaging, and effective learning experience. Good luck on your VR journey.

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Tools & Resources

Virtual Reality Readiness Evaluation Worksheet

When thinking about investing in immersive technology, consider each of the following areas. Talk through them with the leadership and development teams before starting a virtual reality project. Document the responses.

Use Cases

Why do we want to use VR? What are the problems the organization faces?

In which ways could we use virtual reality for training purposes?

Cost

How large or small will the experience be?

What are the associated projected costs, and are they one-time or ongoing?

- Design and development: _____
- Asset and environment creation: _____
- Software: _____
- Hardware: _____
- Mobile device management: _____
- Deployment and delivery: _____

Access

How will learners access the content?

Will we have a bring-your-own-device policy?

Will we purchase devices for each learner or purchase multiple devices that learners can check out to use?

Virtual Reality Readiness Evaluation Worksheet (Cont.)

Can the organization support on-premise Wi-Fi use from required devices?

Can employees have devices shipped to them?

What safety considerations do we need to factor into the learning process?

Data Tracking

How will we track learners and their progress?

What are the necessary steps we need to take to track progress via a learning management system?

How will we capture Experience API data that a traditional LMS doesn't cover?

Do we need to work with an external partner on those matters?

Virtual Reality Project Kickoff Template

Fill in the following information about your virtual reality project.

Use case (Include details about the business problem, business manager, and the reasons VR is the right technology to use):

Learning modalities:

VR team:

- Project manager: _____
- Instructional designer: _____
- Content creator: _____
- Visual designer: _____
- UI/UX designer: _____
- 3D modeler: _____
- Developer: _____

Virtual Reality Project Kickoff Template (Cont.)

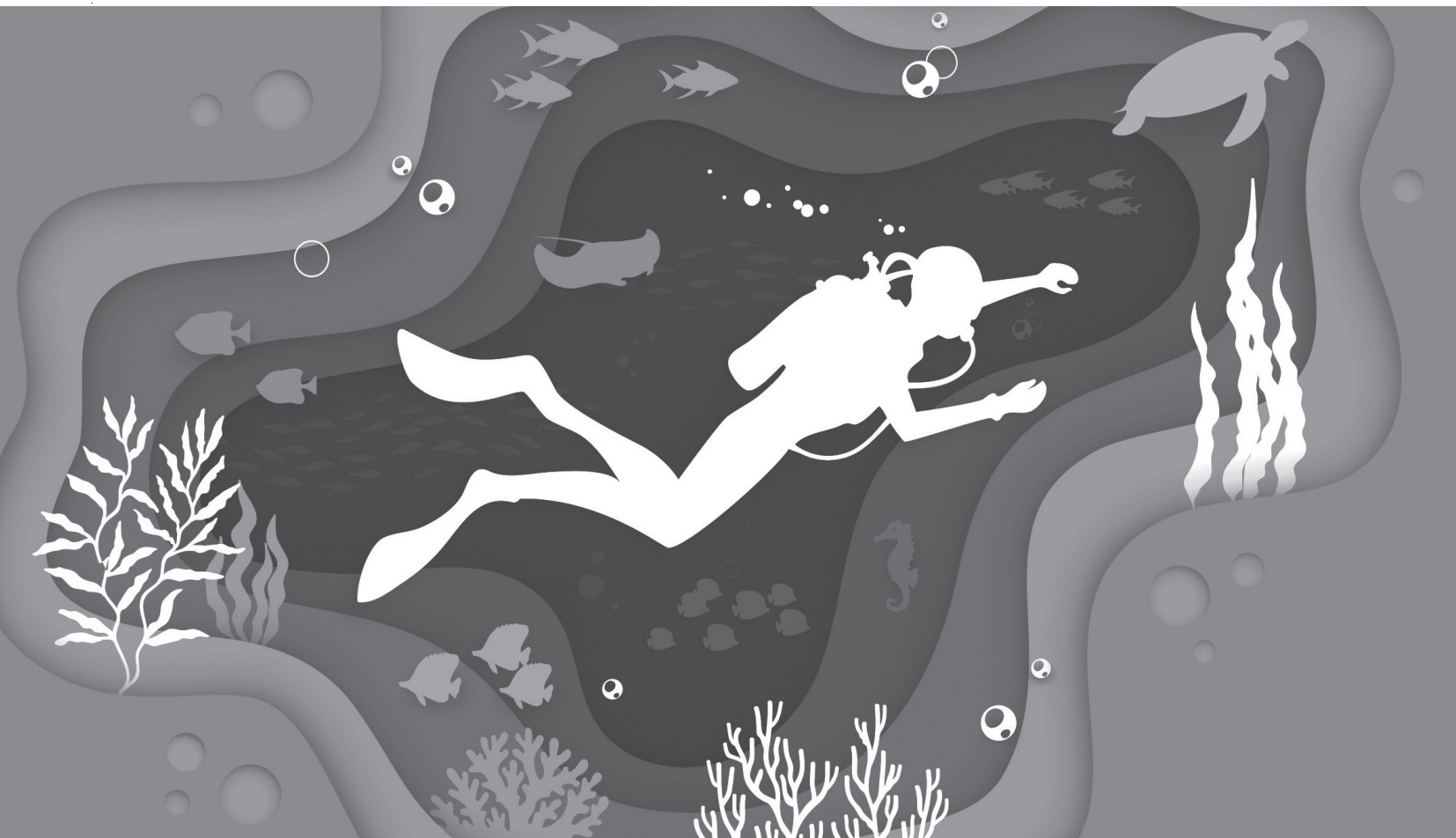
Technical skills (Indicate whether internal staff have them or whether you'll need to work with a vendor):

Software:

Hardware:

Potential barriers (These could include costs, organizational culture, leadership doubts, or return on investment):

A Framework for Immersive Learning



A FRAMEWORK FOR IMMERSIVE LEARNING

AUTHOR

Phoenix R. Cavalier

Phoenix R. Cavalier is the founder of Verus Learning, a learning technology strategy company. With more than 20 years in leadership, instructional design, corporate training, program management, speaking, and facilitation, he has implemented a range of global learning solutions. Cavalier is skilled in the science of learning and the power of storytelling. He is guided by one core belief: It's about people.

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**Content Manager,
Technology Application**
Alexandria Clapp

Editor, *TD at Work*
Patty Gaul

Managing Editor
Rachel Pelovitz

Senior Graphic Designer
Shirley E.M. Raybuck

This guide is an urgent call to action: Learning in the flow of work is the only way talent development professionals can begin to meet employees where they are and equip them with the knowledge they need to thrive in their roles.

The current technological landscape makes it possible to empower employees more effectively than at any other time in history by using immersive learning, a method based on augmented, virtual, or mixed reality content (including 360-degree video, 3D-rendered environments, or “digital twins” of real environments) or a combination thereof. All immersive formats have the capacity to deploy in scalable ways using existing mobile device hardware or through the acquisition of wearable devices.

While *extended reality* (XR) is the umbrella term for immersive technologies, this guide uses XR to refer to immersive learning going forward.

The ability to benefit from breakthroughs in XR depends on understanding how the tools and platforms differ from other learning solutions. Additionally, seeing how XR works alongside current educational modalities will help you synergistically enhance all your programs.

Despite some initial complexity, the wonderful world of XR includes innovative platforms from an array of vendors, which enable L&D teams to launch low-cost use cases with ease. In some cases, you can launch a valid design within three months if you're ready to get to work.

What makes the strategic shift to XR so challenging for organizations is a desire to achieve bold technological wins without first conducting an honest assessment of the levels of change required to achieve lasting performance improvement.

From a thorough reading of this guide, you'll gain a strong grasp of what it takes to identify, define, market, design, deploy, and maintain a robust XR initiative with long-term sustainment tactics. You'll also acquire an understanding of why XR projects have much more in common with a marketing campaign than any learning management system deployment you've launched in the past, which is when you'll know you're ready to build futuristic learning.

This guide will help you to:

- Establish a framework to get started with XR.
- Consider the partners to include.
- Think critically about how XR solutions can benefit your unique learning use case.
- Describe clear differences between simple and complex XR designs as well as the varying levels of effort required to achieve a lasting impact for learners.
- Craft a concise impact statement linked to observable, measurable behaviors that result from a sound learning strategy.

Identifying Use Cases

If you want to launch immersive content, it is essential to fully understand the complex reality of your existing learning and performance landscape. Often, there are vital interdependencies among a range of tools and technology that affect, direct, or limit the viability of even a basic XR use case.

Devices and Partners

It is likely that one internal business group in an organization works closely with certain tools and platforms without realizing which person or team directs the

platform it relies on each day. You must gain clarity to effectively narrate not only a good XR use case but a viable one.

The deployed XR device could be a mobile device, wearable, or a combination of hardware types. A diagram (see Figure 1) is an effective way to begin documenting what defines your current technological landscape, which is how you identify who manages or leads tools within your environment. For example, publishing content often means working with LMS administrators on final uploads and testing.

Once you have documented whom you need to complete a given task, their team, and any kind of intake and engagement process, you will illuminate interdependent technologies, business groups, and—most importantly—people.

After you create a list of tools and identify internal partners, you may need to make some introductions. To transition from awareness of your learning landscape to tactical understanding, translate your list into outreach steps.

Outreach will reap dividends throughout your XR deployment journey because no matter what the platform, you'll need open and clear lines of communication among many stakeholders to integrate and rely on various XR components at different times and throughout your organization.

Sample Use Case

Let's consider a basic use case: Pat wants to create an immersive how-to video.

Pat evaluates the environmental factors associated with the XR use case. He writes, "Learners will click an icon to launch the how-to video about reducing production errors, leveraging a 360-degree video and the device accelerometer, which measures acceleration and exists in most phones today."

When debriefing interdependencies, Pat realizes there are several interdependent variables to address before a learner can consistently launch the video.

Even that basic use case relies on design planning related to 360-degree video production, including unique storyboarding, shot diagrams, and interaction planning for wayfinding by the learner. Other components include final

video file size; local device memory storage capacity; available local data download speeds; video-hosting platform permissions and single-sign-on validation; video content management standards and policies; and XR platform design and enablement, including pre- and postproduction sustainment.

Basic use cases often fail because of assumptions that excited and enthusiastic technology champions make. There is no way around the tough task of first identifying and defining your use case by vanquishing any suppositions you have about how things work in your unique corporate or educational landscape. The ability to evaluate the requirements of successfully deploying an XR use case relies on recognizing that even a simple idea will have many moving parts, and L&D teams must identify all those facets early and check them often.

Validating Hardware Selection

Based on a clear understanding of your organization's technological landscape in tandem with newly open communication lines among key stakeholders, proceed to the next tactical step of your XR deployment strategy.

Basic use cases often fail because of assumptions.

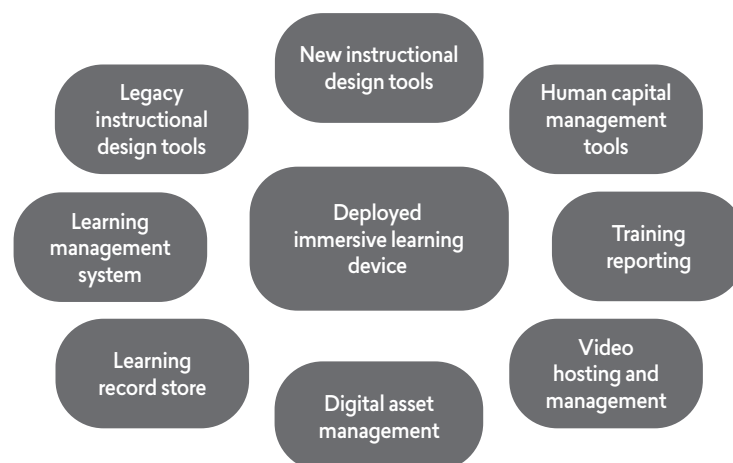
Because devices are ubiquitous, it's easy to overlook areas of risk hidden behind shiny glass and the latest apps. An effective way to frame that focus area is to realize that billions of people rely on technology they don't fully understand. Technology isn't about intelligence; it's about expectation, which is why hardware selection, acquisition, and deployment play a huge role in the perceived effectiveness of any XR use case (see Figure 2).

Most people around the world expect a device at work to perform as easily as their personal devices. That is why every learning professional isn't just competing for attention; we're competing with YouTube, Google, and smartphones based on device expectations.

When sharing an XR training plan with business owners and the C-suite, they will likely ask, "Why can't we deploy the new course to our LMS and have staff access it with the tablets we have now?" or "Why don't

Figure 1. Relationships in Play

How well you understand your learning landscape directly affects your ability to define a viable use case for immersive learning. At the heart of that understanding are the relationships you'll need for a truly successful deployment. For each of the tools or technology below, with whom will you partner?



we just deploy headsets to users and have managers track the devices in their location?” Those are good and rational questions; however, they oversimplify the content deployment goal.

The C-suite or other stakeholders may consider headsets as the “usual suspects” for XR activities. Although a go-to remedy, headsets are costly and cumbersome, and your organization may have a limited supply of them to lend to users. In addition, the ramp-up time is often more than a year for fully deployed, persistent, and sustained use cases. So, it isn’t a matter of being unable to use VR options, but rather that artificial reality scales quickly, leverages existing content, and costs less than VR.

Make sure to manage expectations by explaining the effect of the new technology on the overall company. Bolster your presentation with a comparison of modern wearable devices and their pricing. To add value to how you position XR, define how you can optimize spend from prior budgets or increase the return on investment of new budget allocation based on richer use cases for mobile

devices. Perhaps most importantly, demonstrate how XR helps the business match the speed of modern life.

What makes device selection, acquisition, and deployment important isn’t the amount of money spent, but the number of hurdles to deployment in your environment. From security standards, such as single sign-on or a separate sign-on app, to firewall permissions and wage-and-hour considerations, the viability of an XR use case increases when you can show a direct link between your learning goals and the available hardware—purchased or currently available within your organization.

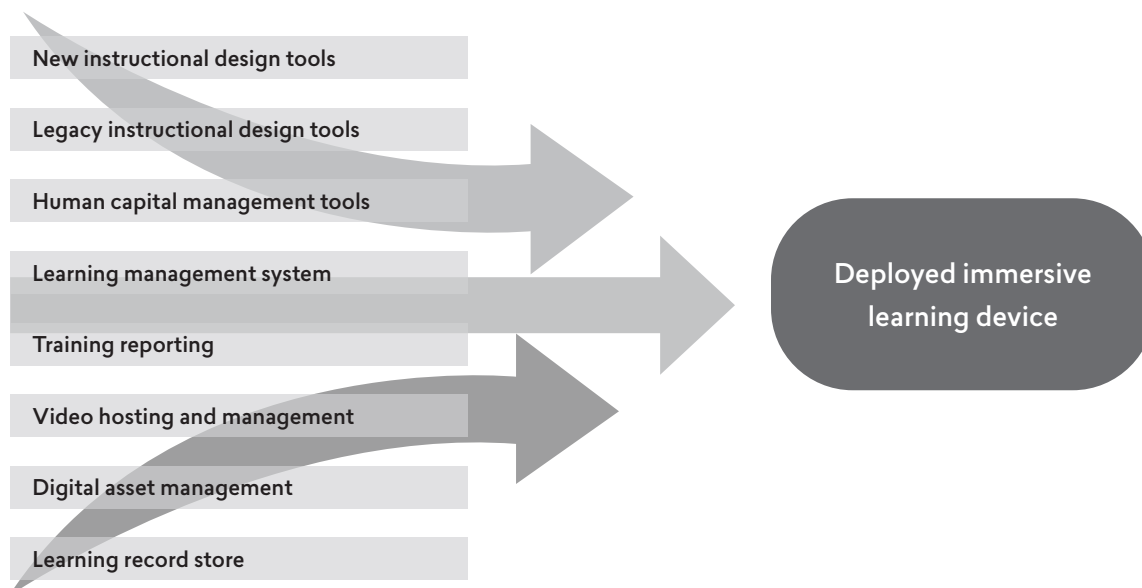
Tablet Considerations

There’s no shortage of devices that offer budget-conscious companies a way forward, all of which are better suited to security protocols than using personal devices.

Tablets are ideal for AR use cases related to learning because they provide a larger screen than a phone. While phones are certainly worth considering, and you often can deploy them for less money, tablets meet

Figure 2. Hardware Selection

Consider these options when choosing hardware for your immersive learning program. A sustainable device strategy isn’t only about hardware; it’s also about contracts, service-level agreements, support parameters, and the overall user experience design.



accessibility standards more effectively as related to content design. The other factor is that tablets are frequently part of the existing hardware landscape in most companies, which can dramatically lower the cost of entry into the XR space versus buying new devices.

If you're choosing tablets for your XR initiative, assess these factors:

- **Screen size.** This can vary from 7 to 12 inches; a 10-inch screen often works well.
- **Storage.** More memory supports multitasking and keeps apps from running slowly. For immersive content and multimedia projects, the least amount of memory to have is 8 GB.
- **Stylus.** This feature can make devices more accessible for some learners.
- **Wi-Fi versus LTE.** The cost is often lower for a Wi-Fi-only tablet; however, that requires consistent coverage to avoid creating a negative learning experience.
- **Battery.** A larger battery is better. However, factor in time for recharging against any concurrent use cases by learners. A smaller battery could mean a more rapid charging pace.
- **Applications.** Consider devices that can run internally built applications, along with those from third-party vendors. Work with your development operations or IT team to determine whether to configure a device for your environment or whether more steps are necessary (and whether that extra effort makes sense).
- **Security.** A good selection will have built-in security and support mobile device management tools.

Wearable Device Comparison Chart

This list, updated September 1, 2023, from device management platform ArborXR, demonstrates how the capabilities that vendors offer will differ. Note that the device facts are separate from the final pricing and support service-level agreements defined in any vendor contract. That is why the earlier work related to your current technical landscape is so essential. By knowing your available bandwidth and data speeds, you can include and exclude devices for more reasons than just price.

	Meta Quest 2	Meta Quest Pro	PICO Neo 3	PICO 4 Enterprise	HTC VIVE Focus 3	PICO G2 4K	Lenovo VRX	DPVR P1 Ultra 4K
Starting Price (USD)	299	1,000	699	963	1,300	399	1,299	599
Battery Life (hours)	2–3	1	2.5–3	2–2.5	2–2.5 (removable battery)	2.5	1.5–4	5
Charge Time (hours)	2.5	2	2.5	2	2 (battery charges to 50% in 30 minutes)	1+	Unknown	2
Resolution (per eye)	1832 x 1920	1800 x 1920	1832 x 1920	2160 x 2160	2448 x 2448	2048 x 2160	2280 x 2280	1920 x 2160
RAM (GB)	6	12	6	8	8	4	12	4
Depth of Field (DoF)	6	6	6	6	6	3	6	3
System on Chip	Qualcomm Snapdragon XR2	Qualcomm Snapdragon XR2+	Qualcomm Snapdragon XR2	Qualcomm Snapdragon XR2	Qualcomm Snapdragon XR2	Qualcomm Snapdragon 835	Qualcomm Snapdragon XR2+	Qualcomm Snapdragon 845
Weight (grams)	503	722	620	591	785	490	771	410

Planning Content Development

The promise of XR is that it immerses learners inside the training world and creates memorable experiences that deliver lasting impressions to rival your favorite films. XR is exciting—and for good reason. With 3D-rendered environments; digital twins of amazing real estate; and feels-like-you-are-there, 360-degree video of bustling cities, telling memorable stories has never held more promise.

From your first use case to your last, the tactical requirements of content development will enable you to build and deploy the content in the manner intended.

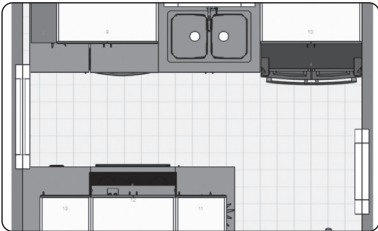
Think of your XR content design as three build levels: flat, semi-immersive, and immersive. Use those descriptors to create content that achieves two essential outcomes: an excellent learner experience based on available data bandwidth and hardware device memory,

and content that rapidly and repeatedly delivers pain-point resolution.

Build levels are an effective way to manage challenges related to design planning and scoping, especially when facing internal (and personal) pressure to shoot for the moon. When planning your content design, each build level presents a unique output well matched to a wide range of practical use cases (see Figure 3). Leverage established business relationships to ensure the success of each use case. Finding a complete and scalable win is more important than getting a “yes” that is perched high upon a pile of unreachable expectations.

By setting design expectations aligned with available time, talent, and budget, a simple use case can transform how others perceive the learning function within an organization, leading to greater support for more advanced—and expensive—training and development initiatives.

Figure 3. Immersive Learning Build Levels

Build Level	Uses	Time	Talent	Budget
Flat = Low bandwidth	Instructions, guides, steps, avatars, and short videos that support knowledge and performance 	Low	Medium	Low
Semi-immersive = Medium bandwidth	360-video and wayfinding via the accelerometer so learners can explore without using a headset 	Medium	High	Medium to High
Immersive = High bandwidth	Spatially aware, 3D content and digital overlays that create immersive spaces with vivid presence 	High	High	High

Significance of Memory

A large amount of memory, regardless of the device you choose, should be at the center of any device selection for two reasons. First, running complex immersive content can be bandwidth intensive. Second, a device's available memory affects how smoothly the device runs following a content upload. Your comprehension of the device's fixed data storage limits is an excellent way to ensure that content design scope doesn't exceed the hardware's capacity to consistently run content for a learner.

Upskilling Your Team

Instructional design has come a long way from the days when we used Microsoft Word documents and slide projectors for our initiatives. Transferring knowledge remains the desired outcome, yet the speed and pace with which TD publishes, shares, consumes, and applies knowledge seems to increase every year. For learning leaders, information sharing presents a persistent challenge when it comes to new tools and technology. The speed of business is often so fast it can seem impossible to integrate new tools smoothly, if at all.

For some organizations, the costs can be prohibitive. In other instances, the ROI may be too small to make a case for new skills training. Additionally, companies looking to both save money and keep up with competitors can fall prey to vendors that present one-off solutions with costly long-term ramifications. Adding those challenges to the risk of investing in the latest trend—and upskilling team members on that trend—only to have it become obsolete can make any decision daunting.

You can best upskill members of your instructional design team by using a matrix to reveal related costs mapped to the expected ROI against the useful life of the XR build and the skills needed to create content. The sweet spot is the intersection of ROI, cost, and use.

ROI rises higher than the cost when the number of planned uses for an upskilling event increases.

Cost is fixed; it appears as a lower value in relation to the ROI based on the number of uses a particular upskilling event will produce. That means you divide the fixed cost by the number of planned uses over time.

Use is defined by the number of times an upskilling event will produce content within a given cost or billing cycle. An investment in upskilling is more efficient when the number of uses is high within a cost cycle or billing interval. If the cost is monthly, quarterly, or annual, divide by the number of uses during the planned billing cycle.

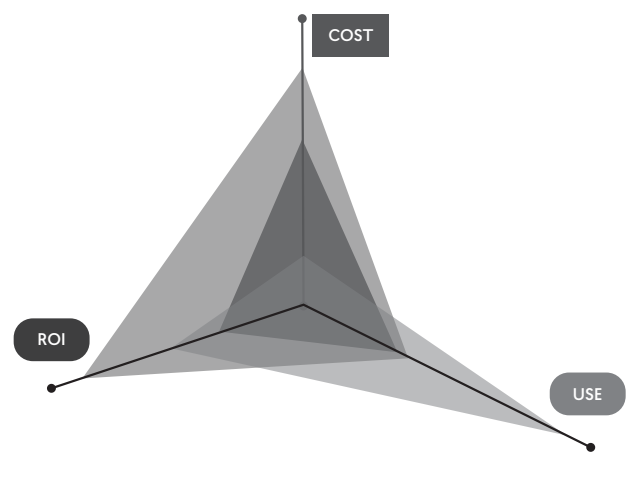
For example, if the budget for a compliance training program for one sales team member is \$1,000, and the team only uses the program in that one instance, that upskilling does not have a positive ROI.

Suppose the L&D team sets up a company-wide business development training course costing the same amount for 20 people. The value of the program equates to \$50 per person (or \$1,000 divided by 20). The latter program has a greater number of uses and a correlatively higher ROI.

Finding harmony among ROI, cost, and use is key to making smart upskilling decisions (see Figure 4). Businesses should, therefore, be conscientious about how often staff members will apply XR skills. For instance, if an initial XR use case links to a special event or an annual learning event, upskilling could slow productivity for a

Figure 4. Determining the Value of Upskilling L&D

The diagram illustrates the sweet spot where return on investment, cost, and use for a skill equal the most value for an organization.



team member to gain a new skill. If the team member doesn't apply the skill with regularity, the promise of personal and professional development may not come to fruition. Conversely, if an employee can apply a new skill broadly, that outcome increases ROI and drives value into more areas of the business. To make smart decisions for an initial XR use case, and subsequent use cases over time, we must think differently about how to deploy learning, well beyond a SCORM package.

Thinking Differently About a Deployment Strategy

For more than 20 years, we have uploaded SCORM packages to an LMS, assigned courses, and tracked completions and quiz scores as evidence of knowledge transfer and achievement. The challenge we all face is to shift perceptions of success in direct relationship to deployment strategies for all learning.

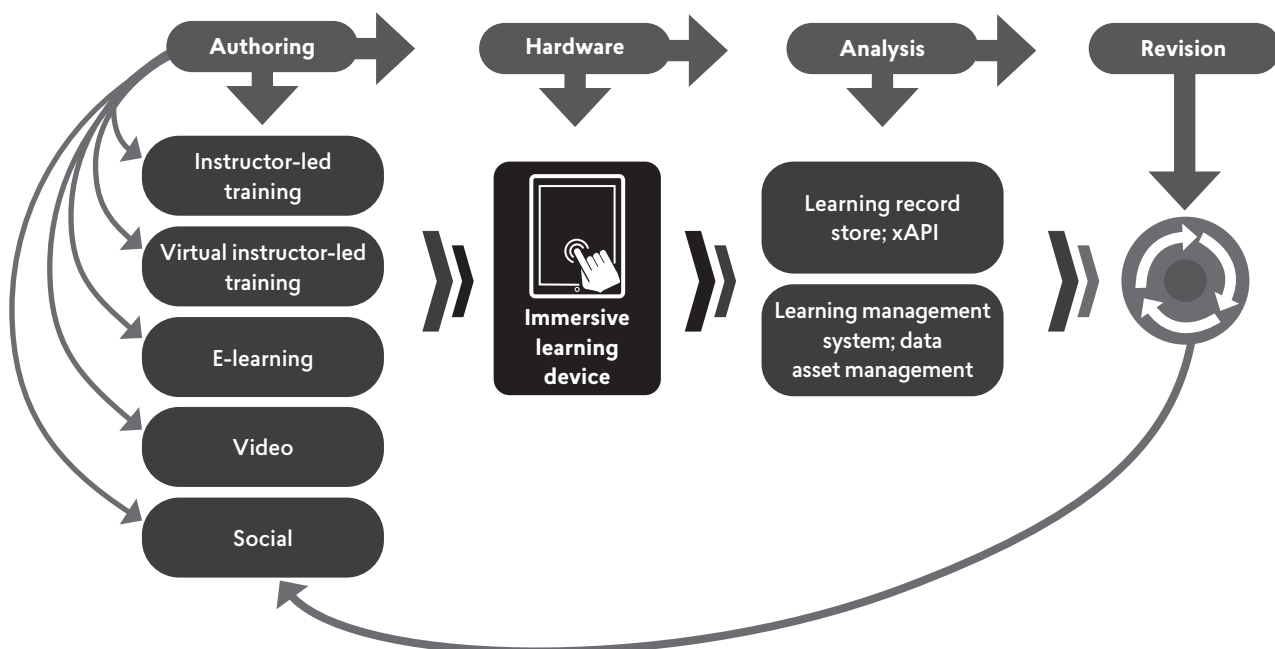
Too often, great content dies behind the walls of the LMS. The old learning journey always includes the same

question: How does a person turn content in a completed transcript into correct behaviors in a moment of need? That question, despite its traditional origins, is the beginning of the shift we must make to build cohesive strategies for XR deployments in the L&D arena.

XR is at the center of a new learning journey. Nearly every learning object in use today holds the foundational elements needed to build learning into the flow of work alongside the existing content and LMS. Creating XR deployment strategies does not mean tossing out all the beautiful work curated by talented professionals. In fact, pre-existing content in an LMS has greater influence by extending the life, meaning, and contextual value of curated content into the learner's workspaces, which dramatically improves how much support each employee has in their role, enabling them to thrive in their careers.

Understanding what makes an XR deployment strategy different from a SCORM deployment, and how they can work together, is the best way to ensure your XR dreams won't crumble under budgetary constraints and deep scrutiny related to knowledge transfer and application. In

Figure 5. Immersive Learning Deployment Strategy



fact, XR presents the strongest opportunity in more than a decade for us to propel performance improvement as well as transform the perception of the entire learning function from cost center to revenue driver.

When learning takes place in the flow of work, the relationship between learner and content changes for the better. While core content works directly within the LMS, flow-of-work learning content is a living document placed in direct relation to a moment of need, a compelling pain point, or within an area where accuracy is vital to the safety and security of daily operations. XR enhances, rather than replaces, traditional learning modalities, which increases the ROI of learning assets such as expensive videos, custom graphics, and permitted use of celebrities.

XR solutions convert work environments (for example, manufacturing, retail, construction, or entertainment venues) into educational landscapes by placing need-to-know, actionable information where it matters most: at the moment of need.

Alongside an LMS, you and your L&D team may use a learning record store paired with xAPI publishing standards to drive content, making for a robust and granular analysis. Incorporate reporting and analytics derived from learning in the flow of work to make meaningful revisions in a rhythmic and reliable manner.

Furthermore, by extracting specific and actionable concepts—which you can observe, coach, and support with contextualized learning content using XR—you can make current content more meaningful and future content more relevant, even with initially moderate investments. Adjusting how TD deploys learning content enables you to calibrate your sustainment activities, link them to a data-informed revision and version-management approach, and alter how internal stakeholders perceive—and fund—the learning function.

Defining a Sustainment Strategy

A unique facet of XR is how it behaves like a living document instead of a completed task, creating both challenges and opportunities that can bring value to learners and the organization as a whole (see Figure 6). Sustainment requires a more direct and ongoing relationship between the learning function and deployed content.

Realize the benefits of XR by recognizing that successful deployment can no longer mean pushing a SCORM package to the LMS and calling it a day. Instead, you must evaluate XR content throughout its life cycle, from launch to decommissioning or replacement. By creating training plans that include a clear sustainment cadence, along with direct commitments from interdependent stakeholders, the promise of XR will come to fruition through improvements in performance that benefit the learner and the company.

Proving the Value of Your XR Strategy

The value of L&D continues to expand, and over time, organizations have come to appreciate the impact of professionals working in training, facilitation, instructional design, and organization development. At the same time, leaders and individual stakeholders must report on the value of one specific training course or program, which may narrowly relate to budgets or broadly apply to entire departments in large companies.

An XR initiative's direct benefit to a learner is the ability to quickly address a pain point, leading to a resolution. That strategy differs from a traditional learning object for one key reason: LMS tasks rarely take place in the flow of work, and learners often cannot access them during a moment of need.

Three processes ensure the XR content you deploy consistently links to real value for learners and the business.

Leverage existing content. The last thing an XR initiative should do is present a solution that undermines current learning initiatives. Invite collaboration across teams and departments to cultivate a rich learning experience that builds rapport and trust with peers and partners.

Extend learning. Whether you present content in person, virtually, or in a hybrid manner, extending the life of content delivers immediate value to learners by ensuring they can access, study, practice, and apply key course objectives, either immediately after or within days of course completion. Additionally, data gathered from subsequent use of materials shared via XR will inform leaders, stakeholders, and design teams on areas of improvement, success, and innovation when a new version is ready for deployment.

Figure 6. Evaluating Potential Risks

RISK	BENEFIT
Outdated content	Publish revisions in hours, not days.
Added capacity needed to maintain immersive learning	Upskilling creates opportunity.
Digital asset license expirations	The useful life of content extends.
Consistent bandwidth required	Swiftly replace unpopular content.
Wage-and-hour tracking requirements	Use mobile-first learning and support.
Hardware versioning and updates	Reuse coaching content over time.
Accidental sharing of nonpublic information	Quickly gather feedback.

demonstrate a link between performance in a role and competence on the job because of accurate and rapidly available supporting information made visible in the flow of work.

Conclusion

For decades, learning professionals have promised to train, develop, and equip learners to succeed. While brilliant people are keeping that promise every day, all too often, the content isn't available to help a learner when they need assistance the most.

Immersive learning isn't a trend; it's a tidal wave, and every leader in the L&D arena should actively plan their entry.

Making the most of XR is about engaging both learners and the business in new ways. Start with a comprehensive audit of the authoring step, from which you can identify key concepts, observable behaviors, and clear coaching opportunities. Then, based on the selected hardware, work with subject matter experts and other partners to translate key concepts into XR elements that extend the value of content packaged for the LMS.

Company leaders who make a clear commitment to XR strategies, with a steady and scalable approach, will emerge as go-to professionals in whom employees can find real support for on-the-job performance and long-term careers. XR will help learning professionals keep the most important promise: to help people.

Transform moments of need. The power of XR to co-locate vital content in the flow of work is at the heart of the value of the technology. Whether in a frontline position in an industrial workspace, or tasked with highly regulated activities in science or engineering, XR makes it possible to surface the right information in seconds. It's a transformative reality that delivers robust data about learner engagement and drives clear analytics that

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Tracking Tools for Immersive Learning Use Case Checklist

This simple checklist can support an initial immersive learning use case. Track answers for key elements as you confirm them, including internal partner names. Having the names of partners in one place will help you establish and maintain valuable relationships.

Confirmation Date	Key Element	Vendor/Product Description	Internal Business Partner
	New instructional design tools		
	Legacy instructional design tools		
	Human capital management tools		
	Learning management system		
	Reporting		
	Video hosting		
	Video management		
	Digital asset management		
	Learning record store		
	[Other]		
	[Other]		
	[Other]		

Immersive Learning Project Framework

As you get started with your immersive learning project, using this framework will assist with thinking through the steps, stakeholders, and tools you will involve along the way.

Identify Your Use Case

How will you use immersive learning in your training initiative?

What are the pain points immersive learning will address?

Why do you want to use immersive learning (and why specifically do you want to use this hardware and software)?

What is your relationship with the business owner of the project?

Will they be amenable to working with you on this project? Can you foresee any challenges to working with them?

Tool Practicalities

How will the intended hardware fit with your organization's current tools?

Do you have a budget for any new technology you want to use? Will that budget support the project at hand?

Do you have any stakeholders to support you in this endeavor?

Immersive Learning Project Framework (Cont.)

What is your relationship with the individuals who manage the company's current software and hardware?

What is the skill level and interest of your learners—that is, will they be interested in experimenting with new hardware?

Immersive Learning Build Level

How complex is the proposed immersive learning project?

Do you have the time to complete and implement the project?

Revisit the reasons for taking on this type of project—do the selected tools (current or anticipated) have the memory and the other necessary features to support your use case?

Necessary Skills

What skills will you need for the immersive learning initiative?

How will you get them?

Does it make sense to upskill your team?

If so, how will you do that? Will you need to implement a separate upskilling project?

Immersive Learning Project Framework (Cont.)

Marrying Current Content With Immersive Learning

To assist the learning journey, what current learning content do you have available to use?

Where does the content reside (such as in your LMS)? In what format?

Sustaining the Learning

Continually evaluate immersive learning content because outdated material will hurt your strategy. Consider the potential risks and benefits of undertaking an immersive learning project, such as the frequency of updating your material, the release of proprietary information to the public, and licensing issues. Consider your risks and how you'll minimize the likelihood of those risks and address them.

Benefits

Risks

Prove the Value

What will success for your immersive learning project and strategy look like? Some of the value may include building upon current learning content, extending training, and showcasing a direct link between your learning project and performance.

Other Considerations

Target Learning With Curation



TARGET LEARNING WITH CURATION

AUTHORS

Michelle Webb

Michelle Webb is a senior manager at CSG, where she leads global onboarding and creates compelling employee experiences. As an organization development professional and performance coach, Webb has more than 20 years of experience creating and driving programs that help leaders and teams create new levels of collaboration, unlock potential, and embrace new ways of working to achieve organizational success.

Jerry M. Kaminski

Jerry M. Kaminski has more than 35 years of talent and organization development experience in a multitude of industries, including IT, retail, government, consulting, automotive and, currently, energy utilities. Previously he led the instructional design team and the leadership and professional development delivery team and vendor management at Consumers Energy.

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**Content Manager,
Knowledge Management**
Eliza Blanchard, APTD

Editor, *TD at Work*
Patty Gaul

Managing Editor
Joy Metcalf

Senior Graphic Designer
Shirley E.M. Raybuck

We live in a world that is constantly on the move, getting faster and more technology enabled. While technology has empowered us to access information more readily, it also has provided too much material for learners to wade through. That has led learners to face cognitive overload with the depth and breadth of information presented to them.

To be effective and productive, learners need access to the right information at the right time and with the right context. That is where learning boards—also known as learning pathways, learning programs, and curriculums, among other terms—come into play. As a learning professional, you can develop a learning board strategy for your organization that engages employees' knowledge and helps reduce the struggle with content overload.

In this issue of *TD at Work*, we will detail:

- The what and why of learning curation
- Ways to get started with content curation
- How to build an intelligent curation mindset
- Strategies to shape your learning board process

- Reasons learning board governance is imperative and how to create such oversight

The What and Why of Learning Curation

In today's work environment, L&D professionals face several challenges, including keeping our learning content current and fresh, ensuring we get it in front of learners in a timely fashion, and supporting the business's competitive growth. Those challenges have become even more visible because of increased demands for regular upskilling and reskilling.

For several years, the solution to skilling was to leverage learning experience platforms. With an LXP's built-in aggregation and recommendation engines based on tagged information—for example, keywords, metadata, and skills—learners can find more targeted information and take the next developmental step in their learning journey. Unfortunately, if they don't have context for how the developmental resources pertain to the organization

or their role, the information can only be so useful. While LXPs can provide targeted resources, the systems miss offering organizational context—for example, they may offer “first-level manager” as a keyword but not outline the expectations for that manager. Additionally, both you and learners end up in a search engine conundrum—too much content, competing topics, and an abundance of data. How does the information apply in a particular situation? How does the information work within organizational systems and processes?

Learning boards, however, can go a long way in providing a solution to those challenges. They focus on providing high-value content in a narrowly defined skill or topic area that is contextually and organizationally relevant. Companies that have had success with learning boards focus on key skills and topics that are in high demand or support critical business initiatives at the awareness and knowledge level. Learning boards can also be role specific, making them even more effective because they provide a deeper level of relevance to learners. Note, you are not developing only one learning board but rather a series based on roles, jobs, skills, knowledge, or content. There are no limits to how many you can build as long as you focus on what is contextually and organizationally relevant to learners.

A good way to begin your journey with learning boards is to leverage your peer community and learn from other organizations' success.

Content Curation

Getting started with learning board curation is easier than you may think. You already conduct needs assessments to understand the challenges that your company is trying to solve. You probably also have task analysis data available to aid in that endeavor. Further, you likely have a competency and skill framework that you have mapped to roles to understand how and where employees work—for example, whether they have access to a computer or other device where they can retrieve learning assets as needed. You also have access to job descriptions; the Occupational Information Network (O*NET), a free online database containing occupational definitions; and other online content that will be

Learning Boards vs. Learning Design

At first blush, learning board curation can sound a lot like learning design. Both require a focus on uncovering the problems that need to be solved and providing opportunities to build knowledge. However, learning boards are focused on awareness and basic knowledge, whereas complex knowledge and application are required for learning design. Rather than seeing curation and learning design as two opposing forces, look at them as complementary approaches to solving organizational and learning challenges. While learning design centers more on program and initiative design, learning board curation targets content to a specific skill, role, or topic, which can serve as a springboard or prerequisite to deeper learning opportunities, including apprenticeships, curriculums, and programs. Learning boards can also serve as references or job aids.

There are no limits to how many learning boards you can build.

beneficial as you pursue developing learning boards. You need content relevant to the tasks individuals in specific roles perform, along with the skills, knowledge, and abilities required of them. For example, for a training and development specialist, O*NET lists instructing, active listening, and monitoring as some of the necessary skills. Oral expression and comprehension and written expression are two noted abilities. Work activities include training and teaching others, gathering information, and thinking creatively.

To create learning boards, take the data from those sources, arrange it, and focus on getting curious about the information within the context of the employee experience.

- When are employees most open to, in need of, or available to participate in training?

- What are the moments when employees are in transition and are looking for information, such as onboarding, preparing for a promotion or newly promoted, starting a new project?
- What modalities are available to deliver a learning board?
- What learning modalities do workers prefer?

Armed with that information, begin to build the framework for your learning boards, which will help inform your approach.

Exploring Technologies

While it is tempting to purchase shiny new technology when undertaking a new learning initiative, learning boards don't need complex or cutting-edge technologies to get the job done. Many L&D teams host learning boards within their learning management system, learning content management system, or LXP. Some organizations may also consider using SharePoint or even Excel to outline their learning board content.

Although LMSs often get a bad name, they are the source of truth for organizational learning because they offer you the ability to administer, document,

Case Study: Learning From Others

When public utility company Consumers Energy started on its journey with learning boards, it aimed to refresh its learning assets portfolio, modernize the format and delivery processes, and ensure the content remained current. The company also wanted to build an infrastructure and process that would enable it to generate, house, and deliver highly targeted content at the point of need. To gain insights from other companies, Consumers Energy reached out to members of the ATD Forum, a consortium of more than 60 companies that provides a confidential environment for exploring and sharing innovative talent development practices.

Through Forum discussions, Consumers Energy gained a deeper understanding of the assets and approaches that other organizations had used to address similar challenges with developing and housing targeted content for learners. Forum members offered

promising solutions, and Consumers Energy was able to connect with an organization that had been using a learning board approach for almost a decade with outstanding results.

Next, Consumers Energy used a formal connection and benchmarking process to poll Forum members about how to leverage targeted content. More than 20 companies participated and offered various names for learning boards, such as learning pathways, playlists, knowledge boards, and learning channels. The approaches were different in design, delivery, and measurement.

Through the discussions and survey, Consumers Energy was able to accelerate its understanding, gain clarity on processes, and save time and resources by moving past trial and experimentation and directly into implementation.

You must have a curation mindset.

track, report, and deliver content to learners. An LCMS provides additional flexibility for creating, managing, hosting, and tracking digital learning content—a one-stop shop for digital learning. A benefit of using an LCMS for building your learning board is that it can do a first-pass curation of your existing content. If you decide to build learning boards within your LXP, you will be able to bring together content from a wide range of internal sources as well as external sources, such as YouTube, online magazines, and other resources as well as from subscription content providers such as Skillsoft, Coursera, Udemy, LinkedIn, and BizLibrary.

Building an Intelligent Curation Mindset

To pursue this new approach to instructional asset development, you must have a curation mindset, a laser focus on being curious about learners and the problems they are trying to solve. “Curation without curiosity is just a list,” says educational technology expert Elliott Masie.

Curiosity leads to asking necessary questions to ensure that the information you assemble is applicable and sticky:

- Why do learners need to know this content?
- Where will the content come from?
- Where and how will they use it?
- What will learners be able to do differently because of what they learn?
- Why is it critical that they learn and apply this information immediately?

Once you understand the answers to those questions, you can break down content into targeted and manageable chunks to address the need. Curation can focus on competencies, behaviors, skills gained through training and experience, and ways people act or conduct themselves at the corresponding information and knowledge level. Consider the business acumen skills that a C-suite executive needs versus those of a first-time manager.

Development Process

The development process involves collecting information and engaging with learners. The acronym CURATE sums it up well:

- Collect best-in-class content.
- Understand key skills and topics to address.
- Reveal the relevance and context.
- Act with an Agile development attitude.
- Take a targeted approach.
- Engage individuals and build communities.

Collect Best-in-Class Content

For many organizations, curation comes in the form of content aggregators and recommendation engines that present information to learners based on keywords and skills. That approach requires individuals to know what keywords they should use to find the intended information, which is difficult for those who are just starting to explore a topic or concept. After all, we don't know what we don't know.

If you have invested in adding organizational roles into your content aggregators, you have the additional ability to highlight content based on similar job functions. However, that can only go so far, and learners often undermine the content's purpose by searching for what they are interested in doing on a personal learning basis rather than the learning you have designed for them. For example, a senior manager may search for technology if they are fond of new gadgets rather than choosing performance management, which you would prefer they learn.

Learning boards by nature overcome the keyword shortfall. Clay Shirky, vice provost of educational technologies at New York University, famously quipped that curation comes up when search stops working. It solves the problem of filter failure. By leveraging a curation mindset and learning boards, you bring to life content that aligns to the business strategy, job functions and roles, and key organizational learning opportunities. Authors Guy Kawasaki and Peg Fitzpatrick point out in their book *The Art of Social Media: Power Tips for Power Users* that “Content curation involves finding other people's good stuff, summarizing it, and sharing it. Curation is

a win-win: you need content to share ... and people need filters to reduce the flow of information.” The challenge of curation, however, is understanding what that “good stuff” is that will enable employees to excel.

Understand Key Skills and Topics to Address

Given the pace of our world today, the skills and knowledge people need to be successful are evolving quickly. According to the Udemy article “The State of Learning and Development in 2021,” an average 38 percent of the workforce was being skilled or reskilled in 2020. In some industries, the need to reskill was as high as 66 percent, according to LinkedIn Learning’s 2021 *Workplace Learning Report*. The World Economic Forum calls out that future business needs will require more reskilling as advancing technology alters jobs. Additionally, employee resignations are compounding the need for the existing workforce to take on new roles in shorter timeframes. Learning boards can serve as a stopgap between fully skilled and new workers assuming open roles.

Beyond staff filling vacant roles, the World Economic Forum estimates that 42 percent of the core skills required for existing roles will change in the next two years. Those skills will be most prevalent in these professional areas due to their growth potential: care (health, fitness, and social services roles); engineering and cloud computing; sales marketing and content; data and artificial intelligence; green jobs and renewable energy; people and culture; and specialized project managers.

And the ongoing resignations in the US are further affecting the need for upskilling, specifically for mid-career employees and the tech and healthcare industries. To minimize turnover and prepare new hires, companies will need to focus on additional skilling opportunities that workers need.

According to software company Amdocs’s report *Workforce of 2022: Reskilling, Remote and More*, 90 percent of full-time US workers consider strong training and upskilling programs an important benefit of prospective employers. That number increases to nearly 100 percent for tech workers. By all indications, the Great Resignation

Curation Dos and Don’ts

Do

- ✓ Leverage the full capabilities of your learning management system and learning experience platform, staying current on recent releases and using inherent search parameters.
- ✓ Understand your learners, such as their format preferences.
- ✓ Embrace formats that make consumption easier, such as podcasts, videos, and short articles.
- ✓ Develop a curation framework that provides context, connections, and content.
- ✓ Ensure users don’t encounter sign-ups or paywalls when accessing learning board content.
- ✓ Be laser focused on the skill or topic.
- ✓ Have a governance process or model and hold true to it.
- ✓ Focus on metrics of use and engagement.
- ✓ Use or find existing content sources.
- ✓ Celebrate successes and communicate them to the appropriate stakeholders.

Don’t

- ✗ Get caught up on the technology. Instead, use what you have.
- ✗ Assume you know how and where individuals want to learn.
- ✗ Use lengthy content or content that is difficult to engage with.
- ✗ Focus on adding more. Instead, focus on adding more targeted assets.
- ✗ Build what already exists, either from internal or external sources.
- ✗ Assume the learner needs to know everything.
- ✗ Make L&D the sole owners. Rather, create a community of curation with an individual or team responsible for analyzing, refining, and providing governance.
- ✗ Focus on completion data.
- ✗ Attempt to develop all the content.
- ✗ Get discouraged if you have setbacks. Learning boards have a learning curve for both the curator and the learner.

Thanks to technology, learning boards are the new job aids or performance support tools in the workforce.

phenomenon is not only continuing but accelerating. That will provide considerable need for talent development professionals to retool the workforce—both current and incoming workers—with new skills.

Development is quickly becoming a nonnegotiable for organizations. You as well as leaders and managers need to ensure you are supporting learners in identifying the most important skills to learn and providing training at the right time, with the right context, and the right degree of focus. Those parameters make learning boards the ideal choice. Learning boards also reduce the amount of friction in the learning process. How many times have you needed to address a skill shortfall but found the content to be too long, lacking the organizational context, or too future focused to be of value? Thanks to technology, learning boards are the new job aids or performance support tools in the workforce.

Reveal the Relevance and Context

Companies that have been successful with learning boards focus on curating for skills and topics that are a priority for the business or organizational roles. As Maria Popova, author of the Brainpicker blog, states: “Curation is more than packaging—it is to help readers discern what is important in the world.” Good learning board design identifies the content learners need and provides it before they search for it. That saves learners time and ensures they have the necessary information for the work challenge.

Curation not only helps discern what is most important but also supports how individuals learn. The brain works best when it can answer the question of why something is significant and make connections between information. When learners see information that is relevant to

them, the brain sends signals to the amygdala, effectively tagging the information for storage. When you position learned content in the context of how that information fits into a larger schema, learners’ brains connect that information to prior knowledge.

Reduce Cognitive Load

Curation has the additional benefit of reducing cognitive load, which is how much of the brain uses its working memory to process information. When individuals experience too much cognitive load, they are unable to process information as efficiently as they typically would. There are three types of cognitive load:

- Intrinsic, the inherent effort associated with a specific topic
- Extraneous, the way the information is presented, which can make it easier or more difficult to absorb
- Germane, the work we put into creating a permanent store of the information we have learned

As people engage with information, it moves through their sensory memory—how they hear and see the information—before it moves into their working memory and then, if they haven’t forgotten it, into their long-term memory.

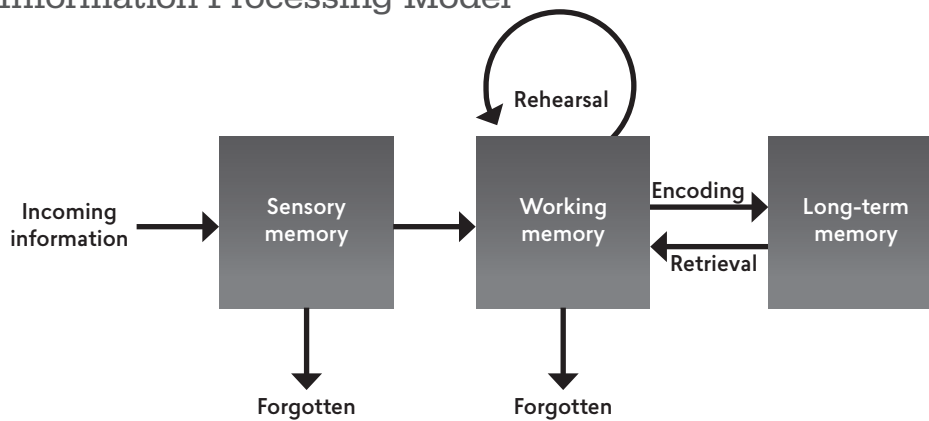
Provide Organizational Context

If information is too complex or doesn’t connect to existing knowledge, learners are more likely to forget it. The human brain will process information that lacks context and relevance as nice-to-know material and then lose it. For example, new technologies such as the cloud and 5G may be interesting. However, without the additional context of how those technologies relate to the organization’s strategy, products, or services, individuals may not engage in learning about them or in making the connection to their work. Both are necessary to retaining the information.

Learning boards provide a means to help learners more effectively manage their cognitive load by structuring content to address questions such as:

- To what skill or competency does this topic relate?
- What proficiency do I need to work toward?
- What is the organizational context around this topic?
- What is most critical for me to know?

Figure 1. Information Processing Model



Adapted from the Atkinson-Shiffrin Model, Richard Atkinson and Richard Shiffrin, 1968.

By addressing those questions, you reduce problem space, or the gap between individuals' current awareness and knowledge and the desired goal. Providing the organizational context for a particular topic or skill is critical to ensuring content sticks with employees. By curating information in one place based on such factors as keyword or role, learning boards will expeditiously guide learners to the information they need.

Curation discerns what is most important and also supports how individuals learn.

One successful strategy for curating content is to tell a story. Learners will relate better to content in a story fashion, especially if that story is relevant or aligns to previous work experiences. Vanessa Boris, senior manager of learning design and media at Harvard Business Publishing, writes in the Harvard Business Publishing blog that stories connect and inspire individuals and make learning sticky. "Stories about professional mistakes and what leaders learned from them are another great avenue for learning. Because people identify so

closely with stories, imagining how they would have acted in similar circumstances, they're able to work through situations in a way that's risk free," she notes.

Act With an Agile Development Attitude

Companies that have been successful with learning boards have embraced Agile approaches focused on adopting a clear, simple, and easy-to-follow process for developing resources. Through the process, curators can quickly pull together content and publish the board without being bogged down in administrative processes or reviews.

A hallmark of high-performing learning board implementation is democratization of the learning process—that is, enabling individuals outside of the L&D team, such as subject matter experts and leaders, to create content; setting ownership with a small team empowered with the authority to manage the process; and training curators in mindset and best practices.

Additionally, take a continuous improvement approach by adopting a cycle for reviewing and updating content. Learners may frequently access learning boards. Without fresh, current information, learners may lose confidence in the learning board content and stop interacting with it.

Take a Targeted Approach

As part of the curation process, focus on the most relevant information to share with learners. It is easy to provide more than is necessary, and that can lead to learner

Figure 2. Sample Learning Board



frustration. Begin with existing training analysis, job descriptions, or organizational needs. The more you can target the content for the learning board, the easier it will be for learners to access relevant information and have a better user experience. Use job titles or roles to focus the content to specific business needs.

Engage Individuals and Build Communities

As L&D professionals, we have our hands full with upskilling staff. With learning boards, you can tap into the organization's collective knowledge and leverage a network of individuals with domain-specific capabilities to build the boards. You don't need to be the sole content creator. That helps build a learning culture.

Learning boards are opportunities for organizational talent to share their expertise and build their personal

brand in a real-time fashion. Good candidates for curating learning boards are individuals who are looking to position themselves for new opportunities or grow their career in different directions.

Tapping the additional capabilities of LXP groups—that is, employees grouped by business team or job family—organizations can build communities and social engagement where learners can discuss what they've learned, share additional resources, and build their networks.

Content curation opens up the expertise of everyone in your organization and builds a community of knowledge, not just information. Suddenly you have individuals who are actively identifying best-in-class assets, reinforcing their own learning, and elevating their own personal brand.

Learning Board Governance

For learning boards to remain useful and effective, it is imperative to have a team dedicated to the project and to establish guidelines that outline the process for such aspects as updating and removing outdated content.

Learning Board Team

As best practice, establish a team of individuals in roles that support the learning boards' architecture.

Curator. This individual has ultimate responsibility for creating and maintaining the learning boards. This can be a part-time role in conjunction with existing roles, but the person filling the role must fully understand their responsibilities and makes adequate time to keep content current. As noted before, building learning boards and leaving content static without review will lead to learners not using them.

Contributors. These individuals are trained as curators and are clear on the specific focus or skill area. Contributors are a cadre of regular providers to the learning boards. While the curator should have the final say regarding the curation, input from a larger audience ensures adequate content as well as timely and relevant information. Expanding and recruiting contributors is important to the program's success.

Editor. This individual, or a team of editors, accesses the learning boards' content to verify it has met the guidelines, such as being relevant, contextual, and targeted and having a short duration. The editor can also identify connection points where the business could use the learning boards to support organizational initiatives and programs. They and the curator must work closely to maintain the correct context during revisions. While the curator could also serve as the editor, we recommend keeping the roles separate for better clarity of the roles.

Focus on the most relevant information to share with learners.

Maintainer. This individual, or team of individuals, regularly assesses the data and feedback associated with the learning boards, including usage and content age. Normally this role may reside within the LMS or LXP team if separate from the core program board team.

Governance Framework

For the learning board governance framework, develop knowledge management governance approaches for:

- Training learning board team members
- Presenting content to learners
- Considering the depth and breadth of content
- Collecting feedback
- Maintaining content

Train Learning Board Team Members

To ensure sustainable success, all board team members need to be trained on how to effectively curate content. Numerous vendors, including LinkedIn and Udemy, have teams that are formally trained to curate content based on the insights they gain from their clients. Use webinars, boot camps, and accelerator programs and cover such topics as developing the curation mindset, the curation platform (commonly an LXP), tagging capabilities and requirements, organizational resources or available subscriptions, the governance approach and refresh schedule, and the importance of context and relevance to learning.

You must teach the curation mindset. As writer and podcaster Merlin Mann notes, "A great curator is somebody who pays attention well and gives you context for understanding why you might want to pay attention to it."

With vendors moving to continuous delivery models for their learning platforms, ensure that team members are aware of and effectively using the capabilities of the chosen platform to get the appropriate content to the learner. They should know which organizational resources and subscriptions are available and how to link to portions of that content. For external content, team members need to ensure they are not linking to content that is behind paywalls or subscriptions. Instruct them how to tag the learning boards and content with skills and metadata tags.

Present Content to Learners

For many organizations, an LXP can be a great tool for building learning boards because it has built-in capabilities for tagging topics and skills. Many likewise have existing curated content to jump-start your efforts. Leverage the default skills inherent in the system or customize them to your organizational skills and competencies. For those just starting out, we recommend pursuing the easiest path until you polish your skill set. Don't take on too much too fast or you risk less-than-optimal performance and use of the learning boards.

Consider the Depth and Breadth of Content

Educate team members about the fundamentals of how to curate, how the brain processes information and learns, and how to maintain a laser focus on best-in-class content that minimizes the gap between current knowledge and the desired level of awareness. They will then find content that provides context and relevance and reduces cognitive load. More is not always better—focused content pertinent to the job, task, or role is more useful than a long list of resources. More content also requires more of a time commitment and maintenance to ensure content remains relevant and isn't outdated.

Research by professors Richard Mayer and Roxana Moreno shows that individuals learn more effectively when they use both their visual and auditory systems. For example, rather than a learner reading an article on a topic, they could watch a short video of an individual talking through a diagram of the content. That would reduce cognitive load. Successful learning boards use all modalities—reading, video, audio, simulations, exercises, job aids, and on-the-job assignments.

Collect Feedback

As learners engage with learning boards, gather their input via qualitative and quantitative measures. Qualitative feedback can come in the form of end-of-pathway surveys or quarterly focus groups. Ask learners about the resources they've accessed and completed from outside content providers. If your LXP or LMS has the capacity to provide rankings or ratings, consider activating them to track employee experiences and to help guide others to the learning boards. In similar fashion, many websites offer

Case Study: Pairing Learning and Social Connections

At Accenture, a global IT company, learning boards have become an integral part of its learning culture, democratizing the learning process. The company offers content on key business and behavior topics in an engaging format that employees can access online or through a mobile app. Each learning board contains an introductory article or video that provides the context and relevance and then features a mix of videos, blogs, e-book excerpts, podcasts, and other short content items.

Additionally, Accenture has built a social component into its learning culture. Employees can interact with others by following, commenting, endorsing, and contributing to the learning boards. That has led to substantial organic growth in workers sharing the learning boards and in inspiring individuals who want to grow their brand and elevate their visibility to become a curator.

thumbs up/thumbs down ratings for their content. To gain insight into what works, what doesn't, and opportunities for improvement, survey or informally ask users these questions after they have completed a learning board:

- How would you rate this learning board?
- How would you rate the specific content?
- Do you understand this skill or topic as a result of accessing the resources on this learning board?
- Does this skill or topic apply at our organization?
- Do you see how this skill or topic applies to the work you do?

Feedback can come in the form of usage metrics, including total and unique users, pathway completions, and related data. Vendors that provide materials across key organizational topics train their teams to curate based on the insights they gain from their clients. For example, if there is an increase in searches for a particular topic but little engagement with existing content, companies can see gaps that curation can fill. As a result of those insights, the curator can expand or reduce specific learning boards, add new ones, or close out unused ones.

Maintain Content

Develop a clear and easy-to-follow content maintenance strategy that involves reviewing feedback, retiring out-of-date content, and adding new content when needed. Also keep a comprehensive inventory of your learning boards, their content—such as titles, authors, sources, and last updates—and any overlap or duplication across boards. Ensure that resources on the learning board are still applicable to organizational goals and mission.

Conclusion

Learning boards have the potential to address many key challenges for companies—providing highly curated and relevant content, building organizational awareness and knowledge on key topics and skills, building an organizational learning culture, and freeing up L&D staff to focus on designing learning experiences at deeper knowledge and application levels. Learning boards add one more tool to your learning portfolio. Further, learning boards support a 70-20-10 learning approach providing components to each of the three domains of learning. In other words, learning boards can both trigger and integrate with other learning modalities to meet learners where they are, starting them on their journeys and continuing to support the learning experience.

Organizations that have adopted learning boards as a core part of their learning modalities have seen tremendous results. Consumers Energy, for example, has more than 125 different job-specific program boards built into its LMS. At Accenture, learning boards became a standard part of the content architecture. After only a few years, the company had more than 100,000 unique followers to the more than 1,500 learning boards. Just as is the case of any development solution, learning boards can't solve all your learning needs, but they are excellent tools for building awareness and knowledge on core skills and topics.

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Stakeholder Discussion Preparation Worksheet

Use this worksheet to prepare for discussions with business leaders and stakeholders. For many of the questions, you will likely be able to pre-populate the responses and validate them as part of the discussion.

Exploring Learning Board Opportunities and Structure

- Discuss and educate stakeholders about learning boards and their importance to the learning culture.
- What are key moments that matter in the employee experience—such as onboarding or moving to a managerial position—that we can support through learning boards?
- When are employees most open to or in need of content, and what material is available for learning?
- Can we slowly and steadily offer content on a topic or skill in advance of or coming out of virtual or in-person training?

Notes: _____

Understanding Skills to Develop

- What are key skill areas we need to develop within a particular group, department, or business unit?
- What are key skills we need across our organization?
- Do we require knowledge components prior to teaching skills?
- How quickly do we need to develop these skills?
- What is the complexity of the skills?
- What do we want individuals to be able to do with the skills?
- What common problems can we address by offering learning materials to change behavior?
- What just-in-time needs can we address?

Notes: _____

Stakeholder Discussion Preparation Worksheet (Cont.)

Identifying Content

- Do we have existing content that we can adapt for the learning board?
- From where can we source the content, such as subscriptions, online resources, internal videos, or job aids?
- What experts do we have in these skill and content areas?
- Who is enthusiastic about learning this skill?

Notes: _____

Intelligent Curation Checklist

Use this checklist with the learning board team members to ensure that they are curating content for the learning boards that provides the right information at the right time with the right context. Team members should answer “Yes” to most of the questions. If they are answering “No” to more than three questions, that indicates they need to have a discussion about how to update or improve the learning board.

Yes	No	
☐	☐	Does the learning board provide organizational context?
☐	☐	Does the learning board spell out the relevance to the target learners?
☐	☐	Does the learning board title accurately convey its use and content?
☐	☐	Is the content focused on one skill or topic?
☐	☐	Is the content recent? (Note: This will vary depending on the topic; revisit the content at regular intervals to ensure it remains applicable.)
☐	☐	Is the business prepared for self-directed learning?
☐	☐	Are learners willing and able to take ownership of their development via a learning board?
☐	☐	Does the organization’s technology support robust learning boards, including maintenance and search capabilities?
☐	☐	Is the content from trusted sources?
☐	☐	Is the content easily accessible and not behind a paywall or requiring registration?
☐	☐	Is the learning board tagged with keywords?
☐	☐	Is the learning board tagged with the associated skills and competencies?
☐	☐	Is the standard evaluation survey included at the end of the learning board?
☐	☐	Have you added reminders to your calendar to review the content in two to three months?

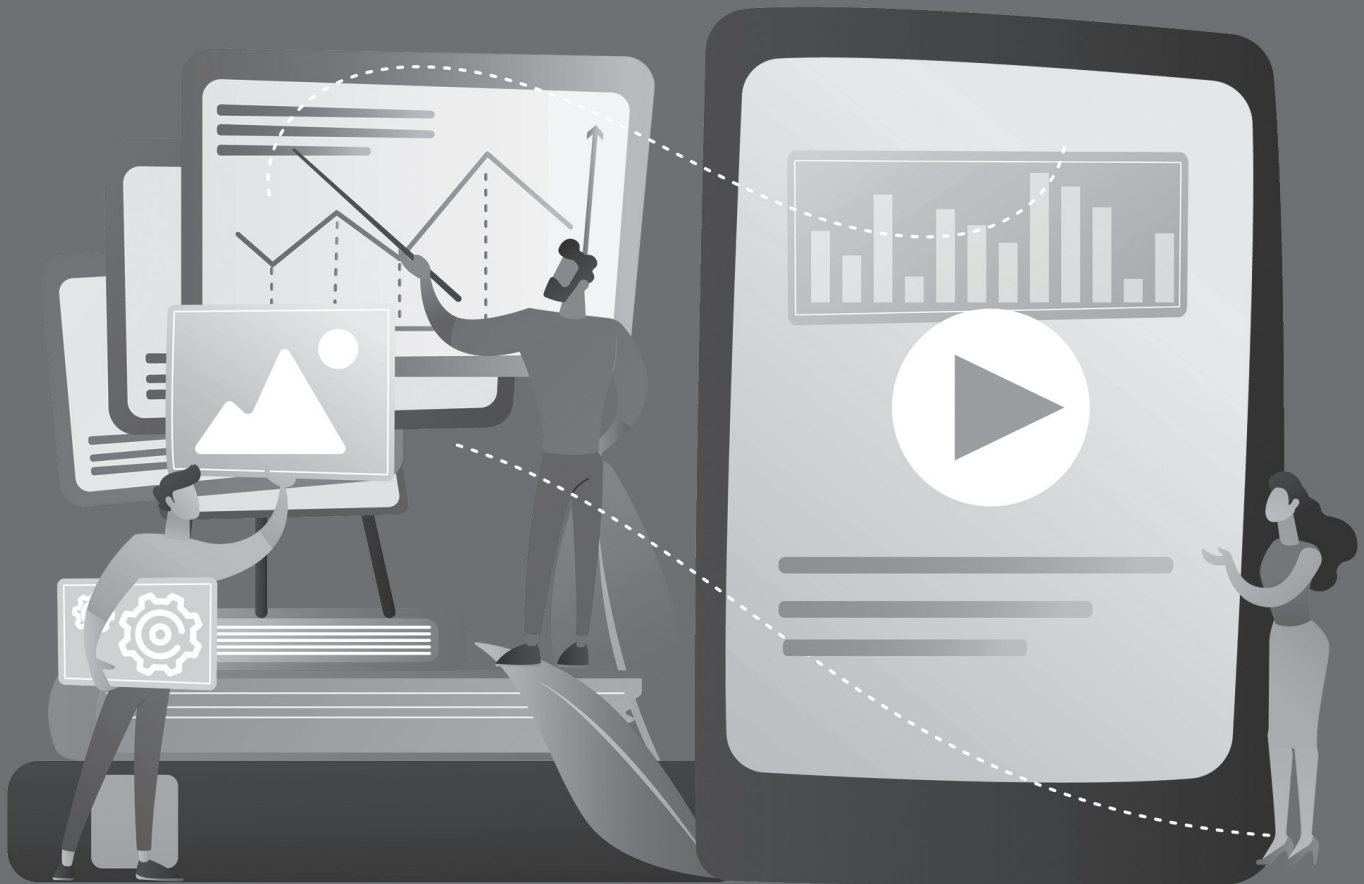
Tools & Resources

Content Curation Source Tracking Sheet

Use this tracking sheet to both brainstorm content sources as well as track the content you and the learning board team include in a given learning board. This will serve as a resource when reviewing content in the future to ensure the accuracy and timeliness of materials. Note: Your technology platform should have reports that can provide some of the information as well as additional data, such as asset keywords, number of accesses, and unique users, that you can use to inform your maintenance decisions.

Learning Board:					
Source Name	Content Type (video, blog, article, podcast, etc.)	Publication Date	Objective	Date Added to Learning Board	Notes

Self-Directed Learning Made Simple



SELF-DIRECTED LEARNING MADE SIMPLE

AUTHOR

Amanda Smith

Amanda Smith is the former instructional design content manager at the Association for Talent Development. In addition to instructional design, her specialties include content development and facilitation. Smith has more than 17 years of experience in the nonprofit sector developing and marketing talent development programs for the adult learner.

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**Content Manager,
Instructional Design**
Amanda Smith

Editor, *TD at Work*
Patty Gaul

Managing Editor
Joy Metcalf

Graphic Designer
Shirley E.M. Raybuck

In a world where many solutions to problems are just a click or swipe away, trainers must use more creative ways to steer learners on the right learning path. Let's face it—Google is our friend, but it can quickly become a never-ending rabbit hole, showcasing multitudes of information that may not pertain to our needs. How many times do we forget the original reason for our search because of the outpouring of data?

Instructional designers need to recognize and embrace this new reality. After all, Google, technology, and mobile devices aren't going away any time soon. In this digital age, learners are fact-checking and diagnosing themselves all under the same spirit of research. L&D professionals can use the habits that learners have undertaken on their own and integrate them into a self-directed learning program, providing the guidance and support learners need.

There are several key factors for why self-directed learning is steadily increasing. These include the widespread use of mobile devices, increased access to media, and the time constraints that individuals face when learning something new. The overall lifestyle and business demands that learners are experiencing are likewise

influencing how they consume information. The desire for quick, accessible, controllable content has a significant impact in training.

Participants are already familiar with this style of data consumption in their personal lives, and they'll only further demand it. Mobile technology will remain a staple for future learning. Self-directed learning aligns well with mobile learning, because learners can receive the content wherever and whenever they want and need it.

The evolution of media, across multiple formats, has created deep and meaningful learning experiences for participants. Media have become a component of active learning, which plays a key role in self-directed learning. To this end, instructors can engage learners by using film, music, videos, podcasts, social media, and much more.

Timing, too, has become a critical factor for today's learner. We can expect that this will only become more constrained in the future. Instructors should remain steadfast and committed to developing training in a digestible format that keeps learners engaged and renders swift results. When there are time constraints—a certainty we all can relate to—self-directed learning enables participants to learn at their own pace, on their own time. This opens many opportunities for L&D to occur and increases learner motivation, because they determine their schedule.

In this issue of *TD at Work*, I will

- explain what self-directed learning is
- pose questions about learners that L&D professionals should answer before implementing a program
- show how L&D professionals can use self-directed learning in the context of a larger development program
- cover key components for building a self-directed learning program.

What Is Self-Directed Learning?

In self-directed learning, participants take complete ownership of their learning, from the needs assessment through goal-setting, active participation, and evaluation. The L&D professional's role is to integrate a diverse range of learning opportunities that support various styles of self-paced learning. It's best to include a range of learning options that the learner can adopt

independently, such as video, e-learning, or a podcast. As Karla Gutierrez, an inbound marketer at Aura Interactiva, the developers of SHIFT eLearning, writes, "The availability of the right tools and technology, easy access to content, and an organizational learning culture that encourages and facilitates [self-directed learning] are integral for empowering learners to make their own decisions regarding their learning paths."

Research from Bersin by Deloitte, as outlined in the study *Meet the Modern Learner*, points to some generalizations about today's learners that L&D professionals need to be aware of. From that research, we can draw several conclusions to today's learners:

- Roughly 1 percent of a typical workweek is dedicated to L&D.
- Learners have more access to content because of new technology; users now want quick solutions.
- Learners are crossing boundaries to become less siloed and more collaborative.
- Most people understand the notion that learning should be continuous if they are to remain competitive.
- Learners have taken on more control and accountability for their learning.

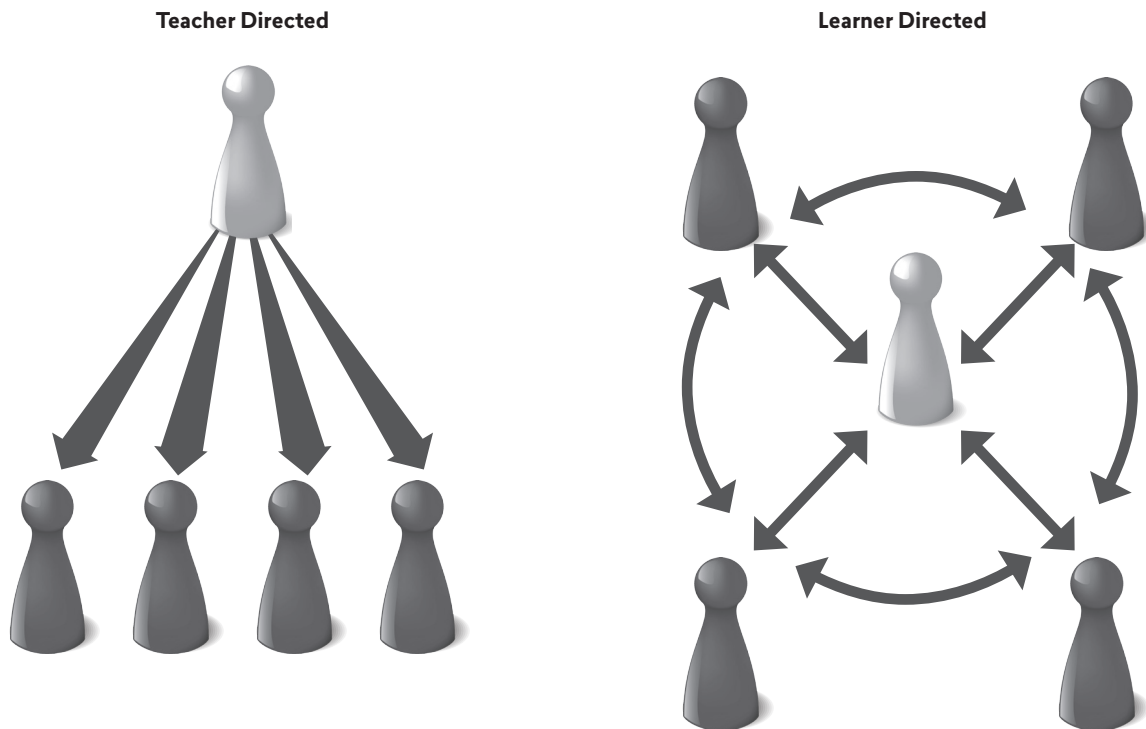
As an L&D professional, you need to understand your organization—that is, the culture and the resources available to you; your learners; and your willingness and comfort level with letting go and handing over the reins in large part to the learners while continuing to serve as an adviser.

Is Self-Directed Learning Right for Your Organization?

In self-directed learning programs, learners are expected to take full control of the learning experience. But L&D professionals play a key role in designing self-directed training programs that are agile enough for learners to pace themselves and engage.

As you begin to think about developing a self-directed training program, ask yourself whether it's right for your organization or the individuals whom you are targeting. The Centre for Teaching Excellence lays out four key questions around self-directed learning:

Teacher-Directed vs. Learner-Directed Learning



- Are participants ready to learn?
- What are the learning goals?
- Are learners engaged?
- What is the impact for learners and the company?

Are Participants Ready to Learn?

Learner readiness is essential to the success of your self-directed learning program. Learning won't happen if participants don't show motivation. However, while a considerable factor, enthusiasm alone does not constitute learners' readiness to commit to the self-directed learning process. Part of the motivation will come from the learners having a good reason to accomplish what they set out to learn. They must understand what they want to learn and how they will achieve that learning, such as the required steps.

In addition to learner motivation, L&D professionals should measure learners' capability in acquiring a new skill based on their current level. For example, do

learners need to receive additional information on the subject matter in the form of prework or do they possess working knowledge of the topic to comprehend and apply the material? Do learners have the resources or technical requirements to fully participate in the learning method?

Despite the many reasons self-directed learning is popular today—with learners, L&D professionals, and organizations—it is not the solution for all training scenarios. Self-directed learning will really only work if participants have a specific set of competencies or traits: curious, motivated, engaged, strong project and time management skills, and some computer literacy. This style of learning can help individuals expand on their current knowledge, gaining new skills and acquiring a sense of liberation—learning on their terms, which produces highly favorable outcomes for many. Learners have to know where they are to prepare for where they're going.

What makes individuals good candidates for self-directed learning? They should be:

- independent
- deadline-driven
- computer savvy
- reliable
- resourceful.

What Are Learners' Goals?

In self-directed learning, the participants set their own goals; but your job is to show them how to get there through a strategic learning approach. The goals will be a collaborative effort in part between you and the participants. Using SMART—specific, measurable, attainable, relevant, and time-bound—goals can be useful for the individual learner and tie in organizational needs and learning.

Here are some questions learners should answer to determine learning goals:

- Why is this learning goal important? How will I use it?
- How does this fit in with what I currently know? Do I have enough of a base for the learning goal I am considering?
- Whom do I need to help me with my learning goal?
- How will I know if I'm successful?
- Do I have limitations that could prevent me from being successful?
- When will I complete this program?

Learners have to know where they are to prepare for where they're going.

Are Learners Engaged?

There is little room to miss the bar on engagement in a self-directed learning program. Learners won't have a trainer hand-holding, and they will need to map out time for lessons themselves. They will only do so if they feel motivated and want to learn the content. The spirit of accountability is now alive and well and is the direction

that many learners are taking with their professional development.

Do learners have the sufficient skill set—including curiosity, time management, research skills, a social network, and so forth—to pursue self-directed learning? They must have a foundation that they can build on to learn more, largely on their own.

What Is the Learner Impact?

How will the goal that each learner has put together make a difference to the organization and to the individual? Where will the learner apply the newfound skill or competency?

To support the self-evaluation progress, you should:

- regularly consult with learners to provide opportunities for feedback.
- encourage learners to regularly reflect on how they will apply their new skills.
- provide opportunities for learners to explain the subject matter.

Set the Stage

For the purposes of this issue of *TD at Work*, let's assume that the time is right and learners are ready to take on self-directed learning. Let's assume, as well, that there is buy-in from senior leaders to try a new program (I'll delve into that later in this issue). Where do you go now? How is a self-directed learning program different from, for example, an instructor-led program?

Developing a Learning Strategy

For any learning program, you need to know what success will look like at the very beginning—what do you want (and what do you want your learners) to accomplish? Understanding this will help you get there. But you also need to understand your audience and organizational goals and vision.

In his TD article, "Designing and Implementing a Learning Strategy Plan," Bruno Neal provides sage advice on ensuring that workplace learning is in line with organizational needs. These tips hold true, with some caveats, for self-directed learning initiatives. Developing a

learning strategy requires careful thought about your approach, implementation, learning, and adoption.

Approach. As with any other learning initiative, it is imperative to know and understand the audience. With self-directed learning, this will, of course, mean determining whether learners are curious, motivated, have time management skills, and can solve problems. Additional matters to consider:

- What technology best suits learners? Where do they turn if they're having difficulties with the tools during the learning program?
- Are learning sources available and reliable?
- Do you have subject matter experts who are willing to work within the confines of the self-directed learning system (once you've helped them understand it)?
- Will the C-suite buy in to the initiative? What learning and business objectives are needed for the organization?

Implementation. Deploy the learning strategy to include checkpoints for routine progress and testing. Align your approach to the learning and business outcomes, which may mean making changes based on the effectiveness of what is being learned and whether it ties successfully with business needs. Analyze your approach for parallel improvements across teams. Take these steps:

- Curate training materials and resources.
- Develop learning opportunities for online research, social media, on-the-job-training, and informal learning.
- Provide tools to managers to use as a basis for check-in meetings with direct reports while they take part in the learning program.
- Determine and implement tools for evaluation.
- Gain feedback on challenges and learning impact moments. For example, provide an opportunity for learner input after a lunch & learn or deploy a survey linked from a social learning platform.

Learning. Two types of learning should occur as part of a sound, strategy-based learning plan: organizational and personal. Organizational learning goes beyond meeting and exceeding budgets. Analyze this learning on the merit of company research trends, improvement cycles, stakeholder feedback, best practices, and benchmarking.

To assess the personal learning strategies, review survey data, manager and employee feedback, and the

Motivation for Self-Directed Learning

In their research paper, *A Review of the Motivation Theories in Learning*, Valarmathie Gopalan and colleagues write, "Motivation and learning process have a deep connection. Motivation is the core for human being's aspirations and achievements. ... In order to continuously achieve a high motivation is crucial."

They continue, "The working definition of motivation is a persuasive feeling that always provides positivism to students to accomplish a task or activity to the end and succeed in it no matter how hard and tough it is."

To that end, self-directed learners need curiosity. They also need the content to be relevant to them and their lives, and they need to have a sense of control, which is helped by determining their own goals.

Specific required competencies include a high level of willpower and engagement and self-efficacy. To be successful, self-directed learners need to have a growth mindset, switching—if need be—from fear of failure and trying to secure a grade or completion to learning from critique and pushing through challenges.

Closely related to that is the need for self-directed learners to be led by intrinsic motivation—that is, enjoying learning for the sake of learning—rather than by extrinsic motivation, or learning or doing something to gain approval.

impact on change and innovation with the employee's role. Determine the solutions for each strategy by analyzing the impact moments through the learning journey.

- As part of a strategic approach to your learning plan, you may need to make adjustments to the learning assets you provide, the initial conversations you have, and the tools you provide to managers as needed to meet learning goals and strategy.
- Share the refinements to the learning initiative with managers, employees, and other stakeholders.

► Train the Trainer

- Determine whether learners are able to access the resources you have provided. Are they comfortable with the technology? Are these additional resources pertinent and at the appropriate learning level (that is, a challenge but not too daunting)?
- Encourage change as needed.

Integration. Once you've identified the learning strategy's impact and made adjustments based on participant, manager, and leader feedback, develop a plan to make changes to your processes and systems and implement recommendations and action items. You can alter this plan as challenges surface, though you should use it as a steady guide for continuous improvement.

- Confirm that systems, solutions, and processes resonate with the end user and are compatible across company divisions.
- Double-check to make sure that L&D is in symphony with other processes, teams, and company goals.
- Determine whether there is room to expand the self-directed learning initiative.

Curating Content

Before implementing a self-directed learning program, determine whether you have resources available for learners, keeping in mind that these should be tied to organizational goals and in a format that learners can easily digest. You may decide, for example, to use engaging video and cutting-edge microlearning strategies for the self-directed learning, but if the content is lacking, there's only so much a beautifully crafted slide deck can assist you. Here is a quick guide to help you ensure content will resonate with learners.

Create the Experience

Think about the program's theme and how learners will respond to the learning experience. Make sure the content is relatable and personable for participants to adopt and apply. If not, learners will be frustrated and, especially at the onset of a self-directed learning program, will lose interest.

If you're using several different learning activities, stick with principles from other learning initiatives: Don't randomly stick data in your program; make the learning components purposeful additions that work together,

creating a holistic journey of discoveries. Storytelling is a great tool for self-directed learning, whether as part of an online learning module or instructor-led course.

Check Your Facts

Remember, you should be a reliable source for learners. While self-directed learners are responsible for critical thinking, you must still provide high-quality content that offers sound—not suggestable—information. You may also want to incorporate sourced data or statistics into other resources so that learners can further explore areas that interest them.

Have a Call to Action

To ensure learners are understanding the material along the way, build in call-to-action segments for participants to assess themselves. One form of this is a brief quiz at the end of a module to test learners' understanding of the subject matter. Be sure to consider additional resources you can provide learners if they are struggling.

Technology Is Your Friend

Graphics, audio, and other forms of media are a great way to keep learners engaged. Technology via microlearning is an effective learning approach for engagement, because it takes a large amount of information and decreases it into more sizable, digestible chunks of learning data. For self-directed learners who may only be able to carve out a few minutes for learning as part of their regular workday, these may be ideal development assets.

Be Concise

Get to the point and eliminate long, drawn-out series of useless information that may not pertain to learners. Successful self-directed learners seek out challenges, want to explore new content, and are motivated. These learners will stay engaged only when they are receiving information they need, as opposed to information that is nice to know.

Format

When designing for today's learners, numerous resources and formats are available, from microlearning assets to podcasts to social learning materials. Because of the

Establishing SMART Learning Goals

The SMART method is a great tool for identifying learning goals. Use it with individuals as you facilitate a self-directed learning initiative. You can use it to ask individuals to complete goals first and then discuss the goals with them; or you can walk through the steps together.



Specific	Measurable	Attainable	Relevant	Time-bound
Be clear and focused on what you want to do or learn. If the goals are too muddled, it will be hard to identify whether you've achieved them. What other resources, including other individuals, do you need to reach your goal?	What will success look like? What are the metrics? How much and how many, for example, will indicate you've realized your goal?	Your goal should be a stretch or a challenge, but it should be doable. To help the process, outline steps you will need to take to reach the goal.	Is the goal worthwhile? Is it aligned with your values and those of your organization? On the latter point, are you the best person to pursue this goal and attain this skill?	By what date do you plan to attain your goal? Look at the steps that you've listed in the attainable step and determine a schedule of when you will need to complete steps to meet the final deadline for your goal.

self-paced format of self-directed learning, many assets are available in online format. Some of these may be in the form of a digital library. As with curating content for learners for any reason, make sure that content is relevant, at the learners' level, and accessible given the technology learners use.

If you choose to incorporate an online course, keep these tips in mind for integrating for self-directed learning:

- Have participants assign completion dates for the learning modules.
- Incorporate flexibility for learners completing assignments.
- Let learners choose the course content and projects for their learning.
- Design an agile learning environment where learners can select which course modules to complete first based on their interest and preference, as well as how deep into the content they desire to go.

You also can provide the tools and resources so that self-directed learners can come together with others,

either virtually or in person. Learners can share resources and tips for staying on track and ask others for help.

L&D's Other Roles in Self-Directed Learning

In addition to assessing learners' readiness for self-directed learning, you can help facilitate learning in other ways. In their article, "How to Support Self-Directed Learning in a Learning Organization," Mirjam Neelen and Paul A. Kirschner offer ideas on how to support self-directed learning. Let's look at a few.

Get Employees on Board

Self-directed learners are typically motivated, want to learn, and have a desire to contribute to the organization. But they need to understand the organizational goals. Make sure you communicate these as part of the learning strategy.

Develop strategies and incorporate processes that support both employees and managers. For example,

provide tools to managers to help ensure that their direct reports' learning is front and center.

As part of conversations with the C-suite, ask about organizational goals and explain how you will ensure that employees will design their self-directed learning goals to be in line with the company's aims. Be a conduit between the C-suite and learners and ensure that organizational goals match learners' work-related tasks.

As an L&D professional, you are likely familiar with thinking on your feet and coming up with a plan B. Snags and shortcomings will be part of self-directed learning initiatives, just as with classroom courses and synchronous e-learning. Be prepared to identify learning opportunities when these shortcomings occur.

Finally, make sure that a manager's and employee's goals are challenging enough to increase performance impact. One option is to sit down with both the manager and direct report to have these conversations.

Create a Culture of Collaboration

Collaboration across teams is even more important today than in the past, given the fast pace of work and the need for innovation. As part of self-directed learners' goals, ensure that they interact with other departments or team members to create a culture of collaborative learning. You can, for example, build networking opportunities where employees can learn from one another to develop additional skill sets and exchange best practices.

Host lunch & learns with cross-departmental learning. Create platforms or cohorts that enable employees to share challenges to support or redistribute, if necessary, assigned projects. Set up a mentorship program and develop opportunities for job shadowing.

Hone learners' critical thinking skills so that they take into consideration varying perspectives and opinions. Pose thought-provoking questions that guide leaders to delve further.

Work with managers to ensure that there is time as well as safe spaces for learning to fully thrive and play out in the improvement of performance and processes.

Never stop supporting employees' learning goals. Their learning doesn't stop; neither should your guidance and support for their learning journey.

Sustain Employees

As part of a self-directed learning initiative, work with leaders and managers to ensure that employees have the resources, knowledge, and tools to go about their jobs successfully and also have time for their own development.

After the initial pilot program, increase learner participation by routinely evaluating employees' learning goals in organizational strategies. This will incentivize both leaders and learners to be advocates and, thus, expand the program.

Develop accountability checklists, which indicate behavior changes that learners will make post-training. Because learners are involved in identifying these behavior changes, they will have increased ownership. Learners can reference these checklists as needed throughout the program.

Further, consider accountability partners. As learners complete their training, providing a solid support system, such as other peers or their manager, will set learners up for the best outcome. You are an important facilitator of these relationships.

Examine employees' development by asking specific questions related to the learning outcome. Given self-directed learners' mindsets and capabilities, they will want to talk about what they are learning. This will increase their motivation and interest in greater development. Allow and encourage employees to stretch themselves by exploring further.

Develop a Culture of Continuous Learning

A culture of continuous learning requires business leaders' and participants' buy-in. Work to communicate that it is OK for employees to make errors and learn from them. As part of this culture, encourage learners to experiment and try new strategies. This also could include new strategies and processes that extend across other departments.

Design and curate resources in a universal location for employees and managers to access and gain information. These resources can include job aids, checklists, and templates, as well as videos, podcasts, and infographics.

Serve as an adviser by being available for learners and by having additional resources on general best practices for learning and studying.

Recognize that each employee will have an individual learning goal and developmental needs. So, guide employees in self-assessing themselves as well as among peers.

Design opportunities for constructive feedback among managers and employees or peer to peer. To make sure that learning is top of mind and ongoing, ensure that learners are regularly tracking their learning goals.

Develop accountability checklists, which indicate behavior changes that learners will make post-training.

Use Technology to Support the Learning Strategy

Through the process of a self-directed learning initiative, L&D professionals will have come to understand learners well. Customize learning tools such as webinars or learning management systems to meet learners' needs. No single technology or tool fits all, so do your homework to determine the best learning platform and tools for the learning goal and audience.

Design opportunities for learners to engage with the content and each other through wikis, the intranet, platforms such as Yammer, and creation of their own short videos or podcasts.

Consider whether initial training is needed to ensure learners are comfortable with the technology or platform.

But remember that there is no need to reinvent the wheel each time to provide learning content. Tap resources such as Google Docs, Webex, Adobe, and other content curation tools.

Keep Learners Engaged

You may, on the surface, understand the learners' needs and goals, but the activities, communication, and additional learning that occurs could make or break

a self-directed learning program. Engagement is the secret sauce that affects learners. This is even more true with self-directed learning, where regular work tasks may derail learning. Help learners fight through the many distractions they will face by providing content that resonates and is applicable to participants' learning goals.

Here are some strategies for maintaining high engagement. Incorporate one or several in your self-directed learning program:

- Provide reflecting checkpoints to discuss the impact of learners' work.
- Keep communication ongoing, as needed, and remain accessible to learners.
- Use a blended learning approach that will assist with the monotony of content delivery.
- Incorporate video, audio clips, or other technology-enabled resources as further stimulation for learners.
- Develop content that includes implementing interactivity through gamification; use technology to interface with the learners.

As schedules become busier for many, self-led learning offers a great option for participants to learn at their own discretion, pace, and time. But learners must make time and schedule regular learning.

Learner and Organizational Impact

L&D professionals know that if return on investment (both budgetary and time) is not evident, support for the program will diminish. Are learners' behaviors changing? Is there an impact on the bottom line? How is this measured and displayed on the job?

Learner Progress

When evaluating learner progress, incorporate a process for self-reflection and self-evaluation. Learners should be comfortable analyzing themselves and making adjustments to ensure they stay on the right path. Are modifications necessary for optimal learning impact?

In "Ten Ways to Measure Learning Impact," Ron Cowan suggests several ways to measure learning impact. Here are some of his tips.

Learning Report Card

Similar to report cards in school, a learning report card is a great tool for evaluating continuous learning in the workplace. Managers may add to it during weekly check-ins, or you could require learners to provide weekly, monthly, or quarterly updates toward learning objectives in the report card.

Such a system has many benefits. It enables you to gather data from participants' learning journey and use that as needed to track performance.

The information can be useful for performance management, enabling learners to communicate achievements, breakthroughs, and milestones. The information can support recommendations for additional learning that is necessary or that supports—and challenges—individual learning and engagement.

A report card is a concrete tool to keep learners and their managers engaged throughout the complete life cycle of the learning initiative. And finally, it provides a history of learners' development, which can be a determinant for a promotion or new role.

Learning Checkpoints

Integrating practices and skills checks will save you a great deal of time in having to guess what makes sense

next for learners. Checkpoints also enable managers to tackle learning challenges earlier instead of waiting until more time and money are invested.

Using a structured, on-the-job, self-directed learning approach with checkpoints for new skills is a sure way to keep managers and learners on target with the learning objective. Allowing learners to immerse themselves in real-world work in this way will provide them with direct access to the skills they need to improve. Further, learners who use their newfound skills and knowledge will continue to hone those skills and retain them.

Develop the criteria for the learning checkpoints. Identify and share these criteria at the onset of the learning activity to ensure that all parties involved are on the same page and that there's a clearly defined set of measurements for learners to work toward.

Scorecards

Unlike a learning report card, scorecards are much more intentional and strategic, because they include the organizational learning strategy to determine alignment with learners' goals. You can implement scorecard reviews quarterly, annually, or as needed to track progress.

Make sure self-directed learners have:

- developed strategic goals that match the overall department's or business unit's goals
- identified action steps to track program goals
- determined measurements, which can be as granular or large scale as needed.

Competency Impact Assessment

Establishing core competencies and skill sets provides learners with a clear goal to work toward. Competencies define the skills and knowledge required to drive change in business. Learners should make the necessary shifts in their behavior to successfully complete the expected knowledge, skills, and abilities required for mastery of job functions.

- Pre-assessments or questionnaires are a great way to identify learners' needs. You can measure the data derived from this research

Engagement Perks

Self-directed learning can help employees remain engaged in their work and workplace. And that's important for a several reasons:

- Organizations with engaged employees significantly outperform those that don't.
- Engaged departments receive higher customer ratings and increased sales.
- Engagement increases company loyalty.
- Employees who are engaged in their roles stay on the job longer on average than those who don't.
- Employees will generally work more hours and give additional discretionary effort if they're engaged.
- Overall work performance increases.

Cultivate Deep Thinkers

Critical thinking is a necessary skill for learners if they are to pursue self-directed learning; it is a foundational element to strategic learning.

In “How to Put Self-Directed Learning to Work in Your Classroom,” Lisa Petro writes that “being a critical thinker who is responsible for one’s own learning is so much more than asking questions.” Indeed, learners must understand whether the content is credible and relevant; they must be open to new sources of information and perspectives they may not have encountered before; and they must be self-aware.

As an L&D professional, you should understand the importance of asking questions of learners around these aspects to get them probing deeper into the content and their perspectives. To help learners do so, you may recommend writing in a journal, inner reflection and dialogue, consideration of alternatives, and visualization.

against the outlined competencies to determine where learners and managers should emphasize further development.

- Implement reporting systems to track performance data and integrate reporting tools in learning management systems for ease of measurement.

Dashboards

Increasingly, L&D professionals are using dashboards to show learning impact. No longer is this smile sheet data or the number of learners but rather metrics that show increased employee engagement, better customer service, and behavior change. Some of the previously outlined tools—such as competency impact statements and scorecards—can serve as data for dashboards that will speak to the C-suite about the effectiveness of the self-directed learning program.

Organizational Impact

Before launching a self-directed learning program, you may need to first gain leadership’s and participants’ buy-in. In an organization where some managers and leaders still consider learning to be a training course, this may entail outlining the benefits of self-directed learning. Leaders may doubt that individuals will be able to develop learning goals that align with organizational needs, so you will need to promote yourself as an adviser who will help guide learners.

Further, managers will need to allow direct reports time for learning, so in addition to you and other L&D

professionals, managers will need to check in with their staff on their progress.

Have initial conversations with the C-suite about implementing self-directed learning as a component of a larger development ecosystem and present data on the effectiveness of self-directed learning. In an increasingly data-oriented and ROI world, consider measuring systems for your initiative. As with any other development program, here are some points to remember:

- It takes time and resources to measure the impact of any L&D initiative. An ineffective self-directed learning program can be a costly expense for many companies to absorb. Starting small will help curtail expenses because you will have already made significant improvements before investing in a full-scale program.
- Determine whether the learning initiative is part of the organization’s core priorities. This information will provide insight into the importance of the learning goal and resources available.
- Find out how critical the initiative is to the organization’s success. The more important it is to the enterprise, the more important it is to know whether participants have learned and whether that learning has made an impact.
- If the skills participants are learning are narrow and change frequently, it may be difficult to establish a baseline for measurement and the data may not be relevant.
- Consider whether there are legal concerns about measuring the impact of the learning (such as

compliance issues) and whether self-directed learning is appropriate.

Further, here are some questions to consider:

- Are you measuring confidence, competence, or both?
- Do you have the infrastructure to provide the necessary data for measurement analysis?
- What do you plan to do with the information? Are you really going to use it?
- Will your organization's culture embrace the idea of any kind of measurement?
- What accountability is in place to ensure measurement and transfer of learning?

Implementation Benefits and Challenges

Implementing a self-directed learning program will mean a learning curve for employees and the L&D team. Be aware of benefits as well as potential challenges you'll face. Note: You may want to start small initially.

Advantages

There are great benefits in adapting a self-directed learning culture for many organizations. Apart from cost alone, which can snowball easily in the instructor-led setting, companies are seeing major shifts in employee performance, such as:

Increased relevance of content for learners.

When learners are their own resource, they focus on information that best relates to their needs.

This takes the guessing game out of the equation for L&D professionals.

Greater knowledge to provide updates.

Motivated learners are gems in the workplace. Providing them with the flexibility to chart their own learning path and own their training experiences could turn them into a tremendous resource for the organization.

Enhanced learning of specialized skills.

Individuals generally become eager at the thought of learning a new skill to add to their arsenal. Let them learn on their terms, and you have a win-win

Tips for Successful Project Management

Two of the common stumbling blocks with a self-directed learning program are time and learners' project management. Here are some tips and questions you can provide learners to help them.

- **Understand the project requirements.** What are you hoping to change or improve from the learning? Do you need buy-in from other individuals, such as your manager or senior leader?
- **Identify your support team.** Whom should you contact when issues arise, such as challenges you're unable to figure out on your own? The L&D professional or a mentor? Is there a cohort that is undertaking self-directed learning for the first time?
- **Prioritize your project based on time, effort, and associated costs, if any.** From a sequential standpoint, what is required now versus three months from now or longer? Are there steps or tasks you need to get started with now so that you can implement subsequent tasks on deadline? Are there portions of the project you are willing or able to do without if cost is prohibited?
- **List project milestones.** Break the project into steps or pieces. Celebrate when you have accomplished these.
- **Determine what resources will support you with your project.** From a technological standpoint, do you have the right software or mobile applications? If so, do you know how to use it? If the organization doesn't have the right technology, is there a budget to get it? Will you use a program management tool?
- **Provide an estimated calculation for completing the work.** Have you built in time for unforeseen circumstances? When calculating the required time, build in additional time to address these snags.
- **Define your quality performance standards.** Do you have reflection points to measure your performance through the project life cycle? What will success look like for the project overall?

situation. Learners don't have to wait until the beginning of the year when their department has training dollars to allocate to training programs. Instead, they can begin their learning immediately.

Less fuss with learning preferences. You can meet participants' specialized learning needs. Learners will gather and receive information based on their preferred formats, and they will have the opportunity to pursue methods that are in line with how they learn.

Potential Negatives

While self-directed learning provides many advantages, you may be concerned about losing control of what content learners are engaging with. You can mitigate these concerns by creating resources and curating materials that are in line with the organizational vision, needs, and mission.

As noted throughout this issue of *TD at Work*, learners must be motivated and have the self-discipline to undertake such an initiative. To help ensure success, you may want to begin small by helping individuals within your organization to work on their project management skills, time management capabilities, and sense of curiosity.

Further, a learning culture must exist within the organization, and this requires buy-in from leaders as well as managers' understanding of the importance and time requirements of self-directed learning. This may require you to hone your communication skills and ability to sell the C-suite on self-directed learning. Hint: To do so, you can go back to the advantages listed above, starting out with the cost savings.

Conclusion

Don't confuse self-directed learning with independent learning. While participants are doing most of the learning independently, trainers still have a vital role in guiding the learning experience and providing feedback.

Given society's lifestyle and technology changes that dictate the business functions in which we operate, self-directed learning is growing rapidly. Companies are doing more with less under strict time constraints and restricted budgets. Self-directed learning is a great alternative to

instructor-led training, which can become costly for both the organizations and independent learners.

Finally, self-directed learning offers the flexibility that many other traditional forms of learning and training do not have. Adult learners enjoy the opportunity of designing and structuring their learning at their own pace. Because learners assume the responsibility for their learning, they—in most cases—become intrinsically motivated to do the work. When provided the right tools and content, learners feel empowered, and this increases engagement and the overall learning experience.

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Self-Directed Learning Program Guidelines

Use these guidelines to start your self-directed learning program. Use the spaces to write notes or list pertinent information. Remember to start small, iterate, and improve. You can tweak these steps, as needed, based on your organization and learners.

Learner Readiness

- **Action:** Determine whether individuals are a good fit for a self-directed learning initiative.
 - **What you can do right away:** Create a questionnaire for the learner to complete. Tailor the questions around learner competencies and personality. Are learners curious? Do they have strong time and project management skills?
-
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Learning Objectives and Goal Setting

- **Action:** Identify the learning objectives and ensure that they align with the organizational goals.
 - **What you can do right away:** Actively involve leaders in the learning decisions to ensure employees understand their contributions. Add focus to the end results, and use business objectives to determine the priorities of the learning opportunities.
-
-

Active Participation and Engagement

- **Action:** Develop content that is personal to the learner, using a microlearning approach to break up interminable information.
 - **What you can do right away:** Show the meaning of the work that employees do and have a bottom-up strategy, not a top-down approach. For instance, employees in those support roles could provide tremendous insight into many business issues and offer better ways of completing certain processes.
-
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Learning Impact Evaluation

- **Action:** Using a learning strategy, create an evaluation process that allows for self-evaluation and self-reflection.
 - **What you can do right away:** Set learning targets throughout your program where users can test themselves as they go and focus on challenges that may arise, more swiftly.
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Learner Readiness Checklist

Use this checklist—or have the individual's manager complete this checklist—to evaluate a learner's readiness for self-directed learning.

Motivation

Has the learner demonstrated enthusiasm for the learning opportunity? ☐ Yes ☐ No

If no, ask the learner why they want to attend your training. Could it be a requirement for work or independent professional development? Find the stimulant.

Is the learner self-motivated? ☐ Yes ☐ No

The learner must take ownership and carry out program requirements. Someone who is not a self-starter or resourceful will struggle.

Is the learner resourceful in problem solving? ☐ Yes ☐ No

Without much guidance, the learner is forced to tackle their own issues that may arise.

Does the learner show a high commitment level for the program? ☐ Yes ☐ No

The learner must be completely committed to their learning. Determine the learner's level of commitment at the onset of the program.

Communication

Is the learner responsive? Does the learner possess a communication method for updating you on progress as needed (including receiving and responding to emails)? ☐ Yes ☐ No

Whether you incorporate learning checkpoints or want to share updates, having a solid communication process in place will make for an optimal learning experience for all parties (employee, manager, L&D, etc.).

Will the learner enlist your help as needed to ensure successful program completion? ☐ Yes ☐ No

The learner should be able to contact you should they need help. However, they should take the initiative in reaching out.

Does the learner possess effective writing or verbal skills, or are there any language barriers where interpretation or translation may be needed? ☐ Yes ☐ No

Once a communication method has been established, explain the process or schedule the touchpoints for that communication to occur. It is up to the learner to ensure that they meet the requirements and can articulate in writing or verbally their status as needed.

Does the learner have access to a computer, mobile device, or other technology to communicate? ☐ Yes ☐ No

If a computer or mobile device is needed for the program delivery or conferencing, the learner should be aware of this early on to prepare for this. This is particularly critical for virtual program deliveries or mobile learning.

Learner Competency

Is the subject matter introduced on the learner's level of knowledge, skills, and abilities? ☐ Yes ☐ No

Understand the learner's competency level to design a learning experience that is effective and engaging.

Is there additional prework material that you should give to the learner as a segue into the program? ☐ Yes ☐ No

Some learners require prior content knowledge before performing a program. You cannot teach someone how to change a light bulb if they do not know what a light bulb is. Assess the learner to aid in developing the best learning experience tailored to them.

Is the learner comfortable with using the required technology? ☐ Yes ☐ No

If no, you may need to rework your learning approach. If your learner is not comfortable with downloading apps or performing online searches, this could become a problem in keeping them engaged throughout the program.

Do the learner's training goals align with the program? ☐ Yes ☐ No

After you have determined the learner's need, examine the program to see if it aligns with that need. The learner will achieve the most success when the learning environment is comfortable, familiar, and applicable.

Grow Leaders With a Virtual Development Program



GROW LEADERS WITH A VIRTUAL DEVELOPMENT PROGRAM

AUTHORS

Lindsay Fletcher

Lindsay Fletcher, CPTD, is an L&D director with experience in the travel, hospitality, and insurance industries. In his current role as head of global L&D at Allianz Global Corporate & Specialty, he is responsible for learning and talent strategies, with a focus on strategic capability building. He also serves as president of the Association for Talent Development's New York City Chapter.

Gerhard Redelinghuys

Gerhard Redelinghuys is a talent development professional and certified executive coach with more than 13 years of experience in L&D. In his current role, he heads up a regional talent development function for a global lifestyle concierge company and drives its global internal communication strategy.

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**Content Manager,
Instructional Design**
Eliza Blanchard, APTD

Editor, *TD at Work*
Patty Gaul

Managing Editor
Joy Metcalf

Senior Graphic Designer
Shirley E.M. Raybuck

Conventional approaches to leadership development often emphasize the importance of the traditional classroom. They claim that the innately social nature of an in-person, face-to-face environment is essential for developing people skills around subjects such as emotional intelligence, interpersonal relationships, motivation, and engagement. Those assertions, however, ignore the fact that with globalization, remote workforces, and the rapid evolution of communication technologies, the work environment is no longer what it used to be.

Today, leaders—whether seasoned executives or first-time managers—need to be effective at guiding dispersed teams. That means applying leadership principles to what is often a virtual work environment, where tools such as email, instant messaging, and virtual meeting software have become the primary modes of communication. In this new environment, leaders require a new

set of abilities, including team building, relationship building, leading meetings, and managing a team you can't see.

That's where a carefully crafted virtual leadership program, built to match your company's typical working environment, can help. It can be not only an effective tool but a more powerful method for developing leaders than traditional face-to-face approaches. And by *leaders* we don't mean only the individuals at the top of the organizational chart. Rather, we are referring to all employees—those aspiring to be better managers, those who are currently leaders, and even individual contributors who are leading in their own ways without the title.

In this issue of *TD at Work*, we'll help you identify whether a virtual leadership program is right for your organization and, if so, enable you to design a customized program that has real business impact. We'll look at:

- Understanding your organization's environment and identifying business needs
- Designing and curating program content to bring it to life with the right modalities
- Marketing and launching the program
- Tracking and evaluating success

No matter what environment your business operates in, learning technologies are critical to your program's success. They enable you to put the ownership of leadership development in your participants' hands and help nurture a culture of continuous learning across your organization.

Organizational Environment

Before you can even begin to put pen to paper to design a virtual leadership development program, you need to identify the environment and your audience as well as business needs. Participants' location and the type of work they perform will determine which learning modalities you select and the content you develop.

It's important to design a program that meets your organization's setup. If leadership is dispersed across multiple offices, with few opportunities to come together, a purely virtual program may be just what you need. If, however, you have a majority of leaders in one location, it may make sense to incorporate face-to-face options in a

blended approach. We will explore how to select modalities later in the issue. For now, consider these questions as a starting point:

- How many employees are in the organization?
- Who is your target leadership population: Aspiring, first-time, or senior leaders? A combination of all leaders?
- Which countries are learners based in?
- What languages do the leaders speak? Is an English-only program viable?
- How many time zones does the company operate in?
- Across how many office locations are employees located?
- Are learners deskbound or mobile?
- Do learners control their own time, or will they need scheduled training?

Leadership Development at Ten Lifestyle Group

Ten Lifestyle Group is a global travel and lifestyle concierge company, serving millions of members worldwide from its 22 offices. After its initial public offering, the company launched a corporate academy with a focus on strategic capability building and leadership development.

As a company undergoing rapid growth with many managers moving into leadership roles for the first time, we identified the need to support our first-level and aspiring leaders with the tools they need to take on increasing levels of responsibility. With more than 100 managers based in offices all over the world, developing a virtual program was a must if we were to meet our objective of offering democratized leadership development to all who needed and wanted it.

By leveraging virtual classroom technology, encouraging self-directed learning, and giving learners the opportunity to experiment with their learnings on the job, we were able to develop a program that met our objectives of being “truly global,” “tailored and flexible,” and “designed for impact.” The program was split into the three subsections of “leading myself,” “leading others,” and “leading for results,” with three main topic areas identified under each (such as time and priority mastery and leader as coach).

Using a pull learning approach, participants managed their own learning journey through to graduation, attending sessions and accessing resources that most resonated with their individual needs.

In year one of the program, we had 172 unique participants from 21 of our 22 global offices, with all business departments represented. Our first batch of graduates came from Cape Town, South Africa; London, England; San Francisco, California; Bogota, Colombia; Mexico City, Mexico; and São Paulo, Brazil. Graduates were in roles as junior as team managers of our frontline customer service teams learning to lead for the first time, and as senior as global heads of departments looking to brush up on their skills and share their experiences with their colleagues.

Research

Now consider why you need to design a leadership development program in the first place. What knowledge or skills gaps exist? Are there other gaps, such as motives, physical resources, structure and process, or information? Is there a desired performance state where you'd like all leaders?

Remember that an individual may not be performing as needed not because they lack knowledge or skills but rather because they don't have managerial support, there is an organizational culture issue, or they do not have the opportunity to practice a new skill. For example, an employee attends a training course and is excited about practicing the new skill he has learned. But when he gets into his daily workflow, he realizes that isn't the way the company operates, and he resumes his previous ways of working.

A training program can help resolve a knowledge gap, but other gaps require different solutions. Identify the desired performance state and leaders' actual performance state to understand the gap between them. Only then can you begin to identify appropriate solutions and build a program designed for business impact.

When carrying out a performance gap analysis, first complete a business analysis. Understanding the internal and external forces that affect your organization and

taking a deep dive into your company's mission, values, and goals for the upcoming quarter and year are essential. Doing so enables you to upskill leaders in the context of achieving desired business outcomes. That is what will set your program apart from off-the-shelf courses that, while valuable, provide a more generic experience.

Stakeholders

Identify the individuals who can provide you with the data you need to understand the business goals and make informed decisions about the program's desired outcomes. That will depend on the size of your company and the seniority of the leadership population you are targeting. If you are designing a program for a relatively small organization, you may start with the C-suite to determine the goals. If you work for a larger organization, it may make more sense to start with department or functional heads.

In addition, determine the skills required to achieve the business goals or desired outcomes, and ascertain leaders' current skill levels. In addition to C-suite and functional heads, speak with the direct managers of your target leaders, or if you work in a matrixed management organization, speak with the dotted-line managers.

Finally, don't overlook the program participants. To design a program that employees will find valuable and want to take part in, you must understand the challenges leaders face daily. That information will enable you to incorporate the support and development the leaders require for success in their roles and career development.

Tools

You can choose from many tools to support your gap analysis.

Interviews provide the most detailed information and allow for follow-up questions. Build an interview protocol checklist to ensure a consistent data-gathering approach. Interviews provide subjective and perceptive data, so be careful to document the actual responses and not your interpretations. Interviews are essential for gaining insight from senior management.

Focus groups enable you to gather data similar to that from interviews but from a larger population, saving you time and increasing your diversity of participants

and responses. In focus groups, participants can interact and add to each other's responses. However, often there is a tendency for one participant to dominate the discussion. Design a structured protocol and carefully facilitate the focus groups to ensure you hear from everyone.

Questionnaires enable you to gather quantitative and qualitative data. Their primary advantage is that they offer you the ability to scale your needs analysis and gather data from a large employee population. They are inexpensive and provide quick results, which you can easily tally to achieve quantitative data to steer the program design. Questionnaires are a great tool for gaining insight from both managers and future program participants and provide an excellent opportunity for you to gain buy-in.

Questions

The insights you generate from this research phase will directly influence the program's focus areas. As such, you need to ask the right questions. For example:

- What does the organization do well that leaders should replicate?
- Think of a person who epitomizes a great leader—how do they perform? What makes them successful? What can others learn from them?
- What would you change about managers' actions and behaviors and why?
- Once a leader graduates from this program, what behavior changes would you like to see?
- What are the essential skills each leader in the company should have to be able to thrive?

Approach

Next, decide your starting point: interviews or questionnaires. There is no correct approach here. Rather, the deciding factor is how well you know the organization and what existing data you already have. Conventional wisdom may suggest that you first distribute questionnaires and then use interviews to clarify and build upon the responses you receive. However, that may lead you to include details of potential leadership development topics or programmatic design elements, introducing significant bias into the questionnaires.

Starting with interviews and focus groups could help you first hear directly from the leadership team and then

build a neutral survey that you extend to a broader group of participants. You can always schedule additional interviews as needed following your survey analysis.

Remember: It's all about the details. Ascertain exactly which behaviors, skills, traits, and attitudes make a great leader at the organization. Identify what leaders need to be able to do to enhance their impact on the business.

SWOT Analysis

To deepen your understanding of the internal and external business environment, consider creating a SWOT analysis. Exploring the organization's strengths, weaknesses, opportunities, and threats will help you to gain a better understanding of a multitude of factors that will influence your program's design and strategic positioning. See Figure 1 for the SWOT analysis that served as the starting point for our program content at Ten Lifestyle Group.

Content Design and Curation

Because both the organization and participants will invest a significant amount of time in the leadership development program, you must deliver a clear return on investment. Use Kirkpatrick's new world approach to training evaluation—the return on expectations (ROE) approach—to ensure the program is valuable. Use the Results-Focused Program Design Template at the end of this issue to plan your design.

The ROE model is superior to the traditional ROI model, which places emphasis on financial or numerical measurements of return, because it involves close collaboration with stakeholders to set expectations around the value your program should bring in a broader context. Then you can evaluate the program based on the extent to which it meets those expectations. To design a program that delivers ROE, identify the measurements you will use to evaluate success and then build valid, reliable evaluation tools during the design stage.

The Kirkpatrick ROE process starts with the end in mind. Ask these questions:

- What are the program's main goals: Do you want to drive succession conversion? Are you aiming to reduce attrition? Is your focus on strategic capability building and closing skills gaps?

Figure 1. SWOT Analysis at Ten Lifestyle Group

To gain a better sense of our organization and what development opportunities our learners needed, we conducted a SWOT (strengths, weaknesses, opportunities, threats) analysis that explored internal and external possibilities and risks.

Strengths • Strongest mid- and senior-level leadership teams to date • New technologies driving peak performance • Talent development team expanded to all regions	Weaknesses • Lack of knowledge of products and commercials across the business • Growth of account portfolios happening too slowly • Many leaders lack core skill sets to effectively prioritize, motivate their teams, and use data to drive performance
Opportunities • Take advantage of our global setup to beat our competition. • Develop a global leadership team with a united vision and strategy. • Share regional L&D resources to design and deliver global programs.	Threats • Lack of clear talent pipeline for succession and growth • Overlooked opportunities to drive peak performance • New competition appearing in the digital concierge space

- How should leaders think, behave, and act after the program?
- What evidence do you expect to see in the business as a result of the leadership transformation that takes place?

Answering those questions will enable you to design a program that focuses on the themes that you identified via the gap and SWOT analyses and target specific performance outcomes that will affect the company's bottom-line business results.

Analysis Revelations

At Ten Lifestyle Group, our gap and SWOT analyses revealed useful information that helped us understand where the program could have the most impact. First, we found that our mid- and senior-level managers were the strongest leaders in our business. However, a recent round of promotions had resulted in many first-level managers taking on people leadership roles for the first time.

Frontline supervisors played important roles as coaches, developers, and managers of multigenerational, dispersed work teams, but they were lacking the skills and knowledge required to successfully carry out those different roles.

We also found that the business was missing a clear talent pipeline and had gaps in succession plans. We needed to upskill this group of first-level leaders not only to cultivate a learning culture and an engaged workforce but also to grow those individuals into future positions of greater responsibility in the leadership pipeline. We made the informed decision to target the leadership development program to first-level managers, with a broad range of learning resources to support their development into well-rounded leaders.

Determine whether the same is true for your company. Will you target first-level leaders, or do you see gaps at more senior positions of the talent pipeline? In the long run, you may need to develop more than one program to meet your talent development needs.

Select Themes and Subcategories

To determine what content you will include in your program, list all the topics you have identified as part of your business needs analysis. If you haven't already, group those topics by theme, limiting them to no more than four

sections. A clear structure makes it easy to understand and sell the themes to stakeholders.

There are endless ways you can structure your program—be creative. Considering the individual, team, and business lens is an effective method for designing any type of leadership program because it looks at the knowledge and skills individuals must acquire to successfully manage themselves, lead others, and achieve business results. Leadership in the information era requires managers to combine interpersonal skills with professional expertise. By developing capabilities in each of those areas, leaders are setting themselves up to be strong partners to both the business and the teams they lead.

Next, break down the main themes into subcategories based on the top skills you identified during the needs analysis. From there, develop individual modules, structuring your program into bite-size modules that participants can complete over time. Doing so makes your program more manageable for participants and enables them to learn and practice new skills before moving on to more.

Through this approach, you will develop an outline for a potential course catalog. In today's fast-paced world, be agile and understand that your subcategories and modules may change as business needs change. Be open to trying things out, seeing what works and what doesn't, and using feedback you collect from participants and the wider business to make changes to your program offerings. See the sample course catalog at the end of this issue for the full scope.

Leadership Program Themes

At Ten Lifestyle Group, we chose to categorize the program's knowledge and skills into three main sections for maximum leadership effectiveness.

Leading myself. The first theme is the individual leadership lens, where we look at skills, knowledge, and tools that will equip an individual to be a more effective leader. The focus is the self and giving participants ample opportunities to reflect inwardly and get in touch with their leadership identity.

Leading others. Next, we look through the team leadership lens. Here we explore skills, tools, and experiences to equip participants with relevant team leadership and

interpersonal capabilities. It's about understanding how others think and act, adapting participants' leadership style for greater influence.

Leading for results. Finally, we look through the lens of leading with business results in mind. Leaders need to understand how the business works and have clarity on its people and customers and what drives revenue generation. Leaders also need skills that enable them to build and execute successful business strategies.

See Figure 2 for the visual representation of our content structure. Notice four essential supporting mechanisms are around the edge of the circle. Those mechanisms enable continuous learning outside the virtual classroom environment.

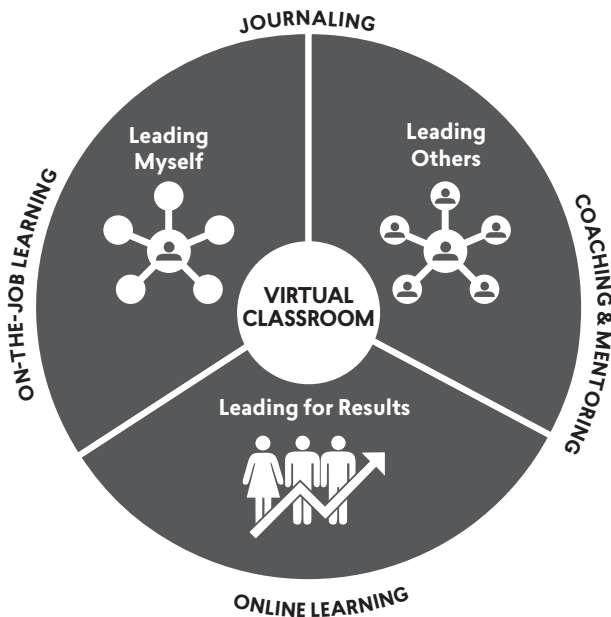
We used our analyses to home in on core skill sets for effective prioritization, managers' ability to motivate their teams, and how managers could use data to drive performance. After examining employee engagement surveys, we found that employees didn't believe their leaders offered a clear vision of the company direction for the coming year. We then broke down the program into nine subcategories, which each had individual modules. For example, under Leading Myself, we had a subcategory of time and priority mastery, with individual modules that focused on participants' attitude toward time, using Microsoft Outlook to maximize the day, and turning ideas into action.

Bring the Program to Life

As noted earlier, companies are shifting to on-demand learning at the point of need. When developing your program, design learning offerings that will enable leaders to continue developing beyond the traditional classroom environment. While virtual classroom delivery can certainly influence your program design, recognize that formal education accounts for only about 10 percent of what individuals learn, with exposure and experience making up the remaining 90 percent.

It is also worth thinking about a move away from the traditional push approach, where participants must complete modules. Many organizations make the mistake of

Figure 2. Ten Lifestyle Group Leadership Program Model



rolling out mandatory fixed curriculums for all leaders. That can result in exciting leadership development initiatives that individuals incorrectly perceive as compliance training. To avoid that, shift to a pull approach, where learners can pick and choose what they need and want to learn for themselves. That is a great way to empower leaders to take ownership of their own development and create a culture of continuous learning in the organization.

Further, your leaders likely don't have the time to be away from work for days to learn. If you want your program to be truly flexible and scalable, select learning formats that meet employees' and the company's needs. How many live virtual classes will you offer each month and in which time zones? Can you make recordings available to leaders? Will you design e-learning versions of modules that are available for participants to study at their own pace?

There are no wrong or right answers to those questions so long as your learning offerings are available in

formats that make most sense for your audience. And there are countless mechanisms you can leverage to support learning through the 70-20-10 model (experience, interaction, and education).

Experience Modalities

As the Center for Creative Leadership explains, "To adapt and grow, leaders need to be constantly involved in new experiences and challenges that foster learning. Some of these new opportunities will come their way through new jobs, crises, or significant challenges." Dedicate 70 percent of the program for participants to learn via experience. Experience modalities often include stretch assignments, new projects, or related work.

Reflection and Personal Development

At Ten Lifestyle Group, we used two types of experience assignments: reflective essays and personal development projects.

For the reflective essay, we encouraged each participant to maintain a journal throughout the program. We incorporated a journaling question into each module and asked participants to reflect on those questions. At the end of the program, they used their journal reflections as the source for crafting a leadership essay that detailed their leadership transformation journey. Those essays served as a final program deliverable and a measurement tool for us to see the business impact.

Consider offering participants an essay template that outlines a structure with a particular focus around business impact. That will help guide their thinking and lead them to well-rounded essays that detail not only what they learned but also how they have applied that learning to their work.

The personal development projects required participants to apply their learnings in the business environment. We asked learners to choose a project related to personal development needs versus business problems. For example, if a participant struggled with presentation skills and leadership presence, they could take on a development project of presenting on behalf of the company at an industry conference.

► Train the Trainer

Participants presented on their project and demonstrated the clear links between their leadership development journey and the project's outcomes. Participants' projects served as a key tool to measure our leadership program's business impact.

To ensure that the personal development project presentations are consistent and well-rounded, suggest participants use a presentation agenda covering no more than three sections, such as how they identified the project, the project's effect on the business, and how participation in the leadership development program shaped their ability to lead the project.

Interactive Modalities

Incorporate modalities that provide participants with 20 percent of learning that occurs through interactions with others.

Coaching, according to the Association for Talent Development's Talent Development Capability Model, helps individuals or teams "identify goals, develop realistic action plans, seek development opportunities, and monitor progress and accountability." Encourage participants to experience the benefits of coaching, either testing their own ability to coach someone else or having a business coach guide them.

Incorporate in your program a session that introduces coaching and ensures that future leaders are clear on the differences between coaching, mentoring, and training. That will add a new skill to participants' leadership toolkit.

Mentoring is a reciprocal and collaborative at-will relationship that most often occurs between a senior employee and junior employee for the purpose of the mentee's growth, learning, and career development. Offer participants the opportunity to explore the power of mentoring others or being mentored by another. Their choice is dependent on what is most relevant to them.

Education Modalities

Education—or 10 percent of the learning—could include virtual and self-directed modalities.

Virtual classroom experiences should ideally be one to two hours hosted via a virtual meeting tool. Because

classes are the same length as many meetings, it's easier to schedule and more feasible for participants to make time to attend.

Self-directed learning includes participants knowing what they need to learn and how to learn it as well as them being able to judge whether they have learned it. As Sofie Loyens, director of the Roosevelt Center for Excellence in Education, and her colleagues explain, it assumes that learners have a role in selecting learning tasks that fit their needs. Encourage participants to explore learning resources such as YouTube videos, articles, podcasts, and books that are relevant to their individual learning needs.

Map and Track

As you design your program, identify ways to monitor participants' progress through it. Because your program consists of different types of learning, you can't simply take attendance. Consider your options for tracking participants' progress.

Credit tracking. Use a credit tracking model that assigns a value to each learning component and ensures that participants know where and how to monitor their progress. For example, your program may have five components, each of which participants need to complete in a specific order. To avoid participants completing the on-the-job-learning components, for example, before they complete the formal education elements, assign a credit value to each. Then require participants to earn a certain number of credits before they can progress to the next stage of the program. Figure 3 provides an example of how to assign credits to programmatic elements.

Journey map. Outline the leadership development program steps, including how participants start and end. The map may, for example, outline classroom modules (along with their point value) in each of the main themes. Along the way, participants earn credits as they take part in self-directed learning, participate in coaching, and complete their experiential learning project, all to reach the end of the program.

Learning management system. If possible, use an LMS to track participants' progression through the

program. Every system differs in functionality, but many systems enable users to upload documents, set up virtual events, and have participants complete surveys. Many also offer a variety of administrative tools. An LMS can make it easy for participants to access a single portal to sign up for classes, access additional learning resources, and track their progress. Also set up alerts for when employees achieve a certain number of credits. That will enable you to guide and encourage them to move onto the next stage in your program toward completion.

Marketing

To achieve desired participation, develop a solid marketing plan. Share key messages with participants, such as what the program is about, where and how participants sign up, and who is eligible to participate. Follow these essential five steps to successfully market your program.

Engage senior leadership. Start at the top with active involvement from your CEO and other senior leaders. The C-suite sets the tone for what's important in your organization and can serve as an invaluable resource for promoting the importance of leadership development and lifelong learning.

Promote the pull strategy. If, as recommended earlier, you implement a pull strategy, where individuals can pick and choose the learning elements they participate in, then design your marketing materials to draw their interest by demonstrating how your program will help them meet their career goals and individual development needs.

Advertise on multiple communications channels. Different employees will engage with different modes of communication. To reach the widest audience, take advantage of all options available across your organization, such as the intranet, town halls, email, printed posters in break rooms (if applicable), and internal social networks.

Host introductory webinars. Hold “Welcome to the Program” virtual sessions where you share program details, with an emphasis on the *what's in it for me* for participants. This is a great opportunity to give attendees a taste of what's available and how your program will support their career development. It's also an opportunity to answer questions.

Celebrate learning and reward participation. Pull strategies for learning programs have the advantage of encouraging a culture where employees take ownership of their own development. To develop a culture of continuous learning and ensure leaders keep coming

Figure 3. Sample Credit Tracking Model

This is one example of ways to assign credits to learning components.

	Learning Component	Credit Value (1,000 Credits to Graduate)	Tracking Mechanism
70 (Experience)	• Learnings captured in a reflective leadership essay • Business impact demonstrated in the form of a personal development project	Project: 400 Essay: 300	Submit PDF of essay and slides via the learning management system to earn the credits.
20 (Exposure)	• Coaching • Mentoring • Live group chats via platforms such as Microsoft Teams	Coaching and/or mentoring: 200	Track four coaching and/or mentoring sessions in the LMS.
10 (Education)	• Virtual classroom experiences • Self-directed learning	Virtual classroom: 80 Self directed: 20	Attend at least 10 classroom modules (8 credits per module), and submit 10 instances of self-directed learning via the LMS (2 credits per instance).

back for more, show the value your organization places on learning. Explore what nonfinancial rewards you could offer participants to help spark a sense of joy in small achievements. For example, LinkedIn badges are an alternative to traditional certificates. They enable employees to show off their achievements online and can even serve to attract external talent to the organization by promoting the development opportunities available to employees.

Additionally, to promote the program, create a newsletter that provides an overview of the program and instructions on how to enroll in sessions. Think about translating the newsletter to be inclusive of all languages within the company. If your budget allows, provide each participant with some branded swag, such as an embossed journal with the program's logo so participants can take notes and reflect on their leadership journey throughout the program.

And remember, you don't have to do this all alone. Get the marketing and communication teams involved to support your efforts to launch the program.

Evaluate Success

Celebrating participants' program completion is a milestone, but that doesn't mean your work is done. Now it's time to demonstrate the impact your program has had on the business, evaluate what changes and enhancements you need to make, and secure investment for the program's future.

Previously we discussed the ROE approach in relation to your program design. Begin to measure programmatic success and then report on the extent to which your program is meeting its goals. Keep senior stakeholders up to date, so consider the best communication methods to report on the program's outcomes. For example, can you join monthly board meetings? Would a quarterly report suffice? Engage with the leadership team to understand the best reporting cadence.

Here are some ways to measure the program's impact:

- **Net Promoter Score and learning gain.** There are numerous Level 1 statistics you can report on to show learner reaction to your program, but Net Promoter Score and learning gain are two we recommend

Celebrate Achievements

Once participants have successfully completed all elements of the program, schedule a virtual celebration or graduation. Invite senior stakeholders, key members of the organization's leadership team, and one or more C-suite executives, if possible. Create a fun-filled celebration that acknowledges the participants' hard work and personal growth as well as the business impact they've made

This is a great opportunity to celebrate people development and further your company's efforts to develop a culture of lifelong learning. If you have a budget, offer surprise awards to demonstrate the value the company places on L&D.

considering for your smile sheets. You can use a survey tool after each virtual session to collect and track those measures.

- **Reflective leadership essays and personal development projects.** As noted earlier, these are two great ways to measure the program and gather qualitative data about it.
- **Anecdotal feedback.** In addition to the feedback you gather from participants after each module, survey and interview them after their completion of the program.
- **Business results.** Don't forget to report on how your program has affected or influenced bottom-line business results. What objectives did you set out to achieve in the design stage? Has succession conversion improved? Did you reduce attrition? Was your program successful in closing critical skills gaps?

Take the time to review the level of success you've achieved and share that with the business. Don't be afraid to reflect on what didn't go as planned and how that will influence your plans for future program enhancements.

Ten Lifestyle Group Success Measures

For our Level 1 evaluation, we sent a short survey to participants after every live virtual classroom model. We chose Net Promoter Score as one of our core measures because it was a metric our business already used to

measure customer satisfaction and one that our employees understood well. It provided a direct comparison to our customer experience scores and served as a baseline number we could use to compare our different modules and understand which had the most impact.

We also leveraged the results of our learning gain question, where participants rated their knowledge on a scale of 1–4 before and after each training module. While not a true Level 3 behavior measurement, it enabled us to understand how successful we were in meeting participants' needs and helping them close their knowledge and skills gaps. It also enabled us to revisit and revamp modules that had a lower learning gain result.

We also included a journaling question with each module for participants to reflect on. To complete the program, participants had to submit a 2,000-word essay on their leadership journey throughout the program. They were also required to complete a personal development project that challenged them to develop their skill sets based on individual needs. At the end of the program, they presented the results of their project to a panel comprised of their manager, senior leaders, and one or more board members.

The essay and project encouraged development by pushing participants outside of their comfort zones and requiring them to reflect on their development journey every step of the way. It also served as an invaluable resource for us to gather qualitative data that helped us report on the program's impact.

Finally, the anecdotal feedback we collected proved powerful in securing future investment for the program's continuation.

the company, and ensure you do not simply attempt to deliver your existing programs in an online environment.

Every organization is set up differently and has its own unique set of needs and requirements. There is no one-size-fits-all approach to leadership development, and the current state of your business and the results you seek to achieve will largely influence the design approach you take.

Building an effective virtual leadership program means putting in the effort to design the learner experience from the ground up, with specific business outcomes in mind. That can include anytime-anywhere access to learning resources, as well as the opportunity to bring dispersed leaders from across your company together on a regular basis. With a program designed with proper thought, you'll be able to offer your leaders an innovative experience that encourages them to take ownership of their own development and supports a culture of lifelong learning across the organization.

Conclusion

Learning technologies play an increasingly key role in learning program design, and the virtual classroom environment can be just as effective as traditional in-person venues in many instances. If you decide a virtual program is right for your organization, consider which of the concepts in this issue of *TD at Work* are right for

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Results-Focused Program Design Template

You may be familiar with Kirkpatrick's four levels of evaluation, but you may not be using the model effectively to design your program. Use this table of sample questions, possible metrics, and example measurement tools to design a program to achieve business results.

Example

Kirkpatrick's Level	Question to Consider	Possible Metrics	Example Measurement Tools
Level 4, Results	How will you prove that the program has made an impact on the business?	• Revenue generated • Cost savings • Improved employee engagement • Improved key performance indicators • Staff retention • Succession conversion	• Personal development project • Business performance reports • Employee satisfaction survey
Level 3, Behavior	How will you know that a participant's behavior has changed and that they have applied what they have learned?	• Time management • Engagement • Productivity • Morale • Motivation	• Reflective essay • 360-degree reviews • Interviews with participant's managers and peers
Level 2, Learning	At which stages of the program do you need to assess whether participants have retained and understood the program's content?	• Knowledge retention • Skills demonstration	• Homework assignment • Knowledge checks • Quizzes • Formal tests • Live application and feedback
Level 1, Reaction	What is a participant's immediate reaction to the program in general or to the specific course?	• Learning gain (before versus after) • Reaction to content • Reaction to facilitator • Ease of using the learning platform • Engagement during the session	• Course Net Promoter Score • Postcourse survey • Informal, anecdotal feedback

Results-Focused Program Design Template (Cont.)

Template

Kirkpatrick's Level	Question to Consider	Possible Metrics	Example Measurement Tools
Level 4, Results	How will you prove that the program has made an impact on the business?	• • •	• • •
Level 3, Behavior	How will you know that a participant's behavior has changed and that they have applied what they have learned?	• • •	• • •
Level 2, Learning	At which stages of the program do you need to assess whether participants have retained and understood the program's content?	• • •	• • •
Level 1, Reaction	What is a participant's immediate reaction to the program in general or to the specific course?	• • •	• • •

Course Catalog Template

Use this template to create your leadership program course catalog. After you have completed your analysis and developed main categories, break down the three main categories into nine subcategories. Enter the name of each subcategory's module.

Example

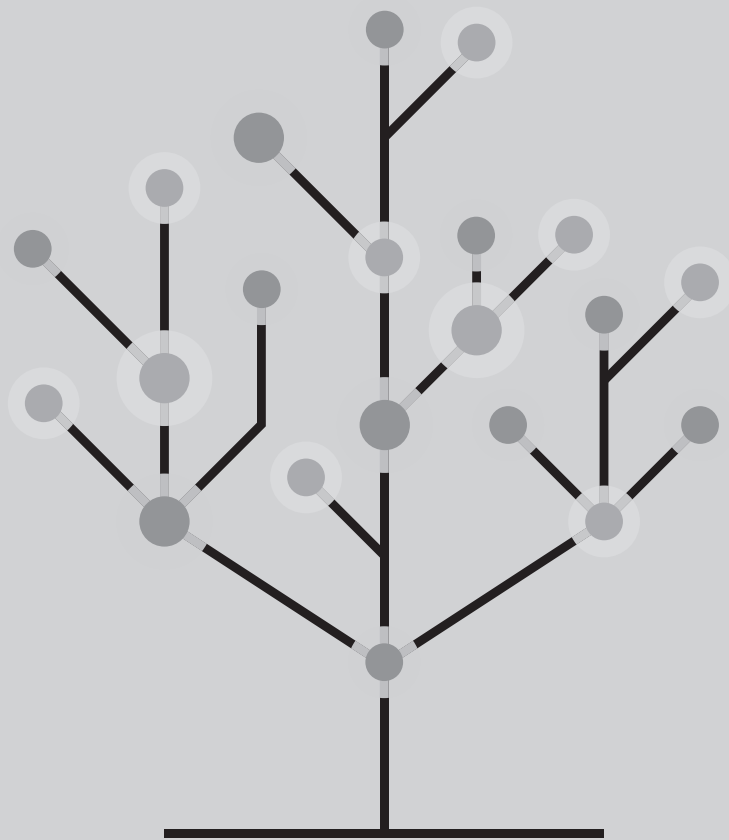
Category	Subcategory	Module
Leading Myself	Time and Priority Mastery	My Attitude Toward Time Using MS Outlook to Maximize My Day Turning Ideas Into Action
	Subcategory 2	Module 1 Module 2 Module 3
	Subcategory 3	Module 1 Module 2 Module 3
Leading Others	Leading Through Effective Communication	Presenting With Impact Leading an Effective Meeting Brave Conversations
	Subcategory 2	Module 1 Module 2 Module 3
	Subcategory 3	Module 1 Module 2 Module 3
Leading for Results	Gearing Up for Success	Developing a Vision and Executing a Strategy Project Management Essentials Becoming a Skilled Negotiator
	Subcategory 2	Module 1 Module 2 Module 3
	Subcategory 3	Module 1 Module 2 Module 3

Course Catalog Template (Cont.)

Template

Category	Subcategory	Module

5 Models for Data-Driven Learning



5 MODELS FOR DATA-DRIVEN LEARNING

AUTHOR

Kristin Torrence

Kristin Torrence is the head of learning engineering at Talespin, where she focuses on applying learning sciences, instructional design, and data science practices to design, instrument, and validate extended reality learning solutions. Her background is in cognitive science, game-based learning, and instructional design. She is particularly interested in the intersection of learning science, extended reality, and learning analytics.

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**Content Manager,
Instructional Design**
Jes Thompson

Editor, *TD at Work*
Patty Gaul

Senior Graphic Designer
Shirley E.M. Raybuck

Learning designers are no stranger to using models—consider ADDIE, SAM, and Merrill’s First Principles, which are widely implemented in the L&D industry. But a less commonly discussed practice is constructing models that help us inform design decisions for the learning solutions we create.

If you are less familiar with creating models, developing your own may seem overwhelming. It’s easy to feel unequipped for the task, but in this issue of *TD at Work*, I will demystify modeling and encourage you to add it to your repertoire. Pairing modeling with learning design enables you to strategically identify and collect rich learning data that you can use to support learners while simultaneously constructing a blueprint for the design and delivery of instructional programming. I will discuss five models—competency, evidence, task, learner, and pedagogical—to help guide your next learning design project. You can use those models for individual learning all the way up to larger programmatic solutions. Depending on your needs and the scope of your learning design project, you may choose to create all the models or a select few.

In this issue of *TD at Work*, I will:

- Outline the five models.
- Describe how the models facilitate an evidence-based approach to design and assessment.
- Walk you through how to develop each model in practice.
- Present case studies for how you can use the models for data-driven decision making.

Why Models?

A model—a depiction meant to describe a phenomenon, concept, or aspects of the subject—is deliberately simplistic. It is an attempt to easily convey information in a clear, concise manner. Interestingly, a model doesn't need to be a completely accurate representation of reality to provide value to the people or systems using it. Often, as individuals, we start with a model that depicts our current concept of a phenomenon, and we use that model to make decisions. Over time as we learn more and collect additional data, we evolve our models into more accurate and robust representations.

We create and use models all the time, but we may not realize it or explicitly illustrate them. Case in point: The way we interact with the world and understand happenings around us physically or conceptually has much to do with the schemas we have or the mental models we've developed. Comprehending how things work

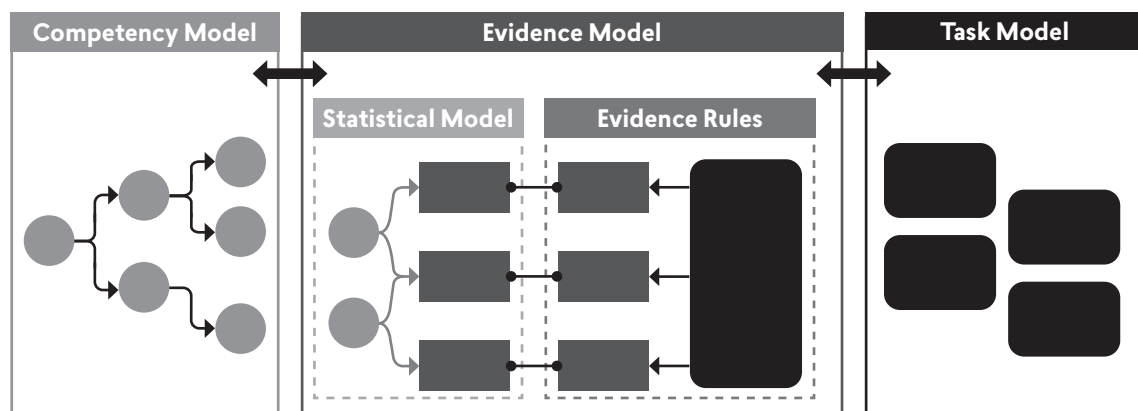
enables us to make sound decisions as we navigate the world. In our everyday lives, we've developed implicit models that serve as a compass for our decisions. For learning design, models help us make sound design decisions in our practice.

As learning designers, we routinely translate learnings from subject matter experts and synthesize the findings of specific behaviors individuals must perform on the job to be successful, the skills they must possess, and the knowledge they must readily apply to on-the-job decision making. Too often, we treat those lists of skills, knowledge, and abilities separately and address them in an unstructured fashion. Modeling, however, is a structured and organized way of relaying that information and its interrelationships, providing a holistic view of competencies learners must acquire. Models can enable us to make sound judgments about which competencies to address, how to meet learners where they are, how to appropriately scaffold content, and how to design for desirable difficulty. That clarity can facilitate more targeted, effective, and outcomes-focused learning design.

Evidence-Centered Design

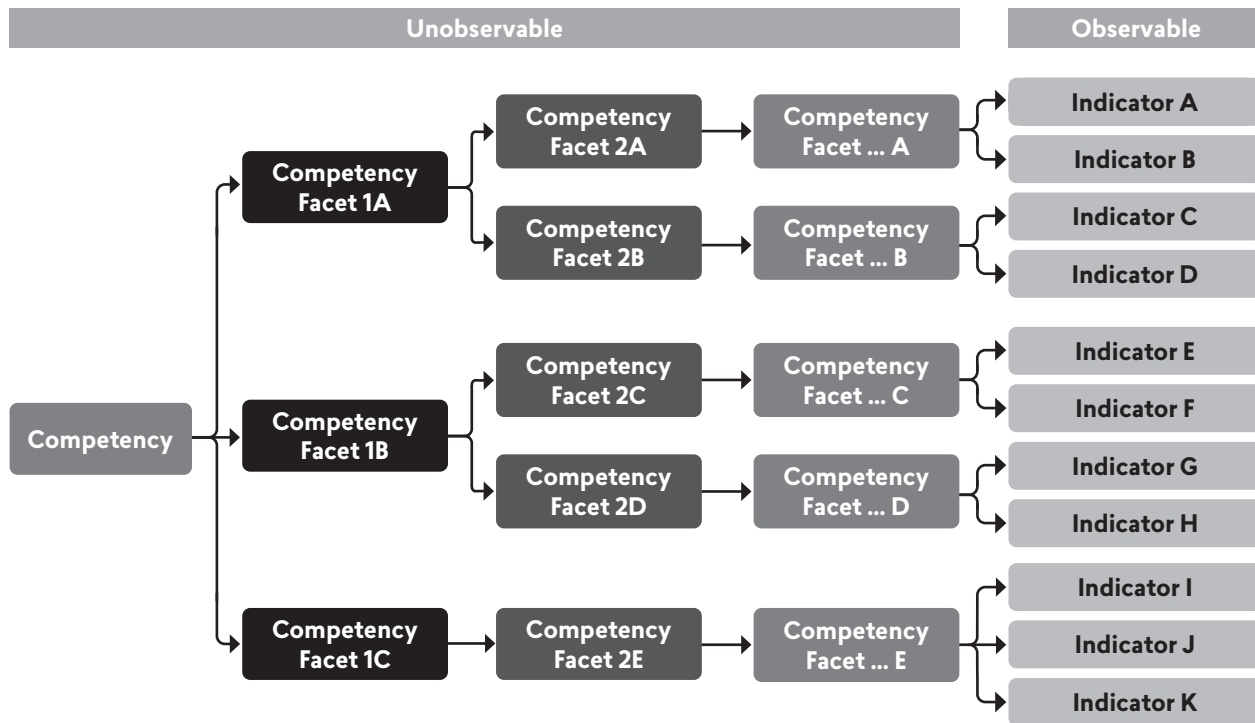
Before I delve into the five models of note, I first want to introduce an evidence-centered design framework. Part of our role as learning designers involves measuring learning and making claims about individual learners. For example,

Figure 1. Measurement of Competencies From Evidence Collected



Source: Adapted from Shute et al. (2010), which was adapted from Mislevy et al. (2003).

Figure 2. Competency Model



we may need to identify whether an employee is a high or low performer. Can we say with confidence that they can apply specific knowledge or perform procedures correctly? Do they need additional training or supplemental resources to be successful on the job? It's important to make reliable and accurate claims, which means basing your conclusions on empirical data.

The framework comprises three primary models: competency, evidence, and task. They feed into one another, enabling them to serve as both design and assessment frameworks. The evidence-centered design framework enables you to make evidence-based claims about a learner that are grounded in your observation of their performance on related tasks. It provides a systematic method of designing assessments focused on the evidence of competencies as the basis of constructing learning tasks. It is a conceptual framework that supports the design of valid assessments by approaching learning experience design with the end goal of targeted and effective learning experiences, as guided and measured

by assessment. You can intentionally create tasks that solicit a learner's execution of target competencies, evaluate their performance, and use that performance to make inferences about their competency levels with evidential reasoning.

Competency Modeling

Many organizations use some form of competency-based human resource management in areas such as recruitment and selection, career planning, performance assessment, and succession planning. A competency model is a collection of capabilities that describe what learners need to know and be able to do and to what degree of proficiency. As you might expect, competencies are the building blocks of competency models (also referred to as domain models). Competencies are measurable knowledge, skills, abilities, and other attributes that are required for effective performance. You can leverage competency modeling

for instructional design as well, for example to inform content and performance standards when designing learning experiences.

It is standard to illustrate competency models in a tree graph format. The higher-order, abstract competencies are positioned on one end, serving as the parent variables. Moving in the descending direction, the subconstruct competency variables listed in the graph are, by nature, more visible and more measurable. In such models, the competency variable nodes represent isolated knowledge and skills, while links represent interrelations.

Figure 2 shows a large, abstract competency operationalized into competency facets, each of which is further operationalized into subconstructs. This unpacking continues until the competency variables are observable.

Such precision in defining competencies at the most granular level sets you up for success by providing clarity about the breadth and depth of a competency domain across the range of visible forms that make up its composition. As an example, consider this use case: Kathleen is training to be an HVAC technician. She needs to learn about HVAC recovery service. ABC HVAC Services has two competency models, simple and granular. Both depict hierarchical parent and child competency variables. However, the granular model, which unpacks the lower-level competencies, is not only more comprehensive but much easier to use for planning and designing

training around. That is because each subsequent child tier further defines that of the parent tier, providing increased clarity of competency definitions. The more clarity you have about what constitutes a competency, the better you will be able to make strategic design decisions that target the competencies with precision.

Breaking competencies into their components identifies what individuals need to learn and provides you with a basis for assessment design. In the evidence-centered design framework, the competency model's variables enable you to extrapolate a learner's proficiency in a particular competency. Clearly identifying the hierarchy of variables enables you to logically group observable indicators. From there, you can target a collection of observable indicators for your assessment design.

You can construct a competency model by defining the knowledge, skills, and abilities inherent in the learning objectives for your project and unpacking them into specific and precise variables or observable indicators. Once isolated, the model provides a focused vision of the knowledge and skills you need to design and evaluate.

Developing Competency Models

You likely have a designated phase in your needs analysis process where you explore the business goal, identify the key behaviors of personnel who contribute to the business goal, and define the learning objectives your

Figure 3. ABC HVAC Services Competency Model (Simple)

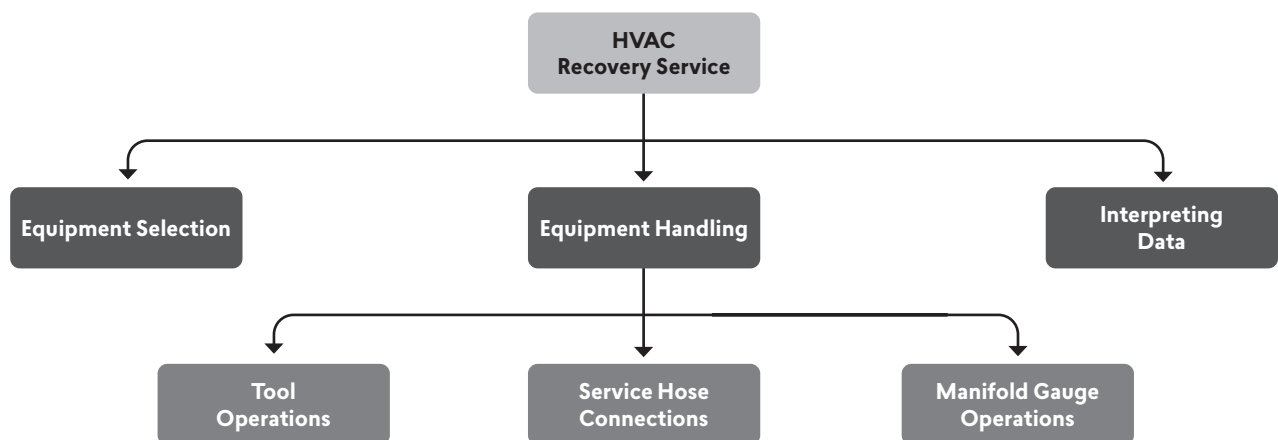
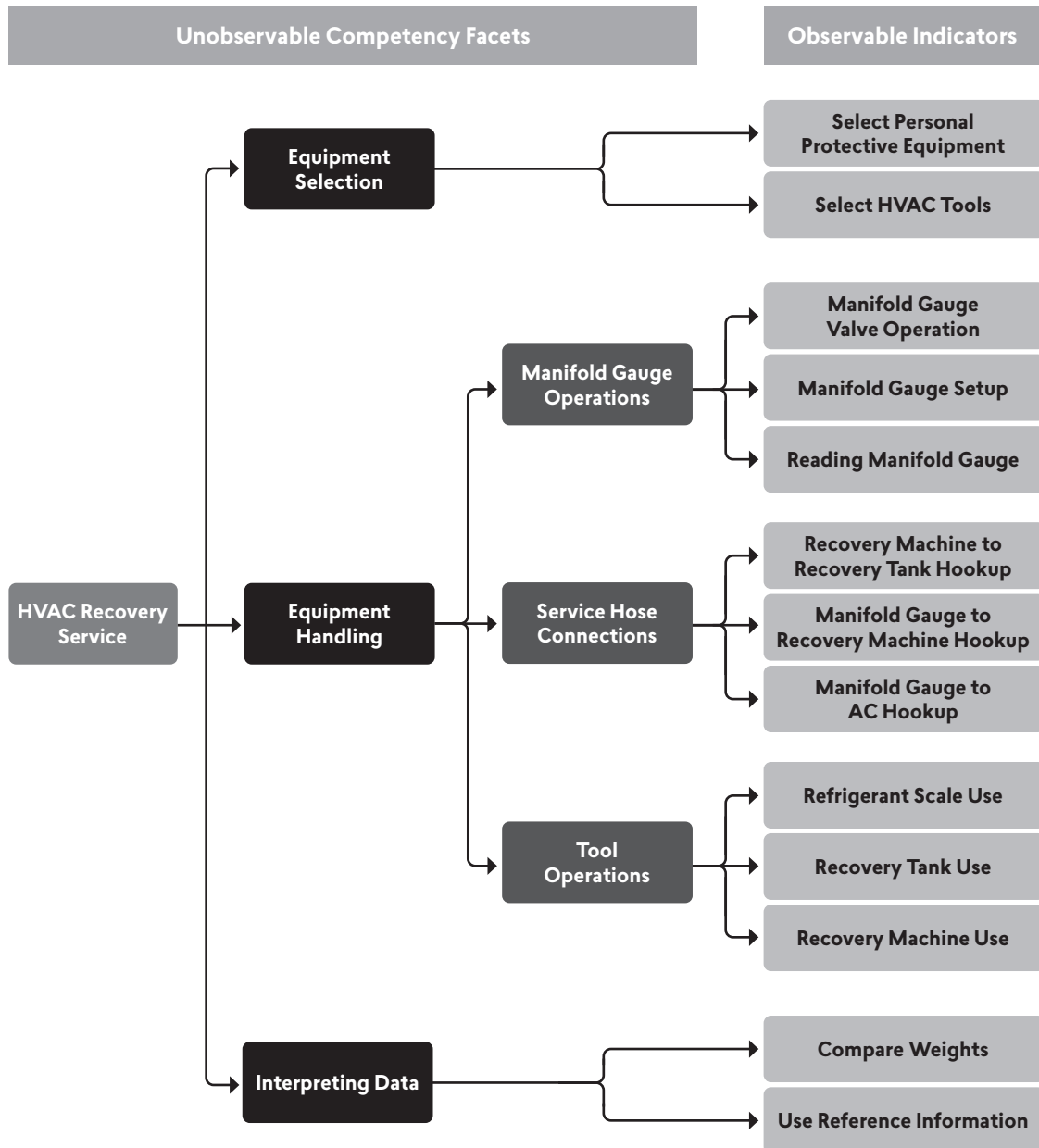


Figure 4. ABC HVAC Services Competency Model (Granular)



solution is meant to target for those staff to successfully perform the behaviors. If you have already identified learning objectives for your solution and are collaborating with a SME, there is no better time to begin constructing a competency model. Competency models are meant to facilitate alignment between learning objectives and

the knowledge, skills, and abilities necessary for achieving those objectives. Through your initial SME sessions, you may have already uncovered several learner competencies to address and evaluate. If so, be sure to jot them down so you can reference back to them as you're creating your competency model. A practical and helpful

method is a cognitive task analysis, a practice of capturing experts' knowledge and thought processes that enable successful task performance.

Begin by collecting preliminary knowledge through document analysis, observation, and interviews with SMEs. Examine each identified task to uncover subtasks and types of knowledge required to perform the task. Then organize those tasks in a hierarchy based on which underlying skills an individual must master to successfully perform the task. Use this exercise to focus your next SME interviews on eliciting knowledge about the tasks. It's common to interview multiple SMEs to capture various perspectives on concepts, processes, and principles or to probe into their expert situational assessment and decision-making patterns. Use findings from the interviews to translate the information into a competency model, and then ask SMEs to validate your model.

Competency Models on a Larger Scale

The competency models illustrated in Figures 3 and 4 pertain to a single, overarching, complex and yet multifaceted competency—an HVAC recovery service. Now let's examine competency models on a grander scheme.

In the HVAC technician example, Kathleen must possess a multitude of competencies to be successful in performing a recovery service. She must be equipped with the ability to perform an array of services, use a variety of tools, troubleshoot machines, comply with safety standards, and provide effective customer service. Each of those categories comprises numerous competencies and subcompetencies.

To represent overall HVAC competency, the competency model would theoretically branch out into five competency groups representing services, tool usage, troubleshooting, safety, and customer service, respectively. Diving deeper into the services competency, the recovery service competency falls into that group, as do many other HVAC service aspects Kathleen needs to know. The model would break out the hierarchical constituents of what the recovery service competency comprises.

Remember, a model is merely a representation meant to describe something. Competency models can be made up of other competency models that get more granular and the scopes of which are viewed based on need.

Depending on what users want to describe or get a clear picture of, they can zoom in or out between hierarchical levels of the competency models as they please.

When communicating competency models to various stakeholders, it is advantageous to expand or collapse competency models to the level most appropriate for the conversation.

The constituents for the models are dynamic and malleable as well. The workforce is an ever-changing landscape; roles evolve over time, and companies adopt new technology and implement new systems. If variables change because of revised protocols or expand due to additional responsibilities, update the competency models to reflect those nuances.

Competency Models in Practice

L&D team members can use competency models in different ways depending on their work goals. Here are a few common deliverables that you can produce using competency models.

Learning pathways. A learning designer is tasked with constructing a learning pathway for a newly created position. They would reference a competency model at the overall job role level to gain clarity on all the competencies an employee must have. They would use the competency model to inform their decisions for creating and curating solutions when constructing a learning pathway that supports continued development of target competencies.

Training needs. A learning designer is responsible for auditing learning solutions in the organization's library to identify gaps in offerings and what training content is needed to support employees' competency needs. The designer would reference the competency models as a set of alignment standards, map the current learning solutions to competencies, and assess which are not yet addressed in the organization's offerings.

Learning design. A learning designer is tasked with developing performance support resources that address known but rare edge cases in the field. They would use a competency model to identify specific situations and circumstances where critical decisions are made and provide strategies for managing them. They would then focus the learning design on building the subcompetencies needed to successfully handle those situations.

Certifications and credentialing. A learning designer is developing the evaluation criteria that verify that those who graduate from a specific program are equipped with the target capabilities. The designer would use a competency model to identify the competencies and observable indicators that they must measure and then align the items in the certification exam to those observable indicators.

Additionally, being able to effectively communicate the data depicted in the competency models can provide you and your team with justification for additional resourcing and content development as well as help you obtain stakeholder approval for L&D efforts.

Evidence Modeling

An evidence model is the true bridge between the competency model and the task model. It dictates how evidence is identified and evaluated within performance tasks and informs how you should refine your understanding of learners' competency levels given the collected evidence. It's made up of two models. The statistical model interacts with the competency model, and the evidence rules interact with the task model.

Evidence Rules

Evidence rules help you identify and summarize evidence within the task. They specify which observations would provide the best evidence of the competency's observable indicators and what the evaluation criteria are. Evidence rules are responsible for measurement. This involves creating scoring rubrics to measure the observable indicators and classifying levels of performance into categories, such as high-, medium-, or low-level performance.

Evidence Identification

For the use case with Kathleen, let's consider the competency observable indicator *manifold gauge to AC hookup*, which is defined as "Uses the correct equipment and process to attach the manifold gauge to the air conditioning unit." Evidence of that observable indicator comprises five parts:

1. Use the hook on the manifold gauge to hang the gauge on the AC unit above the service ports.
2. Disconnect the blue hose from the curved, low-side service port of the manifold gauge.
3. Connect the curved end of the blue hose to the AC unit's low-side line.
4. Disconnect the red hose from the curved, high-side service port of the manifold gauge.
5. Connect the curved end of the red hose to the AC unit's high-side line.

Now imagine that your rubric score is based on the amount of support Kathleen needed to perform the task successfully. The fewer hints she needs to successfully complete the action, the more points she earns. Zero hints awards five points, one hint awards four points, and so forth, with five or more hints awarding zero points. Each of the five criteria is scored using this rubric. Because the steps are considered equal in this case, the average of these scores is the summary score for the observable indicator of *manifold gauge to AC hookup*. That numerical score is then classified as high, medium, or low level using predetermined thresholds. Common thresholds are low: 0–0.33; medium: 0.34–0.67; and high: 0.68–1.00.

The Experience API standard is a powerful method of collecting that type of granular and context-rich learning data in your system. If your learning system is not compatible with xAPI, you may want to collaborate with a data scientist and developer to build in triggers that identify and evaluate evidence using scoring and then categorize the level of performance. That output would then be fed into the statistical model for dynamic updating.

Statistical Model

The statistical model tests how strongly the evidence predicts competency. It represents the probabilistic relationships between competency model variables and observable indicators, including their weights and how they influence one another, especially when evidence is collected. Take a moment to reference the competency model in Figure 2. The general premise of how the predictive model works is by calculating the value of competency facet A, given the evidence you have about indicator A. It's common to create the statistical model in consultation with a SME and in collaboration with a data scientist or psychometrician to calculate the odds of the probabilistic relationships (more on this later in the issue).

Evidence Modeling in Practice

Although sometimes easy to overlook because it lies beneath the surface, the evidence model is the gear that makes the other evidence-centric design framework gears turn. What that means, however, is that it is essential for the evidence rules and the statistical model to be accurate. If you're evaluating a learner's performance on a task, you want your measurement to be valid and reliable. And if you're using the performance metrics to make inferences about a learner's ability, you want to ensure that your understanding of ability predictors is accurate as well.

If you're getting the sense that your instructional task performance metrics and inferences are off, perhaps your predictions suggest that learners are capable, but real-world on-the-job metrics say otherwise. Then it's your responsibility to iterate upon your evidence model so that your data output is valid and reliable and the decisions you make as a result of your inferences are sound.

Task Modeling

Task modeling represents activities that learners participate in that are the source of learning data collection. The primary purpose of the task model is to structure

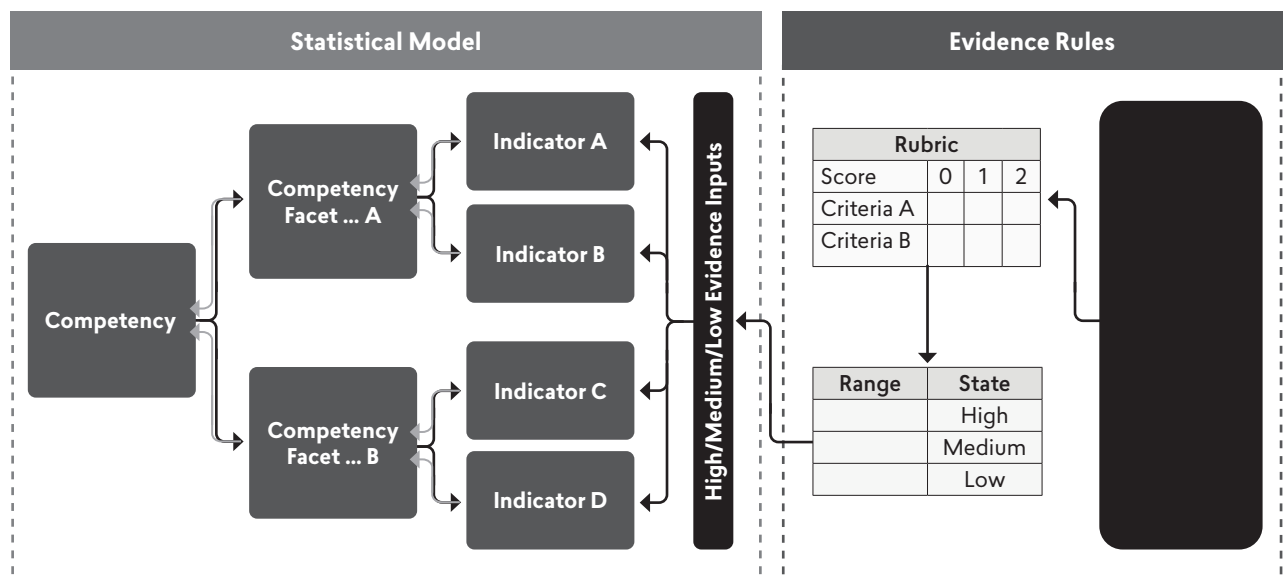
situations that can elicit observed evidence about competencies in the form of actions by the learner. For learner models to be valid and reliable, you need strategic task modeling to target the variables in the competency models you create. You can use the valuable findings collected from your cognitive task analysis to directly inform the types of tasks to present to learners.

Focusing on the competency model variables as you embark on designing learning tasks helps ensure that your design decisions are directly aligned to the learning objectives and competencies you wish to teach, promote the practice of, and measure within the learning solution. With the end goal of assessment in mind, you will be able to design learning activities that enable you to collect the proper data that you can then use to draw inferences about learner competency levels.

Designing With Task Models

Traditionally, task models focus solely on guiding the development of assessment tasks. That is because the task model provides a framework to construct situations and conditions where you can observe learners perform so as to collect data. However, it is feasible for task models to also inform the design of practice activities

Figure 5. Evidence Model



that necessitate formative feedback—especially if they mirror the summative assessment tasks—and, in a backward way, inform the features of situations for which you can create instructional learning activities, such as fishbowl (participants in the fishbowl share and discuss while those outside the fishbowl observe), role-play, or demonstration exercises.

Task modeling provides guardrails for strategically designing tasks that solicit empirical evidence of target competency facets that are within a competency model. It helps ensure that your learning design solicits the right behaviors that produce quality performance data. Task modeling is a valuable practice and can expedite the learning experience design process because the practice helps to define the features for how tasks are constructed and presented to learners, including specifications, stimuli, conditions, and environment. Task model variables essentially provide a blueprint for learning activity design and assessment design.

Task Modeling in Practice

Leverage the task model to expedite design by constructing task shells—distinct collections of required specifications for the purpose of targeting a subset of competency indicators. Those shells create the set of design requirements for learning activity and assessment design. You can create multiple performance tasks from the same task shell, and similarly, you can reuse shells for similar tasks.

For the HVAC recovery service use case, an example task shell may stipulate that a task requires a learner—Kathleen—to select equipment for an HVAC recovery service from an array of equipment options. Example tasks that the L&D team can create from that one task shell are:

- Via a pen-and-paper quiz, the learner must select the necessary equipment for this service by checking all that apply.
- In a computer-simulated exercise, the learner is prompted to visit the equipment room to retrieve the necessary tools.
- To prepare for a supervised off-site service job, the learner is tasked with packing a toolkit.

Developing a task model helps to ensure that the training program is evoking the right kinds of evidence and

Task Shell Canvas

Follow this format when creating a task shell—that is, the required specifications for a subset of competency indicators.

Task name: Name the task shell.

Description: Summarize the task and its purpose. Describe what you expect learners to do.

Learning objective: Define what learners should be able to do after completing the task.

Context: Describe the context and conditions in which learners will perform the task. Include relevant features, resources, and tools provided.

Target competencies: List the competency variables that the task is meant to demonstrate.

Performance evidence: Describe how evidence of target competencies are demonstrated within the context of the task.

Measurement criteria: Detail the criteria used to evaluate the quality of task performance and how learners' performance evidence is scored.

Other requirements: List any other design requirements or considerations that affect the task design's direction.

measurement, which enable the correct kind of optimization of learning activities and feedback. Your task model can be your secret weapon when it comes to gaining stakeholders' buy-in of your design decisions. Clearly communicating how learning activities are directly aligned with and provide evidence of target competencies is a difficult argument to ignore.

Learner Modeling

If you are interested in providing personalized learning experiences, you need an accurate measure of learners' competency levels. A learner model not only helps you determine how to assess competencies and which performance metrics to collect, but—once implemented—it will provide timely and actionable, evidence-based insights about learner performance. The good news is that if you've developed a competency model, you've already built the foundation for learner modeling to happen.

A learner model is a personalized learner version of a competency model, representing a learner's current proficiency levels with the knowledge, skills, abilities, and other attributes depicted in the competency model. If you think of a competency model as defining the content scope and mastery requirements for a single learning solution, every learner who completes the learning solution would in essence have a duplicated version of the competency model. Rather than depicting mastery requirements, the personalized version would illustrate a robust report of the learner's current proficiency levels for every competency variable in a granular fashion. That depth of reporting provides an extremely accurate picture of a learner's abilities and is more actionable for decision-making purposes than a singular performance score.

Learner Models vs. Personas

It's important to contrast learner models with the more popular concept of learner personas. Learner personas are hypothetical archetypes that represent target learners. Designers create and use learner personas so they can customize learning design by accounting for learners' diverse perspectives and dispositions. Learner personas represent who learners are, while learner models represent what learners are currently able to do and at what level of mastery.

Learner models are meant to be explanatory models that accurately represent a learner's competencies and traits at a given point in time, sourced from actual task performance. They paint a picture of where learners are on their pathway toward mastery, where their growth areas lie, and what misconceptions they may be working with.

Keep in mind that it is possible to develop a learner model without first constructing a competency model. Learner models involve defining the components of the learner model and their interrelationships. Components can include knowledge; cognitive and metacognitive characteristics; affective, motivational, and social characteristics; and personality traits.

How Learner Modeling Works

To accomplish learner modeling, continually collect and update data about a learner based on observed behavior

or performance. Through that data collection, an observer can make inferences about learner competency levels, cognitive processes, knowledge gaps, and misconceptions. Then you can use that information to produce baseline diagnostic reports; inform feedback, scaffolding, and coaching supports; and guide the selection of learning activities at the appropriate difficulty level for the learner.

There are several common techniques for learner modeling. One of the simpler and easy-to-implement techniques is the overlay model, which takes the same structural form as the competency model but superimposes values that represent learners' mastery levels for each individual node, often ranging from 0 (not mastered) to 1 (mastered).

Consider Kathleen, for example. To assess her baseline knowledge and skills, Kathleen's instructor asks her to perform a recovery service. The instructor evaluates her performance and concludes which competencies Kathleen has demonstrated mastery in and which she has not (see Figure 6).

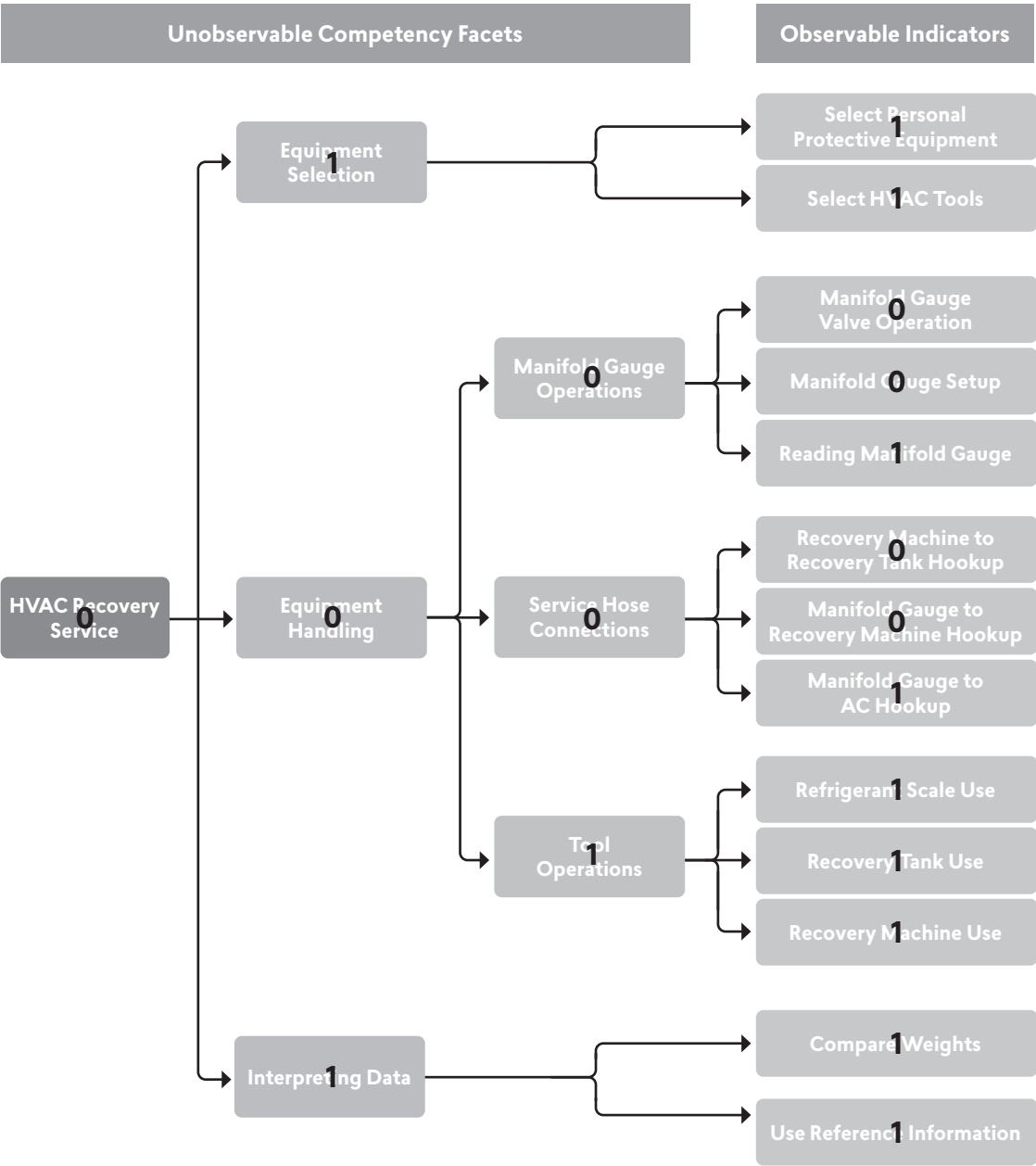
Predictive Modeling

Predictive modeling is another learner modeling technique using data collected from learner behavior to predict their knowledge level or traits. Achieve predictive learning modeling through item response theory, in which you map traits to the assessment items you presented to learners, and learners' responses to those questions reveal something about their level of knowledge, skill, ability, or other attributes.

More advanced predictive modeling techniques may use machine learning to predict learners' knowledge based on previous performance. Bayesian knowledge tracing is a popular machine learning technique that attempts to predict the probability of learners' competency levels based on what is known about learner performance from the observed data the system has already collected.

Imagine again that a trainer is observing Kathleen perform a recovery service. The trainer notes their observations, using scoring points to rate the proficiency of Kathleen's performance on each step of the process. The trainer evaluates the scores for each task

Figure 6. Overlay Learner Model for Kathleen at ABC HVAC Services



and feeds them into the predictive model, which determines the probability of success on an HVAC recovery service overall as well as the subcompetencies it comprises. The more Kathleen practices and the more the trainer scores observations, the more accurate the probabilities become, because more behavioral data

supports those inferences. Figure 7 illustrates an abbreviated example of what Kathleen's predictive learner model could look like.

Learner modeling is particularly important in talent development because TD professionals typically make decisions based on assumptions or claims about learner

proficiency. Those claims must be both accurate and reliable. The advantage of constructing a learner model from a competency model and having that tie into the task model is that your claims will be highly valid because they will be based on empirical data you've collected from learner actions using the learning system.

Learner Modeling in Practice

Use learner models to drive a variety of design decisions relating to personalizing learning for individual employees and overall programming when aggregated. Here are several common scenarios in which learner models can facilitate data-driven decisions.

Succession planning. A high-potential employee is on the track for senior leadership, so you reference the competency model for the senior role and compare it to the employee's learner model representing their current role. You can then use the data depicted in the learner model that represents competencies the learner is or is not yet proficient in to create a personalized training path around developing the required competencies for the learner's current role as well as the prerequisite competencies for the senior role.

Upskilling. A struggling employee needs support; you must determine the learning solutions and sequence that will produce the highest return on investment in the shortest amount of time. You reference the employee's learner model to identify which of the competency groups have the highest impact but lowest competency levels and prioritize administering

training that aligns with the competency groups that need the most attention. In doing so, you help the employee develop the necessary skills to succeed immediately while continuing to support them as they progress through their learning journey.

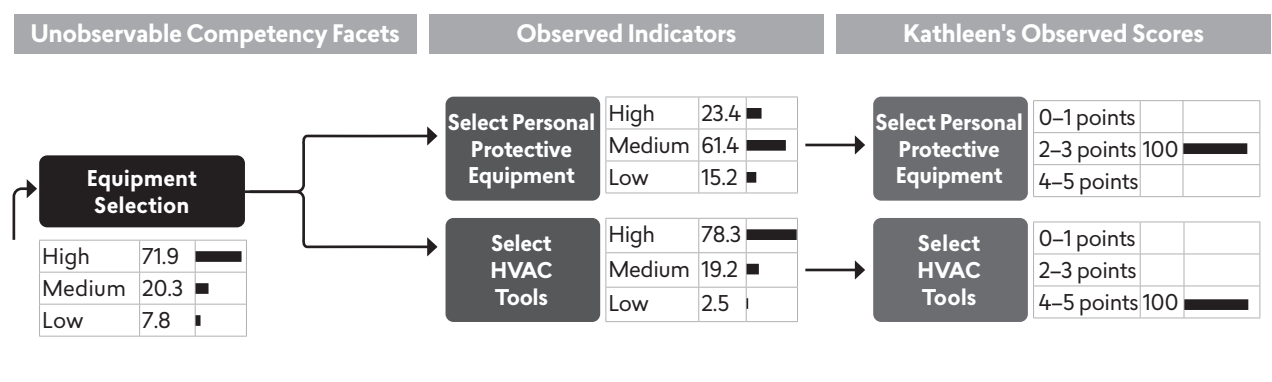
Lateral moves. An employee is unhappy with their role and the work they are doing and wants to pursue a position in a different branch of the business. Working with HR personnel, you can help the learner determine which roles their skills are well suited for by comparing their learner model and competency levels to see whether those translate to prospective positions in the company. If an employee knows the role they aspire to, learning designers can use their learner model to help curate a learning path that aims to fill competency gaps in preparation for the lateral move.

Coaching or mentorship. A senior employee is coaching a junior employee and wants to target specific areas of improvement to make the coaching sessions tailored to the junior employee's growth areas. They can collaboratively use the learner model as a basis for discussion and strategy development during coaching sessions and plan for shadowing opportunities or other on-the-job touchpoints to reinforce coaching.

Pedagogical Modeling

Constructing a pedagogical model, also referred to as the instructional model or adaptive model, can provide advantages when designing learning experiences. Use this

Figure 7. ABC HVAC Services Predictive Learner Model



model primarily for adaptive instructional systems that provide logic to dictate how you should tailor the learning experience to learners. What is particularly helpful about creating a pedagogical model is that it forces you to think about how you can differentiate instruction across learners of varying proficiency levels, metacognitive skills, and affective states and what those implications have on instructional design and performance support. Because of that practice, the application of pedagogical models during learning design can be valuable for most complex learning experiences, even nonadaptive ones.

How It Works

The pedagogical model works by evaluating the discrepancy between where learners are in their current state (learner model) and where you want them to be (competency model), and it optimizes learning by identifying the instructional pathway to bridge that gap. The pedagogical model's primary goal is to pave the path toward mastery through the selection of content, tasks, instructional strategies, feedback, and tailored recommendations. The outcome is a balanced level of guidance, support, challenge, engagement, and motivation to propel the learning experience forward. Having a clear pedagogical model makes it easier to justify your instructional design decisions to leaders who are curious about how a learning program is structured and scaffolded to promote competency development.

In adaptive instructional systems, the pedagogical model defines the rules and conditions that determine the appropriate experience for the learner at a given point in time. When the input from the learner model and competency model triggers an adaptation, the pedagogical model dictates the most optimal learning experience output to execute. It's important to note that although demonstrated competency is specifically used in these examples, adaptive learning more broadly can account for additional factors, including a learner's prior knowledge of errors they make and the strategies they use—their motivation, affect, metacognition, self-regulation, and effort.

Creating Rules

There's a certain art in the cause-effect relationships you may consider as you create the rules for pedagogical

models. Based on a learner's behavior and performance, you can create rules to tailor the learning experience to the individual. Rules can be a set of conditions that dictate *if* something within a learner model is true, *then* the state of certain variables can change. For instance, if a learner model illustrates a score within a certain threshold or achieved mastery in one competency facet, then a pedagogical variable may change. Pedagogical variables can include the sequencing of learning activities within a training program, level of difficulty, feedback intention (motivational, attributional, or performance), feedback interface formats, timing of feedback, progress reporting, and appropriate scaffolding.

To ground this, let's go back to our HVAC use case. Imagine that you've administered a diagnostic assessment aimed at evaluating a learner's ability to successfully perform an HVAC recovery service. To personalize instructional resources and practice activities for Kathleen, you want to create a set of rules that govern which tasks you provide her, such as:

- If the learner doesn't master competency facet X, then provide practice activity for competency facet X at a decreased level of difficulty with increased scaffolding and support resources.
- If the learner masters competency facet X, then provide practice activity for competency facet X at an increased level of difficulty and remove scaffolds.
- If the learner masters at the highest level of difficulty all children of a parent competency, then cease providing practice opportunities.

Putting Rules Into Practice

Continuing with our use case and taking the rules into consideration, you may decide to personalize instruction by removing practice opportunities related to equipment selection, interpreting data, and tool operations from the activity list because Kathleen has mastered those subcompetencies at the highest level of difficulty. If you set the assessment item targeting *reading manifold gauge* and *manifold gauge* to AC hookup at a medium level of difficulty and the learner model depicts that Kathleen has mastered those subcompetencies, the pedagogical decision would be to provide practice activities targeting those constructs

Glossary of Model Terms

Competency: Measurable knowledge, skills, abilities, and other attributes that are required for effective performance

Competency model: A model of capabilities that describes what learners need to know and be able to do and to what degree of proficiency

Cognitive task analysis: A method of using interview and observation protocols with experts to capture the knowledge and thought processes that enable successful task performance

Evidence model: A model of how evidence is identified and evaluated within performance tasks and how our understanding of learning competency should be refined given the collected evidence

Learner model: An explanatory model representing a learner's current proficiency levels with the knowledge, skills, abilities, and other attributes at a given point in time

Overlay modeling: A learner modeling technique that takes the same structural form as the competency model but superimposes values that represent learners' mastery levels for each individual node

Pedagogical model: A model that provides the logic to optimize how to tailor the learning experience for instructional design and performance support

Predictive modeling: A learner modeling technique using data collected from learner behavior to predict a learner's knowledge level or traits

Task model: A model that provides a framework to construct situations and conditions for observing learners' performance to collect data to use as evidential reasoning about competency levels

valve operation, manifold gauge setup, recovery machine to recovery tank hookup, and manifold gauge to recovery machine hookup. Assign supplemental job aids and novice-level practice activities to Kathleen covering the fundamentals of those concepts to fill the skills gaps identified from the learner model.

When creating rules for this model, if the discrepancy determines that Kathleen hasn't yet mastered a competency, attempt to pinpoint where in the competency hierarchy that misconception lies. Is it higher order, reflecting more generalized skill groups, or lower order representing more specific behaviors? If it's unclear which constructs need attention, consider sequencing a collection of targeted learning activities that aim to provide the evidence needed to be able to decipher which knowledge components Kathleen has not yet mastered. Once identified, design rules to optimize learning appropriately. It's helpful to conduct a thorough analysis to delineate the permutations of what can go wrong for learners in achieving mastery of competencies and, subsequently, what instructional strategies to use to overcome those challenges.

Conclusion

Creating models can be your secret weapon for designing strategic learning activities that produce valuable empirical data that you can use to both evaluate and support learners throughout their learning journeys. Try them out on your next learning design project.

at a higher level of difficulty. Additionally, you would use the data from the learner model to identify which competencies Kathleen has not mastered and determine which instructional or practice activities she needs to further develop those competencies.

Based on her scores from the overlay, the competencies requiring attention include *manifold gauge*

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Model Development Preparation Checklist

Use these checklists as you develop all or one of these models.

Competency Model

- ☐ Analyze information sourced from literature, subject matter experts, and stakeholders.
- ☐ Identify the key competencies to assess, and define them in detail.
- ☐ Determine the interrelationships between the competencies.
- ☐ Diagram the competencies from complex and abstract to observable and measurable.
- ☐ Consider the levels of proficiency or mastery to assess, and define them in detail.
- ☐ Validate the competency model with SMEs.
- ☐ Refine and maintain the model based on data, as needed.

Evidence Model

- ☐ Identify the types of evidence you will use to measure the competencies in the competency model.
- ☐ Create a statistical model that represents the relationships between the variables and helps to explain the data.
- ☐ Define the evidence rules by specifying the rubric criteria you will use to evaluate and classify the evidence.
- ☐ Validate the evidence model with SMEs, a psychometrician, or data scientist.
- ☐ Refine and maintain the model based on data, as needed.

Task Model

- ☐ Define the purpose, learning objectives, and context for each task.
- ☐ List the competency variables that individuals will demonstrate via the task.
- ☐ Describe how individuals demonstrate evidence of target competencies within the task's context.
- ☐ Detail the criteria used to evaluate the quality of task performance and how learners' performance evidence will be scored.
- ☐ Identify the requirements for each task as well as the resources and materials you will use to support learners as they engage with the task.
- ☐ Refine and maintain the model based on data, as needed.

Learner Model

- ☐ Consider which competencies and characteristics to include and how you will display them.
- ☐ Determine how the model's elements inform designing tasks as well as the instructional approaches and strategies that will support learners.
- ☐ Refine and maintain the model based on data, as needed.

Pedagogical Model

- ☐ Identify the instructional strategies, scaffolds, and feedback mechanisms that will support learners as they engage with the tasks or activities.
- ☐ Determine implementation rules for the instructional approaches based on data from the learner model.
- ☐ Determine how those instructional approaches inform the task requirements and selection.
- ☐ Refine and maintain the model based on data, as needed.

Building Compliance Training That Actually Matters



BUILDING COMPLIANCE TRAINING THAT ACTUALLY MATTERS

AUTHOR

Travis Waugh

Travis Waugh is an instructional technologist for the Georgia Institute of Technology. An avid writer, film buff, and technology enthusiast, Waugh has been helping adults learn in person and online for more than a decade. He has taught English as a second language in Japan, crafted IT training solutions for large corporations, and met faculty and staff learning needs in higher education.

Community Manager, Learning & Development

Amanda Smith

Editor, *TD at Work*

Patty Gaul

Managing Editor

Teresa Preston

Production Design

Iris Sanchez

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As you're mingling at a party, someone asks, "What do you do?" "I'm an instructional designer," you reply, knowing the title lacks the instant brand recognition of doctors, lawyers, and garbage collectors.

"Oh yeah?" your new friend asks. "What's that?"

Do you say that you create experiences that change behavior? That you equip individuals with the knowledge and skills they need to achieve their potential? Or that you build compliance courses to meet your organization's legal obligations?

Opting for a more literal definition, you reply,

"I create those online tutorials you take at work."

Something passes across the eyes of this new acquaintance. Is it annoyance? Disgust? Boredom? It certainly doesn't look like admiration.

The conversation ends shortly thereafter. No plans for future meetings are made.

Where did we go wrong? We went into this field because we like to help people, and we've stayed in this field because we're good at it.

Although many people value learning, they don't think learning has anything to do with the stream of online tutorials they're forced to take at work. And the dirty little secret is ... they're often right. The problem is not that real learning can't be achieved in an online format or that compliance courses, whether in person or online, have to be tedious or uninspiring. The problem is that too often, we aren't even trying to create real learning. We're trying, instead, to comply, as evidenced in Figure 1.

We are flooding our corporate libraries with compliance tutorials that read more like contracts than calls to action, more like lip service than real service. In the process, we're diluting our brand, squandering our learners' valuable attention, and slowly losing the respect of our decision makers.

This *TD at Work* will:

- paint a portrait of compliance training in the modern organization
- explore the common problems that plague online compliance training
- underscore the need for a new compliance paradigm use
- introduce a custom, ADDIE-based approach that can help bridge the gap between compliance and training.

Bad compliance training presents a serious threat to the long-term health of our industry, but it's a threat we can resolve. With any luck, the next time you tell someone what you do for a living, they just might buy you a drink.

WHAT IS COMPLIANCE TRAINING?

At many organizations, compliance training is an umbrella term, covering a wide range of subjects and delivery formats. We'll use a similarly broad definition, with only a few restrictions to focus our discussion. The following three points will define compliance training for our purposes, while also beginning to reveal the origins of the term's most negative connotations.

Externally Mandated

In this *TD at Work*, we'll define compliance training as any *externally mandated* training course or program. This simple two-word definition is convenient in its simplicity and breadth, and it provides a succinct description of why compliance courses are so often lacking.

The external origin of compliance subjects means the standard content may or may not suit your audience. Unfortunately, this gap is too often ignored or addressed only superficially. I recently worked with a prominent compliance vendor to customize a purchased offering for delivery on our campus. While I was encouraged by the concept, I soon discovered that "customizing" to them meant adding the name of our institution to the header and updating a few legal definitions to match the wording in our state's laws. If we're serious about making compliance learning that matters, we need to take customization further by tailoring unique solutions that meet our external mandates but emphasize our real internal needs.

The mandated aspect of compliance programs is responsible for many of their problems. Nobody likes to be told what to do, and that includes senior leaders, managers, learners, and you. Faced with required training, we tend to act like a petulant child halfheartedly cleaning his room, going through the motions as quickly as possible so he can move on to something he chooses to do.

► Train the Trainer

One key to fixing compliance training is to reframe our thinking about mandates. Instead of seeing them as an unavoidable nuisance, we should view them as a rare opportunity to reach our entire organization with a single message. If we craft that message carefully, we can use compliance mandates to make a real difference.

IF WE'RE SERIOUS ABOUT MAKING COMPLIANCE LEARNING THAT MATTERS, WE MUST TAILOR UNIQUE SOLUTIONS THAT MEET OUR EXTERNAL MANDATES BUT EMPHASIZE OUR REAL INTERNAL NEEDS.

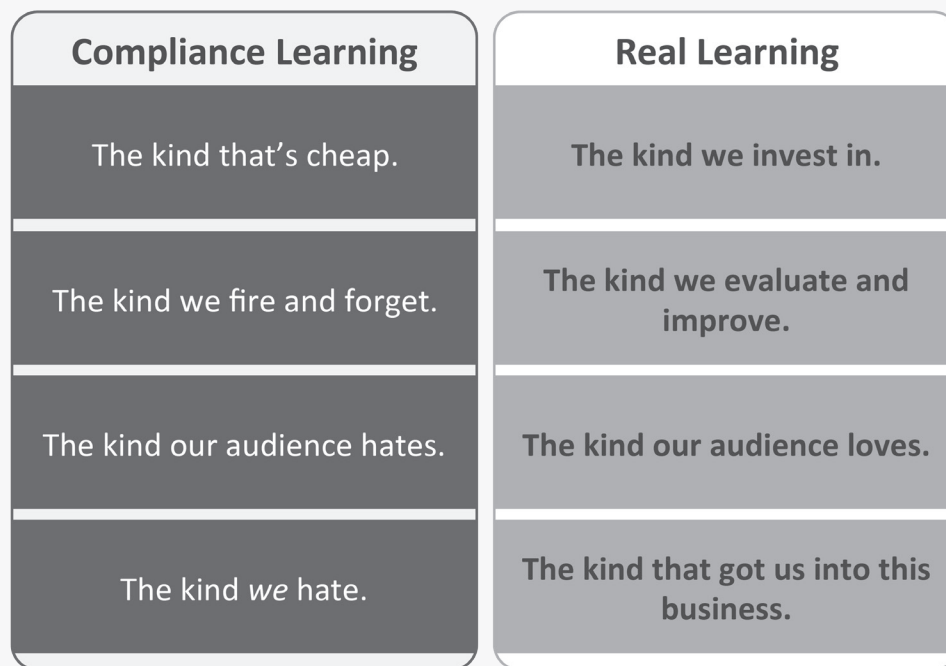
Nonsynchronous Online

Compliance training can be delivered in a variety of formats. Safety topics, for example, are often

delivered in person. However, safety training courses already focus heavily on learnable techniques and behavior change, which means they aren't part of the problem we're trying to solve. Instead, we will focus primarily on the legal and interpersonal compliance subjects that have risen dramatically in recent years, especially in higher education, state and federally funded organizations, and even private corporations, especially those in regulated sectors.

Due to tight completion deadlines, a perceived lack of teachable skills, and the large numbers of employees that these compliance programs are required to reach, they often are implemented as nonsynchronous online tutorials that a massive number of users can access and complete whenever needed. In fact, in some organizations, compliance courses are the only courses delivered via static online tutorials, with more respected subjects garnering in-person courses or live webinars. The result is a serious

FIGURE 1: TWO KINDS OF TRAINING PROJECTS



hit to the credibility of this otherwise promising learning format.

In light of this reality, we will focus our discussion primarily on designing and developing nonsynchronous compliance solutions. However, many of the behavior-based principles we will explore can be adapted to improve the quality of compliance learning in any format.

Owned by a Subject Matter Expert

In large organizations with a dedicated learning and development team, compliance projects tend to

be a collaboration between a learning professional and a subject matter expert (SME) from another group, such as a corporate lawyer or a program manager. The learning professional is responsible for creating a meaningful, measurable, and engaging learning experience. The SME is responsible for meeting the compliance requirements.

When the two parties collaborate effectively, they can build courses that meet both legal requirements and learners' needs. Unfortunately, in many organizations, the relationship has become one-sided, and the SMEs have first and final say on nearly every aspect of production.

THE SCOPE OF COMPLIANCE DEMANDS

In its 2016 Cost of Compliance survey, Thomson Reuters warned of regulatory fatigue in the face of increasing, sometimes overlapping, domestic and international rules. The survey revealed compliance officers' concern about their ability to meet increasing compliance demands and anxiety over personal liability from failing to fully comply.

At Georgia Tech alone, a recent inventory revealed more than 70 compliance training programs for faculty and staff, and that number is only likely to grow. Broadly defined, common compliance subjects fall into several major categories:

Health and Safety

Includes "right to know" training for chemical hazards; specialized training for working in potentially hazardous environments, such as research labs; and specialized training for working with hazardous equipment, such as forklifts, cranes, and class 4 lasers.

Cybersecurity and Privacy of Data

Includes the Family Educational Rights and Privacy Act, the Health Information Portability and Accountability Act, and other mandated safeguards for private data, as well as the safe and ethical use of state-owned or grant-funded IT infrastructure.

Ethics

Includes conflict of interest, ethical procurement and sourcing, and basic ethical behavior expectations in the workplace.

Harassment

Includes civility in the workplace training, antibullying training, and specialized training to prevent harassment by age, gender, race, and other legally protected statuses.

Discrimination

Includes training on hiring, disciplinary action, and other HR matters to ensure these processes remain free of illegal discrimination. Courses also may address unlawful discrimination toward clients, customers, or vendors.

Specialized Regulatory Environments

Highly regulated industries—such as energy, healthcare, banking, and insurance—have numerous compliance training needs related to specific aspects of their business, typically regarding internal transparency, fair market competition, and basic consumer protections.

At organizations like this, the primary goal of a compliance project is to satisfy the SME's expectations and obtain her sign-off, often at the direct expense of the learner. One of the primary goals of this *TD at Work* is to shift the balance of power, at least slightly, to arrive at a compromise that serves our learners and our legal obligations.

It is possible, especially in small organizations, for one individual to be responsible for both content and its method of delivery. For our purposes, however, we'll assume the existence of a compliance SME who operates outside the training function and with whom we must collaborate for success.

IS COMPLIANCE TRAINING A PROBLEM?

Compliance training isn't just a boring burden for our learners. By prioritizing legal requirements over learners' needs, bad compliance training poses a serious threat to our ability to develop talent and improve our organizations. There are many reasons to believe this threat is real and growing, including three troubling issues that underscore our collective need for an urgent response.

VARYING APPROACHES IN THREE CASE STUDIES

While stakeholders may expect another standard tutorial for every project, there may be more suitable alternatives for meeting certain compliance needs. These three examples demonstrate the vastly different forms effective learning solutions can take.

Gas Pump User Training

Georgia Tech operates an automated filling station for institute vehicles, and the state requires all drivers who use the station to be trained as gas pump users. For men and women who have been pumping their own gas for years, without training, the required information can feel redundant. If we added stories, simulations, and interactive scenarios to such a tutorial, it may have felt to learners like an insult or a waste of time. Instead, we highlighted useful and relevant information, like the location of our station's emergency shut-off switch, and kept the remainder of the tutorial as simple and brief as possible.

Ethics Attestation

In years past, Georgia Tech has addressed our annual ethics requirement with a lengthy tutorial, including video re-enactments of ethical infractions. A common complaint from our audience was that the tutorial was underscoring obviously unethical behavior without much new insight or practical advice. With the added demand of several new compliance subjects this year, we elected to dramatically streamline the ethics requirement. Instead of a full tutorial, learners watch a brief video introduction from the institute president, read an embedded copy of the current ethics policy, and attest their understanding through a single-question SCORM quiz. Our ethics requirement is satisfied, our learners know what's expected, and we can all move on to more actionable compliance content.

Cybersecurity

In 2016, the state mandated cybersecurity training for all faculty and staff. While much of the required information was policy and definition heavy, our early conversations with the SMEs revealed an important opportunity for real behavior change. Specifically, the SMEs shared a desire to reduce the threat of social hacking, or phishing, that's currently rising around the globe. With their support, we crafted a full learning solution—using multimedia, interactivity, and job aids—to equip learners with the skills and knowledge needed to spot, avoid, and report common phishing traps. We met the core requirements and our phishing objectives with a modular design, allowing us to reuse targeted segments as stand-alone public service announcements on video boards around campus, continuing the learning beyond the tutorial.

Undermining Trust

We may draw a distinction between compliance training courses and our real learning programs, but our audience does not. If we build and implement a “tutorial of least resistance,” which purely satisfies SMEs’ interpretation of the law without regard for learners’ needs or desires, learners will suffer. And do you know whom they will blame for that suffering? The team that built the course, the learning management system in which the course resides, and the entire category of e-learning.

If we are to remain relevant as an industry, our learners must see us as reliable curators of relevant skills and knowledge. We can only earn the trust we need from our learners by delivering value in every single learning experience we create. Even the compliance courses.

Wasting Opportunities

In many organizations, especially in higher education, learning is difficult to mandate. No matter how important a message or how large the potential return on investment (ROI), getting eyes on content requires continuous marketing. In decentralized environments, the efficacy of any learning program depends on how many individual managers and employees we can convince to participate. If we can’t reach a critical mass, even the best learning programs only amount to a drop in a vast bucket.

Compliance training programs are the only exception. External compliance mandates often require completion by everyone, from the bottom of the organization to the top. Those are precisely the people whose attention we need to create real culture change. Unfortunately, by churning out compliance training programs that meet the letter of the law without regard for real needs, we routinely squander that opportunity.

Failing to Comply

If a compliance law or policy includes a training requirement, the intention of that requirement is likely to change behavior. By implementing dry compliance courses full of legal definitions and abstract jargon, we are not only missing the spirit of these laws, we also may be missing the letter.

Title IX, a federal act forbidding all forms of gender discrimination in higher education, is an example of a compliance law that already demands more from learning. To combat meaningless, rote compliance tutorials, the law requires not just training, but “rigorous and effective” training for all faculty and staff. Further guidance from the Office for Civil Rights explains that the training must be proven effective through reliable metrics or clearly built in accordance with research-verified pedagogical best practices.

If continued poor training efforts force more compliance agencies to append similar language to their requirements, the learning burden may soon become even greater. Already one thing is clear: Bad compliance learning programs are not only failing at achieving real behavior change ... they might not be “complying” at all.

BRIDGING THE GAP BETWEEN COMPLIANCE AND LEARNING

For all the reasons we have discussed so far, it is imperative that we begin to bridge the gap between compliance learning and real learning.

Learning is real when it changes behavior. Knowledge for its own sake is nice, but if it’s not going to achieve better results, there’s no reason for organizations to invest in it. Learning teams only exist because organizations believe that behavior change is possible through learning. Our job is to make good on that promise.

Compliance programs suffer because behavior change is too often left out of the equation, replaced by strict adherence to an abstract, esoteric, externally mandated set of requirements and definitions. To fix compliance training, we must put behavior change back in the center of all our learning, right where it belongs.

This transition may be more challenging than it sounds. There are reasons, after all, that behavior change has been neglected in so many compliance learning programs. In many cases, the original behavioral need that motivated the compliance mandate is lost in the formal language of the policies or laws. Even when the behavioral need is clear, the glut of “required” information can

obscure the real learning opportunities or bump them from the script all together.

Emphasizing behavior in compliance learning is necessary, but it won't always be easy. Luckily, we have the ADDIE model to guide us through the process. Professionals using ADDIE will follow these five steps when creating learning programs:

- *Analysis.* Identify the real requirements of the compliance policy or law and the real related needs that actually exist within your organization.
- *Design.* Select a format and a content structure that meet your legal requirements and your learners' needs, while minimizing the attention burden on your audience.
- *Development.* Use interactivity, multimedia, storytelling, humor, and other engagement techniques to win and maintain your audience's full attention.
- *Implementation.* Brand and implement your program in a way that makes it clear to your learners that this is not compliance as usual and that there is something in it for them.

BAD COMPLIANCE LEARNING PROGRAMS ARE NOT ONLY FAILING AT ACHIEVING REAL BEHAVIOR CHANGE, THEY MIGHT NOT BE "COMPLYING" AT ALL.

- *Evaluation.* Capture metrics before and after training that reveal the real behavior change your program has achieved.

While most instructional designers are already familiar with ADDIE, the concept of applying the learner-centered methodology to compliance training may be novel. If it's new to you, you may already be thinking of objections. Where will you find the time to conduct a full analysis and design stage for all your compliance programs? How will you convince your SMEs to broaden their definition of what a compliance course should be? How will you get cynical learners and decision makers to believe in the transformative power of good compliance learning?

The remainder of this *TD at Work* will provide tips and tricks, organized by each stage of the

I THOUGHT WE LEFT ADDIE FOR SAM

If your learning organization has already moved from the traditional ADDIE model to a newer, iterative approach, like SAM, the language and organization of this *TD at Work* issue may strike you as old-fashioned. However, the tips and tricks contained here should be useful to all, regardless of the specific methodology employed.

In an agile model, greater emphasis is placed on continuous collaboration between stakeholders at every stage of the process. Instead of a linear approach where work is primarily conducted in silos, punctuated by occasional review periods, these newer models emphasize iterative design, development, and evaluation stages that allow for quick, collaborative, manageable improvements throughout the life of the project. Inspired by the project management practices of nimble, continuously evolving tech startups, these models have merit for saving money, speeding up development, and delivering a final product that aligns more closely to stakeholders' current needs. If you'd like to learn more about alternative agile approaches, Michael Allen's *Leaving ADDIE for SAM* offers a primer.

Personally, I have never placed rigid faith in any one model. While I often incorporate agile processes, the traditional terms of ADDIE have never left my thought process. I believe both models offer useful lessons and insights that skilled instructional designers can adapt to their circumstances.

Whatever terms or processes you may use, the basic questions for creating meaningful compliance learning remain the same:

- What does the law actually require?
- What does our audience really need?
- What do our stakeholders demand?
- How can we build a solution that balances all these needs, on time and on budget?

ADDIE model, that can help to answer these questions. By adapting these basic principles to your environment, you can build courses that satisfy your SMEs and your learners. You can meet your legal requirements and make your organization a better place to work in the process.

ANALYSIS

The success of any learning project depends on the designer's understanding of the audience and its needs. Who are the audience members, what do they already believe, and what do they need to learn? These are the vital questions of the analysis phase, and their absence in most compliance projects explains many of the compliance training ills we've discussed so far.

If you already are part of an effective learning organization, concepts like skills gaps, current and desired states, and ROI likely aren't new. What may be new, however, is the thought of applying these principles to a compliance tutorial. Instead, for too many compliance projects, the analysis phase begins and ends with the delivery of the content from the SME. This content may be lifted word for word from the law or policy, or woven from an exhaustive series of bullets and sub-bullets that your legal team feels are necessary.

Lost in all this is the learner. Although the expertise of SMEs is important, and their satisfaction is required for the project's success, the learner must remain our primary stakeholder in every learning project we undertake. If we omit the learner's needs and perspective from the onset of our compliance projects, we are virtually guaranteeing that our final product will be irrelevant and ineffective.

We can leap toward fixing compliance training simply by putting learner analysis back at the beginning of all our projects. Before we define content or design a solution, we must answer three questions:

- What does the law really require?
- What do our people really need?
- What kind of measurable behavior change can we actually hope to achieve?

To help you find the answers to these critical questions, this issue of *TD at Work* includes a Tool & Resource, a compliance analysis form. Use the

form and the guidelines below to perform a full and fruitful analysis for your next compliance project.

What Does the Law Really Require?

I once had a SME tell me that we had no choice but to include 77 text-heavy slides in an annual compliance tutorial. The course ran over an hour long, and I could virtually guarantee that no learner would bother to read it all. "We have no choice," my SME said. "It's required by law."

If we'd given up at that, we'd have had one more terrible course in our catalog, doing nothing for our organization's mission and devaluing our learners' time. Luckily, as the SME and I spoke further, we realized that he'd only inherited his predecessor's assumption about the requirement—he'd never actually seen any references to training within the law itself. When we tracked down the training section of the state law in question, we discovered that there was only a single requirement: "All employees must receive annual training," with no further stipulations on what that training must include. With the rumor about requirements dispelled, the SME and I set to work cutting out the least relevant content and building a course that actually mattered.

To avoid similar "compliance creep" and its associated death by excess, use the "source" and "core requirements" sections of the compliance analysis form at the end of this issue to identify the primary sources of your compliance requirements and what they actually require. Primary sources may include state or federal law, internal or external policies, or official guidance provided by the governing body responsible for the mandate. Whenever possible, look at these sources with your own eyes. Firsthand knowledge will be valuable throughout your collaboration with the SME.

What Do Our People Really Need?

To make compliance learning real and meaningful, we need to know what real and meaningful problems exist at our organization. For that, we must get out and talk with our learners to determine where they are and what they need, just as we would for any other learning project where we hope to achieve real results.

For example, when preparing our initial solution for Title IX (the gender discrimination law) training, we conducted interviews and focus groups with stakeholders across the campus to determine what real pain points might exist for us to resolve. We heard several recurring themes throughout these discussions, including a few persistent issues that we felt we could realistically reduce through training. These points eventually became our learning objectives.

There are a number of analysis tools you may find useful in unearthing the real pain points at your organization relative to your next compliance subject. Those in the left column of Figure 2 are useful for discovering trends, while those on the right are helpful for revealing which trends are most persistent and widespread.

Once you've formed a list of needs, it's useful to prioritize those you feel are most persistent, important, and achievable through learning. If an

issue is important but caused more by incentive issues or a lack of appropriate discipline than by a lack of skills or knowledge, then it might be an issue for another group to address. As learning and development teams, we must focus our learning offerings on the knowledge and skills gaps we can realistically hope to affect.

If you're finding it difficult to identify rich learning opportunities, a fishbone diagram or similar tool that maps out issues in your organization can be useful. By creating a thorough breakdown of your pain points and their underlying causes, you can build a much fuller image of the potential training opportunities that exist. Once you've diagrammed all the potential causes and subcauses of your organization's most pressing issues, you should see the areas where focused training could create the greatest impact.

Using some combination of these tools, begin completing the "related learning needs" section

SUBJECT MATTER EXPERT TALKING POINTS

Subject matter experts are an irreplaceable resource on most compliance projects. Unfortunately, they also can be the biggest obstacle to creating learning that matters.

If you're dealing with SMEs who don't share your vision for relevant, high-impact learning solutions, their skepticism will be easy to spot. Conquering that skepticism is the first step to fixing bad compliance training.

Below are a few of the most common objections you may hear from hesitant SMEs during the analysis phase, along with some key talking points you can use to move the conversation forward.

SME: I don't have time to rethink our whole approach to training. Just take last year's course, add the notes I gave you, and send me the final product for review.

You: I understand completely. To save you time, do you mind if I talk to a few of your audience members? I can host a quick focus group, just to be sure there aren't any pressing needs we could be serving with this year's course. You and I can use their feedback to decide what we need to keep from last year's course, what we should add, and what we can cut.

SME: What do you mean, cut? It's all required!

You: You're right ... we certainly can't cut anything that the law requires. In fact, if you could share the source of the mandate with me, I'll take a look and make sure we're including everything that's asked of us. If we're lucky, the legal wording might allow more flexibility than we realized, allowing us to focus on what truly matters.

SME: You don't seem to understand. This is a compliance course. We do it every year. Not because we want to, but because we have to. Why do you want to waste all this time?

You: You might be right, or we might have a valuable opportunity here that we've wasted in previous years. A good course can actually change behavior, and this compliance mandate has given us the eyes of your entire workforce. Think of all the common mistakes, the complaints and confusion, the frequent questions flooding your inbox. If you help me identify your pain points, I can build a training course to address them.

of the compliance analysis form by listing three to five real learning objectives that will guide the rest of your work. Figure 3 offers guidance.

If you complete this due diligence and still find no real learning needs within the scope of your given compliance subject, that knowledge is useful. As we will discuss in the design phase, there are a wide range of potential formats for meeting most compliance requirements.

If you're sure that your audience has no real learning needs for you to address, there's no reason to waste their time or yours. Instead, you can select an alternative method to make the learning solution as quick and painless as possible, while still meeting the demands of the law.

Achievable Behavior Change

Good learning can change behavior. If that weren't true, there'd be no reason for compliance

laws to mandate training and no reason for the learning and development profession to exist at all. If we can't show that we change behavior, why would anyone continue to invest time and money in our services?

Unfortunately, proving change can feel impossible, especially when it comes to interpersonal soft skills. How do you know, for example, if a sexual harassment course worked? Would you see more registered complaints because learners are now aware of their rights and reporting channels? Or would you see fewer complaints because learners are now better at moderating their behavior and avoiding common harassment actions?

If you build a course on valid but subjective goals, these kinds of questions make it nearly impossible to accurately evaluate your program's effectiveness. The solution, instead, is to start with specific measurement targets in mind and build your course to hit them.

FIGURE 2: DATA SOURCES AND USES

Good For Generating Theories	Good For Validating Theories
SME Interviews	Help Desk Records
Senior Leadership Interviews	Incident Logs
Job Shadowing	Key Performance Indicators
Audience Focus Groups	Audience Surveys
Organization or Industry Reports	Test Cases

► Train the Trainer

Imagine you were tasked with creating a new Family Educational Rights and Privacy Act (FERPA) training course for a college campus. FERPA is a federal law mandating the privacy of student educational records. It includes a training requirement for all campus personnel who have access to student data.

While working with stakeholders, you uncover a real learning need: Many student-facing staff members are refusing to provide important information to students, citing FERPA constraints, despite the fact that the law allows them to provide the information in question. These FERPA

“false positives” are wasting time and hindering the quality of student customer service, which represents a pressing need for your organization. In its last customer service survey, in fact, student satisfaction with this team rated below 50 percent.

After collaborating with the SME and other stakeholders, you believe that your training could have a real impact on your organization's bottom line by reducing these false positives. But what data could you eventually use to demonstrate whether that impact was achieved?

- Is it reasonable to expect a rise in student satisfaction on the customer service survey following the implementation of this course? If so, what information do you need to include in your course to maximize your chances of achieving this impact?
- Would it be convincing enough to your stakeholders, who already believe in the problem, simply to show that your course has increased participants' knowledge

AS LEARNING AND DEVELOPMENT TEAMS, WE MUST FOCUS OUR LEARNING OFFERINGS ON THE KNOWLEDGE AND SKILLS GAPS THAT WE CAN REALISTICALLY HOPE TO AFFECT.

FIGURE 3: DESIRED BEHAVIOR CHANGE

RELATED LEARNING NEEDS <i>Related to this subject area, what real, observable learning needs exist within your organization?</i>	Desired Behavior Change	Impact	Learnability
	More efficient and timely processing during security screening.	High - Low	High - Low
	Improved customer service throughout the security process.	High - Low	High - Low
	More effective communications to inform customers before and during screening.	High - Low	High - Low
		High - Low	High - Low
		High - Low	High - Low
Overall, how would you rate these learning needs?	Real & Relevant	↔	Mostly Irrelevant

regarding false positives and the real requirements of the law? If so, a simple Kirkpatrick Level 2 evaluation may provide all the metrics you need. Simply quiz your staff before training to measure their ability to spot false positives, hit those scenarios hard within the course, and conduct a variation of the same quiz to demonstrate knowledge transfer after the course is done.

Options for evaluation and measurement are nearly limitless, although Kirkpatrick's levels of evaluation provide a useful guide for those looking for inspiration. Ultimately, for every objective you add and every line of script you write, you should have a clear idea of which metric it intends to move. If you have a learning point that you can't tie to a specific measurement, consider cutting it from the course. If it isn't worth measuring, it likely isn't worth teaching.

By focusing on measurement from the start, you guarantee a spot for real behavior change at the heart of your learning experience. To help, the compliance analysis form includes space to record exactly what measurements will be used to evaluate the effectiveness of the course. This not only provides a useful lens for understanding and prioritizing your objectives, it also gives you time to capture a snapshot of any relevant data before you begin, enabling you to compare the same sources after the training initiative and hopefully demonstrate a difference.

DESIGN

In the design phase, the instructional designer will balance the compliance requirements and the learning needs captured during the analysis phase to create an approach to the content that meets everyone's needs.

Specifically, before we begin writing scripts or developing tutorials, we will work with the SME to answer two primary questions:

- What delivery format is the best fit for this compliance subject?
- What content points will we include and emphasize?

The answers to these questions will largely define the final course, while also allowing the flexibility needed to build a solution that engages our learners.

What Delivery Format Will You Use?

The words *training* and *learning* can mean many different things. I may learn from reading a TD *at Work* issue, receiving one-on-one feedback after a mistake, observing my peers, sitting in an eight-hour training class, watching an online video, or clicking a link and visiting a policy page. These actions define learning and development in a modern organization. And depending on the specific compliance mandate in question, any of these actions may be enough to satisfy your compliance requirements. Given all that flexibility, why would we assume that a full course or tutorial is always the best solution?

A LEARNER'S ATTENTION SPAN IS A VALUABLE AND FINITE RESOURCE, AND WE ARE ITS STEWARDS.

For example, if an analysis reveals no real, actionable learning objectives and a compliance mandate requires simply that "all employees are informed of their rights and responsibilities," why not simply embed the governing body's webpage in your learning management system and have the learners attest their understanding using a one-question quiz? Not only would you save your learners time and earn back a little of their trust, you would also free learning and development resources to focus more energy on courses where real learning needs exist.

A learner's attention span is a valuable and finite resource, and we are its stewards. That means we have an obligation to make the burden of our courses as light as possible. At the same time, we must include enough information so that our SMEs and stakeholders remain confident that we are meeting their full legal obligations. Serving both these needs can feel like a precarious balance, the information you uncovered when completing the compliance analysis form can make it much easier to identify the best possible compromises, as shown in Figure 4.

When completing the form, you found the primary source of the compliance mandate and explored whether its training requirements were

vague and open-ended, or detailed and tightly defined. Then, you searched for the real learning needs at your organization and ranked their overall importance and learnability. By doing all this, you have sketched out the details you need to tailor the perfect solution for your learners and stakeholders.

While the nearly infinite variety of potential modes of learning means that no two perfect solutions are likely to look the same, this simple framework can help you identify the kind of solution that will best balance the needs of all your learners and your stakeholders for any given compliance project.

What Content Points Will You Include?

It's useful to collaborate with the SME to lock in the basic content points that your course will address before moving on to the development stage. Just as we highlighted with the balancing needs framework in Figure 4, the aim here is to meet

TO INCREASE THE CHANCE OF LASTING LEARNING TRANSFER AND BEHAVIOR CHANGE, WE MUST DELIVER THE CONTENT IN A FORMAT THAT ENGAGES AND INSPIRES OUR AUDIENCE.

everyone's requirements with as few content points as possible.

You may find it useful to capture these points in a formal design document for your stakeholders' review. Using a simple bullet list, a mind map, or any other format you prefer, this document should include all the learning points that will be included to address the course's learning objectives. This isn't the same as a full script or storyboard. It's a high-level outline that includes a minimum amount of detail. Too much detail at this stage will slow down the design process and unnecessarily restrict your creativity during the development phase. But

FIGURE 4: BALANCING NEEDS FRAMEWORK

Compliance Requirements:		
Strict and specific	Requires measurable training with tightly defined objectives, but lacks actionable needs. Keep these tutorials as short and painless as possible.	Requires measurable training with tightly defined objectives, and real needs are present. Use all your skills to make these online tutorials as engaging and transformative as possible.
Loose and vague	Calls for "informing" or training without specific requirements; lacks actionable needs. Consider nontraining options, like policy acknowledgement forms to minimize the burden.	Calls for "informing" or training without specific requirements; real needs are present. Consider beyond-training options, like comprehensive communications campaigns to spark conversation and elicit change over time.
Learning needs:	Unactionable or irrelevant	Learnable and relevant

include too little detail, and you run the risk of shocking the SME when you deliver the full script or storyboard later, likely entailing costly rework.

When you finish your design document, you can gauge how well you have achieved this balance by reviewing each individual learning point to ensure it meets the SMARTER criteria outlined below. If a learning point fails one of these seven criteria, consider rewording or cutting it before sharing your design document with your stakeholders:

- *Specific.* Each learning point should be clearly focused and complete. It should be able to stand alone as a complete skill or unit of knowledge.
- *Measurable.* If you can't at least imagine how the successful transfer of a specific learning point could be measured, it may not be actionable enough to include.
- *Achievable.* If the content point is too dense, abstract, profound, or foreign to be absorbed by your audience in your intended format, consider cutting it.
- *Relevant.* If a specific learning point won't feel real or relevant to your audience, consider cutting it or replacing it with a more relatable variation. For example, if you are introducing sexual harassment to a factory audience, only use learning points that resonate in a factory setting.
- *Traceable.* Ensure that each learning point you include can be easily traced back to a specific compliance requirement or learning need that you unearthed during the analysis phase.
- *Efficient.* Use the smallest number of words possible to capture the essence of each learning point. If the content already exists in the form of a policy, website, or existing training course, linking directly to that content can show your stakeholders what you intend to include. By keeping your point short and high level, you maintain your creative freedom later in the development phase.
- *Reviewable.* Include enough information for the core point to be understood and confidently reviewed by all stakeholders. Legal wording, for example, can be highly contentious. If you feel a specific learning point may have significant legal connotations, include it word for word in

your content outline so your stakeholders can review and debate the wording before you move any deeper in the process.

By the end of the design phase, you and your stakeholders will have a clear idea of all of the content your course will include. In the next stage, we will focus on delivering the content in a way that engages the audience and elicits lasting behavior change.

DEVELOPMENT

With a thorough analysis and design phase now complete, the remaining three stages of the ADDIE model largely take care of themselves. The care and attention that you have paid to your content up to this point in the process will pay dividends throughout the remainder of the project. However, there are some important strategies that you can execute during the development and implementation phases to ensure that your outstanding content translates to the expected outcomes.

To increase the chance of lasting learning transfer and behavior change, we must deliver the content in a format that engages and inspires our audience. If we were compliance engineers in the previous stages, focusing on requirements, constraints, and the underlying structure of our courses, we are transitioning in the development phase to the role of compliance artist.

Your primary goal now is to connect with your audience. Depending on your organization's expectations, your audience, your content, and your own strengths and weaknesses, your method of engagement can take a number of different forms, including any combination of those shown below.

Vignettes. Two- to three-minute stories—told through video, animation, stills, or other multimedia—can engage your audience and facilitate intuitive learning. Vignettes can be woven together to enhance a traditional tutorial, or issued as stand-alone episodes to sustain interest in your subject over time.

Plot-driven course structure. Instead of adding short stories to spice up a traditional tutorial, create a “feature-length” story that ties your learning objectives together in a single, overarching experience. For example, if designing a Title IX solution, you could cast your learner as a

dean of students, called in the middle of the night to investigate a troubling case of potential sexual harassment. As the character investigates and the story unfolds, the narrative structure keeps your audience engaged. Even more important, the natural flow of the story allows you to place your learning objectives in a real-world context, making them far more likely to stick with your learners.

Interactive branching. If the law or a SME requires the inclusion of content that doesn't tie to any desired behavior change, branching can be a great compromise. Create multiple paths through your course to provide specific required information to specific roles, without burdening your entire audience with information that may not apply to everyone. Alternatively, build a simple interaction that allows users to explore "bonus" content at their own pace. Or simply pause the flow of the course, embed a policy on the screen, and prompt your users to read the text and click next when they are ready to continue.

With these solutions in place, the required content is still available to all those who need it, without bogging down the flow of the course or bankrupting our audience's attention span. Also, if you give your learners the agency to explore the content on their own terms, they are far more likely to invest in all your content and discover the points they actually need to learn.

If none of these approaches suit your needs and circumstances, try experimenting with other methods that feel like a better fit for you. By identifying your unique voice as a learning artist, you can build connections between your content and your audience that achieve your desired outcomes.

IMPLEMENTATION

Now that you've built your masterpiece, you must deliver it to your audience members in a way that wins their attention from the start. If not, your content will be lost in a sea of bad compliance courses from which your learners expect to learn nothing at all.

To earn your learners' full engagement, you must signal that this course is real, relevant, and worthy of their time. If your organization houses a corporate communications team,

consider leveraging their expertise to build a comprehensive communications campaign around your course or tutorial. This helps to sell your course and win attention. If real learning needs are present, sustained communication before, during, and after the training window will greatly increase your chances of achieving lasting behavior change.

Even if you don't have the time or resources for a full communications push, there are a number of simple tips for differentiating your course from the pack.

Name your course with care. First impressions are everything, and the first impression of your course often comes through its title. Don't call your course "FERQ Mandatory Compliance Training Initiative 2016/17" unless you absolutely have to. Instead, use your title and your course description to show learners what's in it for them.

Package your course attractively. If you're housing the course in a learning management system, explore your options for building an engaging, attractive landing page. If possible, use still images, video, or dynamic writing to "sell" the course to learners from the moment they arrive on the site. They may be required to take the course, but we must win their willing buy-in if the course is to capture their attention and achieve real learning.

Emphasize learning over compliance. If you have space to include a course overview and objectives, be sure that everything you write revolves around behavior change and not compliance requirements. If possible, in fact, don't mention compliance requirements at all in the course messaging.

Your learners don't care which law has compelled them to take this course or which policy they will be in compliance with after completion. Instead, we must convince them to care about the subject on its own merits. We must persuade them that the course isn't about mere compliance, but about relevant and meaningful skills and knowledge.

Underscore the need. The best way to get an audience to invest in your learning is to demonstrate that it's needed. By completing the full analysis phase and crafting your learning objectives from the results, you are well prepared to explain the real needs behind every aspect of your course.

If you have compelling quotes from focus groups or stakeholder interviews or hard

numbers from relevant metrics, consider including that information in your course description and related messaging. If you can show a real need, not just globally but locally to your organization, your learners will enter the course with heightened interest and a greater willingness to learn, both of which are essential to any successful learning outcome.

EVALUATION

To complete a successful evaluation phase, you need only follow through on the evaluation plan you created in the analysis phase. The only bad kind of data is no data, so get out and measure your audience's response to your learning early and often.

In addition to conducting learner evaluations immediately following the course, check in with your audience at regular intervals, and monitor any hard metrics your compliance program may influence. If you begin to see positive changes, capture the numbers and share them with stakeholders. Consider adding the most useful statistics to a running dashboard or annual team report. At a minimum, keep a few compelling points in your back pocket to help persuade your next reluctant SME that good training is worth the time and effort.

If you don't notice any changes, share that with your SMEs too. Due to the many variables surrounding human cognition and behavior, not every learning experience will achieve its desired outcomes on its first attempt. Don't be afraid

REFRAIN, REJECT, REPORT: A CASE STUDY IN LIVE-ACTION VIGNETTES

After a full analysis and design phase for a new compliance training program on sexual harassment, discrimination, and violence, we identified three worthy learning objectives beyond the standard requirements. Specifically, we saw a need to help learners *refrain* from inappropriate comments that could make others feel unsafe or unwelcome, *reject* and effectively correct the inappropriate comments of others, and promptly *report* any potential threats to student safety.

Along with these learning objectives, the analysis phase uncovered a number of true case studies from campuses across the United States. We decided to develop the entire course around these compelling stories, beginning each module with fictionalized live-action vignettes that contextualized and underscored the need for each learning objective.

- *Episode 1: Refrain.* Sarah recounts her experience with a former supervisor who seemed to be interested in more than work. This professor may not have even realized that he was making Sarah uncomfortable, but his inappropriate behavior had a lasting impact on her academic career.
- *Episode 2: Reject.* Peter recalls a former supervisor who didn't know where to draw the line. Peter's inability to intervene reveals the difficulty many face in confronting and rejecting the inappropriate behavior of others—especially colleagues and supervisors—and illustrates the costly impact of silence.
- *Episode 3: Report.* Sheila remembers a former student, Susan, and a relationship that appeared potentially abusive. Despite her fears, Sheila ultimately decided there was nothing for her to report. Several years later, she wonders whether she did enough to protect her student.

Rather than full re-enactments, each vignette featured a single actor sitting in front of a black backdrop, recounting the story as it happened. To prevent the stories from lagging, we cut between the actors and plain-text slides that described key events and advanced the plot.

In addition to the efficiencies this approach provided for casting and editing, the format offered an engaging, quick, easy-to-repeat structure for all three stories. As an added benefit, each video functioned as stand-alone content, enabling us to continue the conversation and engage a broader audience through an online "Innovation Knows No Gender" campaign.

TO EARN YOUR LEARNERS' FULL ENGAGEMENT, YOU MUST SIGNAL THAT THIS COURSE IS REAL, RELEVANT, AND WORTHY OF THEIR TIME.

of this failure. Instead, investigate all negative responses and trends openly, and use them as opportunities to improve the learning experience in its next iteration.

The recurring nature of many compliance requirements, combined with frequent changes to policies and laws, means that you will likely have another chance with the content in the near future. With the right data, good or bad, you'll start the next project in a much stronger position.

CONCLUSION

There are valid reasons compliance training has historically suffered. As an industry, we have a growing list of required subjects that we must address with limited time and resources. It's only natural, in such an environment, to give vocal SMEs what they want, get their sign off, and move on as quickly as possible to the next project in our queue.

This is an understandable position, but it's not sustainable. If learning and development is to remain an integral part of the modern organizational culture, we must seek effective compromises between our learners' desires and our legal requirements, instead of giving deference to compliance-heavy, learning-light content.

We can fix compliance training and ensure the long-term health of our industry by serving two central tenets in every learning experience we create:

- Learning only matters if it changes behavior.
- The learner is our primary stakeholder.

By following the tips in this *TD at Work*, you can incorporate these two tenets in any project, at any organization. The result will be relevant, engaging programs that generate better outcomes for you, your learners, your stakeholders, and your organization's bottom line. And that's when compliance training really starts to matter.

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Compliance Analysis Form

SUBJECT TITLE

AUDIENCE

SOURCE

*Law or policy number,
guidance letter, etc.*

CORE REQUIREMENTS

*What learning
objectives or delivery
formats are specifically
required by the law or
policy to which you are
complying?*

STAKEHOLDERS

How would you rate
these requirements?

STRICT & SPECIFIC



LOOSE & VAGUE

Subject Matter
Experts:

Legal Team:

Communications
Team:

Training Manager
and Colleagues:

Senior Leadership
and Project Sponsors:

**SPECIAL
REQUIREMENTS**

*Varying schedules,
audience subsets,
refresher options,
legal signature
requirements, and
so on.*

Compliance Analysis Form (Cont.)

RELATED LEARNING NEEDS

Related to this subject area, what real, observable learning needs exist within your organization?

Desired Behavior Change	Impact	Learnability
	High - Low	High - Low
	High - Low	High - Low
	High - Low	High - Low
	High - Low	High - Low
	High - Low	High - Low

Overall, how would you rate these learning needs?

Real & Relevant ◀

→ Forced & Irrelevant

MEASURABILITY

What measures could you use to show whether or not your learning achieves the desired behavior changes listed above?

- 1.
- 2.
- 3.
- 4.
- 5.

ANALYSIS ASSESSMENT

Building on everything you've learned in the analysis phase, in what quadrant would you place this compliance project?

Learning Needs:		
RELEVANT		
IRRELEVANT		
Compliance Requirements:	SPECIFIC	VAGUE