



EXPERT PERSPECTIVES ON
CLOSING SKILLS GAPS

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INTRODUCTION

Preventing, Identifying and Closing Skills Gaps

Work is changing, but in many cases, we aren't keeping up. According to the World Economic Forum, a little over half of workers around the world will need “significant re- and upskilling” by 2022 — just two years from now. New and changing jobs require new and changing skills, and it's up to training professionals to lead the way.

Definitions for the term “skills gap” range from an individual employee's gaps in required skills to gaps across teams, organizations or even industries. Gaps also exist across industries, functions and types of skills; for example, we recently conducted research with BizLibrary and found significant soft skills gaps among survey respondents, no matter where they worked or who they were. It's important for learning and development (L&D) leaders to be able to recognize where these gaps exist, determine how to close them — and then do it.

This e-book explores the perspectives of training experts: their insights into how to understand skills gaps and their causes, how to prevent skills gaps from occurring by effectively onboarding new employees, and strategies for closing skills gaps using various training modalities. Using their tips in your organization will enable you to evaluate and bridge skills gaps across employees and teams.

I would love to hear your perspective on this collection of articles from TrainingIndustry.com's community. Feel free to reach out to us at editor@trainingindustry.com.



Ken Taylor, CPTM

President and Editor-in-chief, Training Industry, Inc.

CHAPTER 1:

WHERE DO SKILLS GAPS COME FROM?

The Underlying Issues of Skills Gaps: How to Address What Really Drives Performance



Chris Davis is senior director of business consulting and transformation at [GP Strategies](#). He has more than two decades of experience [helping companies](#) drive profitability, cost reduction and process improvement.

Sales in the specialty widgets department have dropped at Acme Widgets. While a steady stream of shoppers enters the store looking to satisfy their specialized needs, they are purchasing fewer high-end and customized widgets, especially since Acme introduced its revolutionary new wonder widget line.

After examining the data, the company's executives conclude that their associates have a skills gap. They call their training partner and ask for a more robust product and sales training initiative tailored to wonder widgets. The associates take the course and apply it to their jobs, but even then, specialty widget shoppers are leaving the store empty-handed. What went wrong?

When is a skills gap not a skills gap? Probably more often than you think.

Sometimes, it's not the skill that's missing but the understanding of how to apply that skill. Other factors might be at play that impact the efficacy of the skill. If you jump immediately to "skills gap," you may miss underlying issues that continue to hamper your progress.

Determining if It's a Skills Gap

It's important to holistically examine each new initiative that enters your training organization. While it's easy to develop the habit of fulfilling orders, it helps to take a step back and ask a few questions:

- What evidence is there that this is a skill gap?
- What business metric makes you think that it's a skill gap?
- Have things changed that you may not be considering? Has the store been rearranged, has equipment been moved or has software been updated?
- Are some employees performing at a higher level than everyone else? Do they have a skills gap?
- What are top performers doing differently than everyone else, and how can you harvest that difference and pass it along to others?

- Are some employees performing at a higher level than everyone else?
- If it weren't a skills gap, what else could it be?

It's common to find a high-performing tier of employees in every organization. One way to look at them is that they have taken all their training to heart. Another is that they have the same training as everyone else but have found ways to work around the other issues impacting job performance.

Some people are constrained by the box, while others are not. If that's the case, pumping more product knowledge or sales skills into your team may not move the needle, but identifying new ways to work within policies and procedures may.

Six Key Factors Impacting an Employee's Ability to Apply Skills

If you're having trouble meeting business goals, a gap does exist. But before you can fill it, you must understand it. Here are six critical areas to examine before you assume it's a gap in skills.

“If you're having trouble meeting business goals, a gap does exist.
But before you can fill it, you must understand it.”

1. Information

Do your employees have ready access to all the relevant data they need in order to apply their skills? In the case of specialty widgets, there's always going to be a customer who comes in with an unusual problem that requires deeper product knowledge. Can your employees access the information they need to close that sale quickly and easily?

Is it a business priority to sell custom and high-end widgets? Do the associates know their role in driving sales in these categories? Do they have a clear path to selling these categories, or are there obstacles in the way? Do the associates have partners in selling these categories? Is leadership informing them of what they need to do and why they need to do it and then holding them accountable?

2. Resources

Do employees have the right tools and resources available to them? Are they supported by effective information retrieval systems, leadership and other employees when they need help? Or are customers left hanging?

3. Knowledge

Do associates fully understand what the job requires? Have you trained them in the first place, not just with product and sales knowledge but also with the practical tasks of their job? Or have they been over-trained — inundated with too much knowledge they don't need? Not all knowledge has equal value; what do they really need to know in order to be effective?

“It's one thing to understand the skills and another
to have the potential and time to apply them.”

4. Capacity

Are employees matched to their jobs appropriately? It's one thing to understand the skills and another to have the potential and time to apply them.

5. Incentives

Is the employee incentivized to produce the outcome you want, or is the incentive counter to your goals? If a widget salesperson is rewarded for selling high-end wonder widgets and not widgets from other lines, they will focus on wonder widgets, and customers may not be informed of all the options available to them.

6. Motivation

Are the employees' personal goals aligned with the organization's goals? Is there a mismatch between individuals and their roles? Is the organizational culture at odds with individual success?

Finding the Missing Link

The barrier to your organization's success is not always a skills gap. As most L&D professionals know, there are often barriers between individuals and their perceived connection to business results — their ability to resonate with their role. It's not always about hiring different people or delivering more skills. Just as often, it's about delivering tools, knowledge and resources that form an inspired connection between the individual and the organization's goals.

There's a lot of talk about building “the workforce of the future.” If you've been around long enough, you know that building the future workforce is an evolutionary process. It helps to step back, see the big-picture view and look beyond skills gaps to make sure you've built the very best “workforce of today” that you can. After all, that workforce is the foundation for tomorrow's. And you want that foundation to be solid.

“Building the future workforce is an evolutionary process.
It helps to step back, see the big-picture view.”

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Employee Performance: Is the Skills Gap Due to Environment, Behavior or Leadership?



Sara Verdi is a content writer for [Roundtable Learning](#).

In [PwC's 22nd annual global CEO survey](#), “four out of five CEOs bemoaned their employees’ lack of essential skills and identified that as a threat to growth.” With a worldwide skills gap that was one of the top three concerns of 79% of the CEOs surveyed, what can companies do?

A company’s growth is directly linked to employee performance. If it is apparent that there is a skills gap within the company, business leaders and managers are responsible for examining whether it is due to the work environment, employee behavior or leadership and then taking the correct measures to close it.

A great way to begin this examination is to ask the right questions. Using aspects of Gilbert’s [behavioral engineering model](#), let’s analyze the work environment and employee behavior to determine the root cause of the skills gap.

Gilbert’s Behavioral Engineering Model

In 1978, Thomas Gilbert published a study promoting performance analysis as a means to identify the root cause of performance problems. This study asserted that employee performance is affected by three variables: information, instrumentation and motivation. Using this model, you can first examine variations regarding the work environment. You can start with information and ask questions such as the following:

Information

- Do employees have all of the information they need?
- Do they know what they are supposed to do? Are the expectations clear?
- Are there metrics for employees to know when and what to improve?
- Are they receiving [timely feedback](#) on their work?

Even if you identify a gap in the first question, continue until you have asked all questions within this information phase. A thorough examination is important to ensure that you address each issue.

Next, discuss instrumentation and then motivation:

Instrumentation

- Do employees have the tools they need to complete the job?
- Do they have easy access to help or resources?

Motivation

- Are employees motivated to do the job?
- Are they fairly compensated for their work?
- Do they feel valued?
- Do they feel like they are making a difference?

Once again, if you find issues within the environment, do not stop there. You must repeat the process with the employee behavior section of the model. Here are some examples of questions to ask:

Information

- Was training designed to match the requirements of desired performance?
- Are employees appropriately matched with their positions?

Motivation

- Do employees want to be doing this work?
- Are they overwhelmed or unaware of how much work their position requires?

Instrumentation

- Are employees' aptitude or intelligence appropriate for their position?

Leadership and Training

If you do not encounter the root of the gap within either the environment or employee behavior, it is time to dig deeper. Conducting interviews and surveying employees is a great way to gain feedback directly from the source. When doing so, however, it is important to consider the impact leaders may have on employees.

“Conducting interviews and surveying employees is a great way to gain feedback directly from the source.”

Managers and leaders may even benefit from flipping the questions to reflect on their own work. For example, are they providing the necessary information or feedback for employees to succeed? What can they do to support employees?

The quality of training could also contribute to the skills gap. It is important to review training and make certain that courses include [strong learning objectives](#) and measurable assessments. Further, are you delivering training through the best modality? For example, are you requiring employees to take online courses on their own time when they may be better served with instructor-supervised courses? Rather than completing training on their own, many learners benefit from an environment where they can ask questions or seek guidance.

In addition to determining the best modality, is there a way to measure the success of a training program and to reinforce the skills employees learn? At the end of each course, is there an exam or skills check to ensure employees have learned and understand what the course intended to convey?

What's Next?

Once you have answered these questions, it is important to act on the findings. This process may have helped you discover the root of the skills gap and employee performance problems, but now, it is time to close the gap. Hiring and retraining are two possible solutions.

For example, you could invest in training programs to promote new skills or upskill employees, or you could invest in [leadership training to help create a positive workplace culture](#). Incentivized training is also an excellent solution for working toward closing a skills gap and creating a [learning culture](#). Managers and leaders should encourage a knowledge-seeking environment and reward employees for self-improvement, continuous learning and skill development.

You can also evaluate areas with gaps and determine if hiring a specialized person or team would help fill the gap. If budgeting for hiring is an issue, you can partner with local universities to create an [internship](#) or [apprenticeship](#) program. These programs

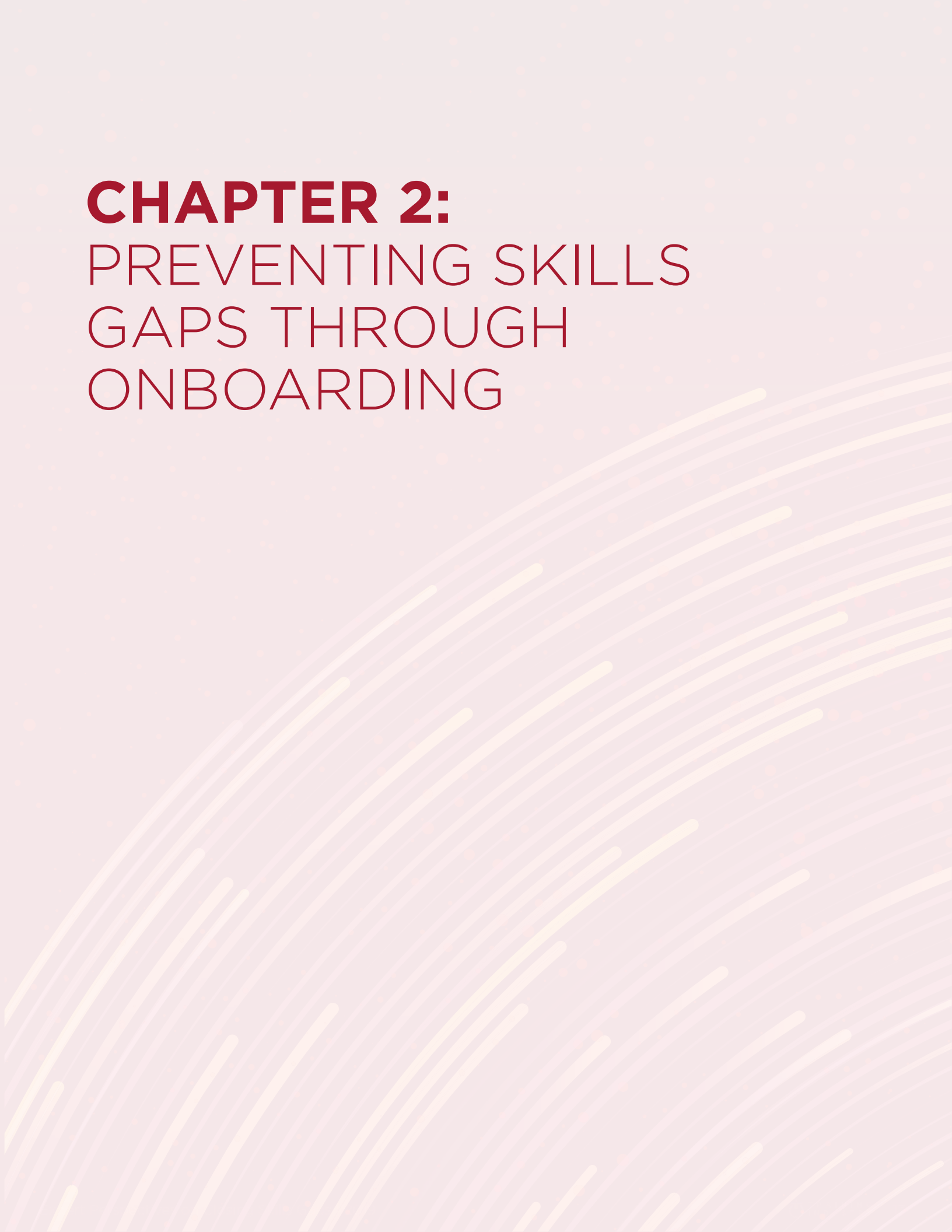
simultaneously work toward filling the gap while giving students professional work experience — a win-win!

Get to Work!

To wrap up, we've covered Gilbert's behavioral engineering model and discussed factors that can contribute to poor employee performance and skills gaps. It is vital to the success of your company to identify where your skills gap is occurring and how to close it. We've outlined some of the tough stuff; now it's your turn to ask the right questions and get to work.

"It is vital to the success of your company to identify where your skills gap is occurring and how to close it."

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CHAPTER 2: PREVENTING SKILLS GAPS THROUGH ONBOARDING

Prevent a Skills Gap: Onboarding Your Workforce



Tony Johns is a learning application specialist for [Brainier](#). He has been helping companies educate, engage and empower their employees and customers for over four years through project management, learning strategy and learning technology consultation.

It's common knowledge that with [digital transformation](#) occurring in the global workplace, there is a growing skills gap. The most forward-thinking organizations will undoubtedly schedule strategy meetings focused on how to remedy this situation. This sudden organizational self-awareness, however, can lead to conflict between departments. Without a strategic [onboarding](#) process, the potential that a talent acquisition specialist sees in a candidate may not be realized, despite the efforts of a training specialist.

To succeed, modern organizations need to provide efficient — and, more importantly, engaging — onboarding experiences for their new employees. They also must continually develop their workforce to stay relevant in an ever-changing environment. While the term “onboarding” can mean many things, in this case, it is the process of going from a “new-hire” to a fully contributing team member.

Onboarding Is Crucial

Organizations must ramp up new employees quickly so that they can contribute soon after their hire. There is an inherent concern for any manager that the new hire is a good fit for the organization and an expectation that they contribute right away. However, not every new hire can or should “hit the ground running” until they develop a sense of the culture they have just stepped into. Alternately, new hires, whom may have turned down other offers in this [competitive job market](#), need to validate their decision to choose their new company. They need to see how their abilities fit into their organization's mission and overall values and how it will support them to succeed in this new role.

During the first 45 days of employment, turnover rates can be [as high as 20%](#), as people find that their new environment isn't a fit for them. Without sufficient planning, the “hand-off” to the learning and development (L&D) department can undo the efforts of the recruiting department.

Employee engagement studies show that employees' first day is typically the highest point of engagement for their entire tenure at the organization. Organizations should try to take advantage of this “[shiny new job enthusiasm](#).” Human behavior

psychologists tell us that the most successful behavior changes often occur with a big change in environment, such as relocating to a new city or beginning a new job.

“Employees’ first day is typically the highest point of engagement for their entire tenure at the organization.”

Crowdsourcing Your L&D

Many organizations are seeing greater engagement when they use social learning. Users can comment on and “like” each other’s posts as well as share and suggest additional, relevant content. This new collaborative nature of learning can shorten the onboarding experience and create a repository of best practices. It also strengthens the network of mentors within an organization and can specialize them based on seniority, location and especially task purposes. This participation by the general workforce can also reduce some of the burden on the L&D department to determine what a complete curriculum should look like.

Beyond Week 1

A few weeks in, continual touch points with the new employees help solidify the knowledge they have (hopefully) gained thus far. This process could involve incorporating different types of learning assignments into the learning management system (LMS), perhaps metering the assignments so that they must complete some within the first week of their employment, others within the first month and others within the first 90 days. This approach helps learning stick over the long term and enables each module or curriculum to build on the previous one. Many organizations are even tying their learning goals with overall performance evaluations, such as requiring documentation that employees took steps to expand their skill set or develop soft skills, such as through leadership courses.

“A few weeks in, continual touch points with the new employees help solidify the knowledge they have (hopefully) gained thus far.”

The Importance of Communication

The first six months are critical in bringing an employee to competency and performance. After that period, organizations should keep communicating about opportunities to develop. An important but often neglected part of executing ongoing learning is making it a priority. Too often, development activities are pushed aside in the interest of day-to-day duties, which delays the process of accomplishing the employee's goals and devalues the learning process. Finally, these programs should also help employees understand their future with the organization, via [career pathing](#) and continual skill development.

Where Do We Go From Here?

[Much has been written](#) about the future of the job market and the yet-unwritten titles and descriptions that will rise in the near future. Many of these roles will be filled by people currently in the workforce, who will face an immediate need to learn how to be successful in their new roles. The remainder will be filled by people who are not currently in the workforce, presumably with no baseline knowledge of how to succeed within the organization, much less the new position. To find success in this great new work landscape, it is imperative for organizations to craft a thoroughly modern learning environment, not only for the individual but for the future of the organization.

“To find success in the new work landscape, organizations must craft a thoroughly modern learning environment.”

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Use Design Thinking to Design New Hire Onboarding



Clare Dygert is the director of instructional design at [SweetRush](#).

The five-step process known as [design thinking](#) — empathize, define, ideate, prototype and test — is well known thanks to the work of IDEO and Stanford d.school, which have used it to design a wide variety of new products. And it seems like it would [work for learning designers](#), doesn't it? Good news: It does! Let's take a look at the whens, whys and hows of applying design thinking to one of your most common learning programs: new employee onboarding.

The process of designing a learning program isn't usually all that novel. You know what your business constraints are — that is, your budget and timeline — and, more than likely, they are tight. You will not be creating something the world has never seen before, right? You've probably received a directive like, "We need the new global onboarding ready to go by October," and you probably can, off the cuff, list the primary topics that the program needs to include.

Do you really need design thinking for that? Is there any value to gathering everyone to plan something you've done a zillion times already? Well, yes — especially in the case of an onboarding project, when:

- You have a large number of stakeholders with a broad variety of points of view — some of which may be in opposition to one another.
- You have an existing program in place, but you feel that the new version needs to be better, and you aren't sure what "better" means.
- Do they feel valued?
- Your audience for the program is "everyone."

Let's start with the **empathize** step. In general, [empathy in design thinking](#) means understanding your audience. You need to understand what your learners want to know, not what your stakeholders want to tell them. As learning designers, we have two challenges with this step: First, we might not regularly meet our audience. More frequently, we are told about them by the people who are asking for the training on their behalf, who have solid reasons for believing they know their audience — and who can be wrong.

“You need to understand what your learners want to know, not what your stakeholders want to tell them.”

There’s no substitute for talking to audience members directly. In the case of onboarding, you can tap into folks who are still new at the company — perhaps only a few months into their new position. When you do these interviews, it’s best to do a little talking and a lot of listening. Try not to guide the conversation; keep your questions as open as possible or even vague. Let the learner take the conversation where he or she wants it to go. The strategies you use in subject matter expert interviews to establish connection are probably not suitable here. For example, don’t chime in with examples or stories from your own experience. Your role is to listen.

You won’t be able to interview everyone in the audience, so how many people is enough? If your audience is huge and diverse (“the whole world” might actually be the audience for a global organization), try to [break it down into categories](#). In an onboarding project, think about where the learners are coming from. What kinds of experience do they bring? Interview a diverse group with members from each category. You’ll start to hear patterns, which is what you are looking for.

There are two practical strategies that can be helpful in gathering your audience information. First, if possible, include your stakeholders in the interview. The learners will probably say something that turns their assumptions upside-down. It’s more powerful if they can hear it from the learner’s mouth than to see it as a bullet point in a design document.

Second, if you can, schedule twice the time you think you need. If you finish early, it’s fine. But let the learners talk as long as they want. Taking the time pressure off helps you reach a deeper understanding.

The **define** step is considering business constraints and goals associated with your project, including the audience needs, desires, interests and motivators, and define learning objectives.

Because of the empathy step, you know who the audience is now. You know their skills, knowledge and mental models. During the [define stage](#), you can uncover what the business’ needs are. Then, the learning objectives will transform your learners from their original, untrained state into the employees the business needs.

Have you ever had a conversation with a stakeholder where he or she insisted on including a topic in a program because “We always do”? With design thinking, you can work through that conversation and come to a decision that is mutually agreeable and helps you achieve your desired outcome.

At this point you know your audience, you understand the business’ needs and you have learning objectives — or at least topics. Next, you’ll move to the **ideate** phase. [Ideation](#) can help you determine the modality (or modalities, in a [multimodal program](#)) to use, nail down your [narrative arc or storyline](#), and consider features or approaches.

At this stage, you’re trying to put as many ideas on the table as possible. A helpful strategy is to include diverse points of view in the conversation. Can you include someone who recently joined the company? What about someone who joined from a different industry? This person may bring an entirely new way of thinking to the conversation. You may also find it helpful to create smaller ideation teams made of people from various parts of the company. Non-siloed brainstorming is a boost to creativity and the generation of novel solution sets.

“Non-siloed brainstorming is a boost to creativity
and the generation of novel solution sets.”

Prototyping and testing are closely linked when you’re creating a learning experience. The [prototyping step](#) is an opportunity to try things out and fail early and often. It can be as simple as quickly drawing a visual [storyboard](#) to help learners imagine the final onboarding experience might look like and then asking for their feedback. If your solution includes e-learning, you can divide it into small “nano” modules, release one to current onboarding participants, and follow up with interviews or surveys. If you have the numbers to do it, you could try a couple of versions of the same module.

This step is also the [test phase](#). Although you can ask questions like, “How much did you love this module?”, there are other elements you’ll want to ask about. Think about the design challenge you faced in creating the learning, and ask questions that evaluate how successful your solution is with your learners. As in the empathy interviews, it’s a balancing act of asking what you want to know without pushing the respondents to reply in a particular way. Ask yourself whether the questions

prompt people to tell you that the learning experience wasn't successful. That kind of information is gold and will help you improve the program.

For the particular challenge of creating onboarding, the testing phase can and should extend into the future. Any learning experience has two points of evaluation: the learner's experience and the effectiveness of the learning. Considering the latter, you'll want to measure how effectively the program prepared learners to contribute to business goals — essentially, its return on investment. If your organization has an evaluation process in place, use it to assess your work.

You will likely find yourself returning to the ideate stage to refine parts of your learning experience, which is good! Design thinking is an ongoing process that loops back upon itself, gathering information and using that information to make incrementally better and better learning. When you use design thinking for learning, you may initially feel like these “back to the drawing board” moments are failures. Instead, they are a testament to your commitment to the best possible learning experience for your learners and a successful marriage of training and business achievement.

“Design thinking is an ongoing process that loops back upon itself, gathering information to make better and better learning.”

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6 Reasons Onboarding Doesn't Work



Sandy Stricker is a learning solutions architect at [Caveo Learning](#).

Onboarding doesn't work.

Those of you who have designed or led onboarding programs in your organization may shout out in righteous indignation, "Rubbish! Ours works perfectly!"

That may be the case; if so, I applaud you. But in my experience, most [onboarding](#) programs fail to do the two things they are supposed to do: prepare new employees to become productive quickly and help them see they've made the right decision in joining the organization.

Those failures come at a cost. Ineffective onboarding costs your company in money, time and resources. The new hire doesn't become productive and proficient quickly, which, in turn, can cause them to feel inadequate and begin to doubt their decision to join the company, lowering their engagement. In many cases, this situation causes the employee to leave, and you have to begin the cycle all over again.

Where do we go wrong, and, more importantly, how can we go right? Here are six reasons onboarding doesn't work and how to make sure it does.

1. It's Seen as a One-time Event, Not a Process

Here's the scenario: On their first day, you put your new hires through a full day of onboarding. You cover everything from the building layout to HR policies and benefits to how to log in and track their time. Yet on their first day, they've not had enough on-the-job experience to make sense of all this information or to know why what they're learning is important — or even if it is important. They've just had a lot of information thrown at them and are trying to make sense of it.

Onboarding should be a journey, with milestones throughout employees' first year. This approach gives them time to assimilate information and learn what they need, when they need it. It gives your new hires the opportunity to attain and demonstrate a certain set of skills before they are expected to master more complex knowledge. Consider a program that presents information in a more manageable format, over the

course of 30, 60 or 90 days, but also consider providing developmental opportunities throughout the employee's first year.

“Onboarding should be a journey, with milestones throughout employees' first year.”

2. There's Too Much Emphasis on HR Topics and Not Enough on Culture and Expectations

Information such as health benefits and policies is important — but all in due time. On their first day, employees don't need to know everything about a stock purchase plan that they can't participate in for a year.

The goal of onboarding is to help new employees understand why what they're learning is important. Explain what's expected and not expected of them in the first 90 days, both in terms of job performance expectations and personal expectations. It's also important to help them understand your company's global strategy and direction. We all want to have a clear understanding of where we're going and how we're contributing to the company's objectives and goals, but few companies include that information in their onboarding.

3. It Tries a One-size-fits-all Approach

In most companies, there is a single onboarding program that every new hire goes through. But does every person need the same information? Everyone doesn't need a personalized program, but it's important to think about the persona of your employees and how you balance delivering a consistent messaging with flexing to different personas. The vice president doesn't need the same information as the person working the IT support desk. Determine what's important as a foundation for all employees and what's important to add to the program for employees in a particular role, business unit or geographical location.

“Think about how you balance delivering a consistent messaging with flexing to different personas.”

4. There's no Plan to Use Technology

Is your onboarding program a series of PowerPoint slides from your human resources (HR) department? Is there a script that managers follow every time they hire a new team member? Or, are you using the available technology to deliver your onboarding program?

You likely have a [learning management system \(LMS\)](#); use it. An LMS typically has the capability of assigning learning when a new hire is added to the system. Building your onboarding program into your LMS ensures that new hires have access to the information and tools they need from their start date.

There's a caveat here: Make sure all new hires will be in the system and have access on their first day. Nothing says "We weren't ready for you!" like making employees wait four days to complete their day 1 activities. If it isn't feasible for them to be active in the LMS on their first day, then don't assign to-dos for that day.

5. The Wrong People Are Responsible for It

A new employee shows up to work and is paired up with a "buddy" who will "onboard" them. But, the buddy is too busy, doesn't understand why it's so important and, more importantly, doesn't want to do it in the first place. Sound familiar?

Having a buddy or mentor who can work with a new hire on an ongoing basis isn't a bad idea, but you should make sure that the buddy has the skills, knowledge and enthusiasm to do it. And don't forget to include the new employee's manager, who should have a part to play in welcoming his or her new team member to the company and to the team.

6. It Fails to Consider Change Management

Starting a new job is a big change — an exciting one, but a change nonetheless. Many onboarding programs fail to recognize this fact. Think about the new team member who comes in on her first day, both excited and nervous to start this new chapter. Despite appearing confident during the job interview, she inevitably has doubts about her ability to perform and wants to make a good first impression and contribute in a meaningful way, right away. New team members need encouragement

and reassurance, and they need to believe that others feel they have what it takes to succeed. Help by guiding them to let go of where they were previously and quickly transition to the new.

“New team members need encouragement and reassurance, and they need to believe that others feel they have what it takes.”

Turning your onboarding program into one that works isn't too difficult. The key is to, as Stephen Covey would say, begin with the end in mind. Focus on what an onboarding program should do: prepare new employees to become productive quickly and help them see they've made the right decision in joining the organization. Keeping that focus will ensure a program that works!

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When Onboarding Isn't Enough: Addressing New Hire Skills Gaps



Michael J. Noble, Ph.D., is chief operating officer and chief learning strategist for [TTA](#), where he leads sales and operations and works with some of the world's top organizations, providing top talent in training delivery and instructional design. TTA is a perennial [Top 20 or Watch List company](#) on several lists curated by Training Industry.

We put a lot of pressure on our [onboarding](#) processes and training. We try to use it to address human resources (HR) and administrative needs, provide a high-level overview of the organization, and orient learners to their departments and their respective roles. Through all of this effort, we aim to create a positive experience that promotes a strong affiliation with the organization and decreases the amount of ramp-up needed for the new hire to contribute and succeed in his or her role.

For better or worse, we usually measure success in levels of enthusiasm and then cross our fingers that we're hitting performance targets. HR, information technology (IT) and everyone else outside of the hiring manager is checking the box that he or she has provided all the necessary overviews and introductions. Meanwhile, the hiring manager scrambles to cobble together the most relevant resources, training and job shadowing for the new hire.

This approach is far from ideal, but it has been minimally functional in many organizations for quite some time.

Hiring for Attitude

Because we put so much into onboarding — ATD's 2018 "State of the Industry" reports that it's nearly 10% of all of the training that we do — there are a variety of challenges worthy of our attention and in need of innovation. One the biggest, particularly in a time of increasing skills shortages, is how to onboard talent with known or likely skills gaps.

We know that we're going to have to become more creative in terms of hiring. It's one thing, however, to say that you're hiring for attitude or aptitude; it's another to recognize that your new hires lack some of the skills that would be prerequisites if the talent economy weren't so competitive.

For example, suppose you're hiring for a technical skill set that is in short supply. It may be that you will have no choice but to take a chance on talent that seems to have the aptitude even if they don't have all of the specific skills. In these types of

situations, onboarding isn't enough — the new hires need further development in order to be successful.

Here is where the traditional division of labor in our HR departments breaks down: if our talent acquisition professionals are telling us that the company cannot acquire the necessary talent, whose job is it to do that development? Is that outside the definition of onboarding? It certainly has to be part of our talent strategy and likely goes beyond the types of challenges that our business unit leaders can deal with on their own.

“It's important to identify where you're going to have talent or skill shortages before you can determine an action plan.”

Developing New Hires

If the goal of onboarding is readiness, we must begin to talk about developing new hires and not just orienting them or onboarding them. In a survey of more than 1,000 U.S. workers, [BambooHR](#) found that almost one-third had quit a new job within the first six months. This problematic reality quickly becomes costly if much of that six-month period is spent developing new skill sets that may never provide a return for the organization.

It can be difficult to assess or estimate the cost of developing new hires without looking at some of the possible solutions for closing the gaps. Here are some recommended next steps for evaluating and designing possible solutions:

Assess the Overall Skills Map of the Team

Rather than treating each new talent search as a separate challenge, it's worth looking at the overall skills required for success on the relevant team. What competencies does the team require now and in the future? What technical skills does/will it need, and at what level? Ultimately, it's important to identify where you're going to have talent or skill shortages before you can determine an action plan.

Consider the Design of the Role

While mapping the team's requisite skills, it's important to determine whether you can simplify complex roles. Can you tier a role so that a new hire can contribute

more quickly without as much development? Can you create a related role as an introduction or a support to the more complex role, so that the new hire can learn on the job? It's important to consider how different roles — some more simplified and others more specialized — might change the equation in your workforce planning.

Set Parameters for Evaluation

How do you evaluate readiness for candidates during the hiring process now, and how would you like to evaluate the readiness of new hires (who may not have all the necessary skills) in the future? There is a subjective but important difference between what you consider to be ideal and what you consider to be good enough.

Furthermore, a new hire's stated readiness and his or her actual readiness may differ dramatically. Talking about these evaluative guidelines will help you to know where the targets are — and at what point the new hire is sufficiently equipped to begin practicing on the job.

“A bootcamp approach to filling skills gaps can promote diversity in hiring and provide upward mobility for existing employees.”

Create a Formal Apprenticeship Program

One way to address the skills gap is offering an [apprenticeship](#) program to new hires and existing employees. A formal apprenticeship — as opposed to job shadowing or informal mentoring — can provide enough structure to measure progress and align the results with the parameters that you established for evaluation.

Create a Learning Cohort

A cohort provides many advantages, including scalability. By working with a pool of new talent, you can minimize the effects of early attrition and maximize camaraderie and other benefits of [social learning](#). The cohort will learn to help each other solve problems, and learning transfer will improve, particularly when cohort members will be working on the same teams.

Include a Bootcamp

A [bootcamp](#) approach to filling skills gaps can [promote diversity](#) in hiring and provide upward mobility for existing employees. The bootcamp may run for two or three months and can include both the technical and the [soft skills](#) necessary to be successful in those hard-to-fill roles. These experiences typically culminate in a portfolio or capstone project that demonstrates readiness for job responsibilities.

Consider Outside Partnerships

Freeing up your internal subject matter experts can be difficult, particularly when their skill set is in short supply. Outside partners may have existing bootcamps, micro-credential programs and other offerings that you can integrate into your pathway for new hires. This strategy usually works best in combination with other onboarding and skills development that is specific to the organization. A good integration includes coordination with the hiring manager and the teams on which participants will eventually work.

To be successful, it's important to define multiple pathways to channel talent into our organizations. Whether we think of new hire development as onboarding or not, it should be one of those paths. By broadening our definitions — of talent acquisition, of onboarding, etc. — we can leverage the new hire experience to increase commitment, minimize attrition and ensure readiness. Onboarding then becomes a key strategy to support organizational growth and innovation.

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CHAPTER 3: STRATEGIES TO CLOSE SKILLS GAPS

Earning, Learning and Closing Skills Gaps With Apprenticeships



Hope Williams is the editorial intern at Training Industry, Inc.

[Apprenticeship](#) programs are simultaneously experiencing a major resurgence and undergoing a serious makeover. However, until recently, there has been considerable debate regarding whether these programs are worthwhile. In 2018, [a research study](#) conducted in the U.K. revealed discrepancies between the recruitment and wages of male and female apprentices but also “a positive earning differential ... in many contexts” as a result of apprenticeship.

In addition to the monetary value they can provide, apprenticeships offer substantial other benefits to the participant, with [Forbes citing](#) mentorship, hands-on experience, exposure to different areas of an organization, the acquisition of specific job skills and the opportunity to demonstrate mastery as just a few.

The companies that provide these programs benefit as well. Let’s assess the need for apprenticeship in the modern workplace and the many ways organizations can close skills gaps with apprenticeship programs.

Understanding the Need for Apprenticeships

Governments across the globe are incentivizing organizations to offer apprenticeship programs in order to meet the demand for career development opportunities for workers [outside of the traditional — and expensive — four-year college route](#). As Eric Seleznow, director of the Center for Apprenticeship and Work-based Learning at JFF, says, the journey to professional success is “no longer a linear path.” In order to avoid “crushing debt” and “student loans,” young people and adults are turning to apprenticeship in their pursuit of professional development.

Additionally, the number and types of [industries offering apprenticeship training](#) are expanding in order to close the ever-widening skills gaps pervading the modern workforce. Alongside traditional trade skill apprenticeships, industries such as IT, health care and cybersecurity have begun to implement apprenticeship programs in the hopes of building a workforce that can achieve critical competencies and meet the necessary demands of the fast-paced, tech-driven, global marketplace.

Sophie Adelman, co-founder of WhiteHat, points to the rise of the digital economy as a leading cause of apprenticeship's expansion into "white-collar" jobs. "As the pace of digital transformation accelerates, every developed economy around the world is facing a major skills gaps, and there is a pressing need for job training and reskilling," she says. "Apprenticeships are key to tackling this problem by training the workforce in the right skills for the future."

Tom Ogletree, senior director of social impact and external affairs at General Assembly, shares that sentiment and says that apprentices can not only master deeply technical manufacturing roles but also develop "skills in fields like data analytics, digital marketing, product management and software design."

"Apprenticeship programs give organizations the opportunity to monitor progress and assess compatibility."

Reducing Recruiting Costs and Improving Employee Retention

Relying on recent graduates to fill the skills gaps in your organization can present risks. "Large companies have historically relied on university graduates for their entry-level roles," Adelman says. "However, a degree doesn't necessarily provide the right skills many of today's top employers are looking for." Recent graduates may be well versed in the concepts and theories applicable to their new roles but lack the hands-on experience needed for high performance.

"Apprenticeships help reduce recruiting costs," says Ankur Gopal, founder and CEO of Interapt. Bringing on apprentices in your organization provides the opportunity to "guide and mentor them in a short period of time."

Cultural fit plays an important role in reducing recruiting costs as well. Dara Warn, chief operating officer of Penn Foster, says apprenticeship programs enable companies "to see how someone is working and being part of the organization" before stepping into their new roles. Rather than hiring a permanent employee who turns out to be underqualified or a poor culture fit, apprenticeship programs give organizations the opportunity to monitor progress and assess compatibility.

Seleznow says that apprenticeships also create a "workforce that sticks around" — which is critical, because it is hard to close skills gaps when turnover rates are through

the roof. Gopal agrees that organizations that offer apprenticeship opportunities are sure to “see an uptick in retention.” He attributes this result to a sense of loyalty to an organization that facilitates and encourages professional development: “Most people who go through a program with an organization that gives them a first chance tend to stay longer, as long as there’s a pathway for growth.”

Curating Your Workforce

Developing apprentices skills to meet the specific needs of your organization is an effective way to close skills gaps. “The notion of curating your own workforce is really what we see a lot of employers focus on,” says Warn, “and apprenticeships [are] one way that you can do that.” Apprenticeships help organizations and facilitators be intentional about the curriculum and learning objectives in order to build a workforce that meets business demands.

Organizations can also be deliberate about pairing apprentices with mentors who will guide them to success. Ogletree says that apprentices “have the opportunity to move right into teams of workers who are helping to support other businesses’ software needs and are getting to break into the world of work in a team context, where they have mentors and coaches.”

“Coaching and apprenticeship together enable organizations to align their needs and the skills of their workforce.”

Of course, without a strong [learning and mentoring culture](#), your apprenticeship programs are less likely to succeed. [Coaching](#) and apprenticeship together enable organizations to align their needs and the skills of their workforce. Gopal warns that apprenticeship “requires a level of mentorship; it requires a level of peer interaction and support. A lot of companies may not have that culture readily built into their organization.”

Before taking the initial steps to bring in apprentices, be sure that your organization has the leadership and time to commit to supporting their success.

Initiating the Ripple Effect

Apprenticeship programs benefit both the organization and the apprentice while also having a significant impact on communities at large. Gopal says, “The community benefits, and the local economy benefits in creating a citizen’s development program that helps the community thrive.”

Implementing these programs in underrepresented communities is integral to initiating local and societal change. As a result, Ogletree believes that it’s important for organizations to ask, “How do we help members of underserved and overlooked communities who may not have had access to education or professional opportunities ... [receive] exposure to training in different disciplines and move them to meaningful work in the digital economy?”

Additionally, Gopal says, apprenticeships have the power to create “a strong sense of purpose [within] the organization, which is a very high factor for not only employees, [who] want to work at companies that have a clear purpose and mission to help the community, but also customers, who are now basing their choices on the social impact of [the] corporation [they’re supporting].” With apprenticeships, your employees will want to stay with you, and your customers will continue to support you.

Ogletree advises companies to err on the side of caution when it comes to “the idea that apprenticeships are the silver bullet for addressing a lot of the issues that we’re seeing in the education and workforce space.” There’s a lot of work to do to close the major skills gaps present in the modern workforce and even more to make professional development and social mobility accessible to all. However, with effective apprenticeships programs, organizations can set out to close the deepening skills divide while promoting social equity.

“With apprenticeships, your employees will want to stay with you, and your customers will continue to support you.”

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The Skills Gap: Bridging the Divide



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“It is what we know already that often prevents us from learning” (Claude Bernard).

The skills gap has been a threat to organizations for several years. It started the moment someone coined the term “millennial” and realized this group would enter the workforce as the boomers left. Still, we continued to do what we have always done, because it was working.

Twenty years later, the future does not look bright. There are more jobs than there are people to fill them. The people who are left may not have the required knowledge to fill the open jobs. The data varies by industry, but it looks like there will be somewhere between 10 and 25 million unfilled jobs by 2020.

As a learning and development (L&D) professional, my first question is, “Why?” If there are so many millennials, and popular opinion tells us that millennials are good at technology, why will we have such a wide skills gap? According to almost every research study, the educational system has failed to keep up with the technology of the future. Technology is moving faster than education, and we are teaching theory instead of providing practice.

This is where L&D can step in and help. Most workplace challenges could be solved by upskilling, and we know how to upskill. The problem is that doing it is a double-edged sword. If the people fail, we take the fall. We can talk about how the problem is not training but reinforcement and application as well as poor leaders who keep learning from happening. This story is old, and it is not the only problem.

“Most workplace challenges could be solved by upskilling, and we know how to upskill.”

According to the SHRM 2019 report “The Global Skills Shortage: Bridging the Talent Gap with Education, Training and Sourcing,” in December 2018, there were seven million open jobs but only 6.3 million people looking for work. Eighty-three percent of survey respondents said they had trouble finding suitable candidates in

the last 12 months for a multitude of reasons, but two stand out: experience and technical skills. The problem is that they may not be what organizations actually need.

In 2016, Sunnie Giles, president of Quantum Leadership Group, [grouped the top global leadership competencies](#) into five areas:

- Demonstrating ethics and providing a sense of safety
- Empowering others to self-organize
- Openness to new ideas and fostering organizational learning
- Nurturing growth
- Fostering connection and belonging

The [Center for Creative Leadership](#) has identified five important leadership competencies for young people entering the workforce:

- Communication
- Self-motivation
- [Learning agility](#)
- [Self-awareness](#)
- Adaptability

None of these competencies is a technical skill. It seems that we have some misalignments to correct as well as some work to do. How can you bridge the great divide? [Be an influencer](#).

Influence business leaders to look at transferability of skills and strategic thinking. Take note of important competencies, and communicate them. When we train and develop leaders, we must discuss the importance of the leadership competencies and help leaders think differently about technical skill acquisition.

“Training is the key, but we have to speak the language of our leaders and HR teams to be successful.”

1. Align HR and Talent Management Strategy to Business Strategy and Then to Training

We have to [speak the language of the business](#) to gain a seat at the table. Only then can we forecast and assess the skills the organization will need. We need to work together with the human resources (HR) team and the business to create a learning strategy that supports the growth and success of the overall people investment. Training is the key, but we have to speak the language of our leaders and HR teams to be successful.

2. Create Mentoring and Coaching Programs

Peer learning, both in departments and across departmental boundaries, is imperative. Identify opportunities to create avenues for employees to learn from each other. This approach will increase engagement and make [succession planning](#) easier.

The learning goes both ways. For example, if you have great technical employees (often, but not always, millennials), have them coach up (on technology), and have senior leaders [coach down](#) (on politics). Both groups can learn a lot from each other.

3. Make a List of Ways to Improve and Sustain Learning, Engagement and Organizational Growth

Talk about your list when you are at the table. Here is mine:

- Hire for adaptability to learning.
- Create a [sustainable](#) coaching or mentoring program.
- Have an innovation contest, or reward people for great ideas you can put into practice.
- Create co-authoring opportunities across departments or inside departments when there are dependencies that matter.
- Build time into the day for learning to be a priority.
- Determine a baseline, and track success.

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5 Steps You Can Take to Close Skill Gaps in Your Organization



Michael Moore is a senior product manager with [D2L](#) with over 20 years of experience in the software industry. Previously a D2L client, he often speaks at industry conferences and presents webinars publicly and for the D2L community.

The growing skills gap is a problem that affects everyone. Employers are struggling to find the talent they need, with almost 40% telling McKinsey they're [unable to find people with the qualifications even for entry-level jobs](#), and graduates are frustrated. In a Gallup poll, 12% of adults said they [would earn a different type of degree](#) if given the chance to rewind time, and 36% said they would choose a different field of study altogether.

The bad news is that without meaningful change, the problems are only going to become worse. The good news is that there are actions employers can take now to begin moving the needle, including investing in modern learning programs to forge stronger skills.

Here are five steps you can take to understand what your learning programs need to deliver and how to put effective solutions into practice.

1. Gather the Evidence

Before you can develop any plans around how to improve skills, you need to establish the baseline from which you are starting. You can do so by leveraging tools like:

- Assessment scores or “grades” learners have earned in specific courses or modules.
- Self, peer or manager assessment surveys.
- Observational or video assessments.
- Examples of work, showcased in a portfolio.

Whatever metrics you choose to evaluate, make sure you establish clear frameworks, including rubrics, checklists or relative rankings, for measuring them. A lack of consistency is one of the biggest stumbling blocks organizations must contend with early in their journey to close skills gaps.

2. Undertake a Skills-mapping Exercise

Skills mapping is important, but it's also an area where organizations tend to struggle, for two main reasons.

First, there's not a single standard approach every organization can take all the time, though there are common principles you can consider when building a skills map for your business:

- Start by assessing and documenting what you're already doing that fits within the skills mapping process. Do you already have measures in place, even on a small scale, to gather skills evidence and recommend solutions if you identify gaps?
- Establish the baseline by doing an inventory of the jobs that currently exist within your company and the skills associated with them.
- Use the evidence you now have at your disposal to map the skills data across every level — the individual, the team and the organization.
- Forecast both the jobs you predict will be retired over the coming years and the jobs that will emerge.
- Work with partners, [especially educational institutions](#), to develop a language around competencies that everyone can understand.

These recommendations can serve as an excellent starting point, but keep in mind that every skills-mapping experience will look somewhat different depending on where an organization starts from, what it needs to achieve from it and a host of other factors.

The second hurdle that organizations often run into is when information falls out of date because people incorrectly view skills mapping as a one-and-done activity. Instead, it's an ongoing, iterative process that needs to adapt and evolve as skills ebb and flow over time. Think of your skills maps as dynamic resources that you must feed regularly with current information so they can help your business effectively forecast into the future.

“Skills mapping is an ongoing, iterative process that needs to adapt and evolve as skills ebb and flow over time.”

3. Identify Learning Opportunities Geared Toward Closing the Gap

Now that you know where you need to be, you're ready to take the next step: sourcing and creating the learning content, courses and tools that can help get you there. There are a few considerations to keep in mind at this stage:

- If you already use technology to curate content of interest, this process is a fantastic opportunity to make those efforts even more powerful, as they bring to light information and resources centered around developing the priority skills you've identified.
- Look for opportunities to make the learning experience social. Soft skills are coming to matter more and more, with 57% of senior leaders telling LinkedIn Learning that soft skills are more important than hard skills. One of the most effective ways to nurture soft skills is by giving employees opportunities to practice and collaborate with each other and give each other feedback.
- Personalize the experience by creating custom learning paths based on the different areas where employees need or want to improve.

Ultimately, it's important to make sure your learning program is adaptable. The solutions you use must grow with your organization as its needs change over time and enable you to make the most of future opportunities.

“Ultimately, it's important to make sure
your learning program is adaptable.”

4. Create Engaging Learning Experiences

The key to implementing effective learning programs is making sure that they engage employees and learners in ways that drive real change. Studies have shown that happy employees are 12% more productive than their counterparts and that companies with engaged individuals and teams are 21% more profitable.

You have a variety of tools at your disposal to help you increase engagement, including social learning and assessment, videos, gamification, and online portfolios.

It's important to emphasize, however, that engaging learning doesn't need to be over the top. Sometimes, a simple quiz will be more effective than a complex game or

interactive scenario. At the end of the day, it's about designing learning experiences that leverage a combination of tactics to help you meet your goal: providing learners with the knowledge and experiences they need to improve their skills.

5. Monitor Your Progress

You've spent all this effort creating your modern learning program. Now, it's time to measure its effect. Provide dashboards so leaders can have on-demand access to insights that help them assess performance. Use analytics to track significant metrics and keep your learning programs on track. Create opportunities to exchange information with educators and other stakeholders. You may even need to learn to speak a common language; for example, employers usually talk about skills, while educators prefer to call them "competencies."

Learning is an ongoing process. Tracking its impact will help you identify what's working and what isn't so you can drive real change and lasting progress for your organization and your employees. At the end of the day, that's what we all want.

"Learning is an ongoing process. Tracking its impact will help you drive real change and lasting progress."

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In the Face of Automation, Job Retraining Should Be a Top Priority



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Technology is transforming the marketplace in bold and amazing ways. About every business in the developed world is using automation to some degree to free up resources, improve processes and reduce costs.

Not everyone sees this change as a good thing. In fact, there's considerable anxiety in the air about the prospect of automation's leading to widespread unemployment, and it's a reasonable fear to have. While progress is ultimately a net-positive, it will inevitably leave some people behind. Looking at the situation from a corporate training and development perspective, how should we help those individuals facing the prospect of technological unemployment prepare?

Robots Are Coming

Automation won't impact every industry the same way. In some cases, new tools will transform or replace existing roles and create new positions. For example, consider when the implementation of digital systems for managing data was still a new idea. It might have eliminated the need for some positions in record-keeping departments, but it created plenty of new positions in data management and administration. Other jobs might change shape from hands-on, manual work to roles with more of an oversight and managerial capacity.

In many cases, workers can transition into these new roles produced by technological advances, but it's not a one-to-one process. Not everyone will be fortunate enough to smoothly slot into a new role. Forrester's 2019 report "Future of Work" predicts that automation will eliminate 29% of current jobs. McKinsey's report of the same name estimates that the jobs of [as many as 375 million workers](#) — 14% of the global workforce — could be made obsolete in the next decade.

At the same time, technology promises to expand existing positions by as little as 13%, for a 16% net loss, according to the Forrester report. After all, the point of automation is to reduce costs, and most of those reductions will come in the form of labor. Therefore, automation is displacing workers faster than we can create new positions for them.

This process will not affect every segment of the workforce or every demographic evenly. [Women will likely be hit especially hard](#), with 58% of their positions considered to be at [“high risk” of displacement](#), despite their representing just 47% of the U.S. workforce. Many of the jobs in which women traditionally represent a large share of the workforce (e.g., secretarial work, bookkeeping, retail and reception) are among the most susceptible to elimination.

If we don't approach this issue seriously, we could quickly be headed for out-of-control inequality, much of which would break down along demographic lines. It's a recipe for greater social and economic instability — and it could be just around the corner.

“If we don't approach this issue seriously, we could quickly be headed for out-of-control inequality.”

Finding Opportunity in the Current State of Affairs

Despite the high stakes, it's not all doom-and-gloom just yet. Rather than assuming that we're headed for disaster, we can actually take this situation as a bold new opportunity.

Amazon, for instance, recently announced [its “Upskilling 2025” program](#), which aims to retrain 100,000 current Amazon employees by 2025. Despite the projected \$700 million price tag, this move promises to pay off for the company in just a few years' time. Amazon's laying the groundwork for its future growth and development by retraining employees now for the jobs the company will need tomorrow. While some of those employees may not find new work at Amazon, they will be armed with the skills and knowledge necessary to compete in the market and find employment elsewhere.

While it's not realistic for every company to implement an ambitious plan on the scale of what Amazon is doing, just about every company has the resources to invest in some degree of retraining and preparation for the dynamics of the future labor force. Retraining existing employees means saving resources that the company would otherwise have spent on recruitment and bringing new employees up to speed on the company and its culture. Existing employees can transition into new roles and hit the ground running, providing a shot in the arm for productivity. Thus, devoting a small share of resources to preemptively training workers for new and developing positions can save a lot of money down the road.

“Just about every company has the resources to invest in some degree of retraining and preparation.”

Where to Start

There are numerous positions that are largely safe from risk of automation. Caregiving jobs and positions involving hands-on, interpersonal interaction tend to be safest. Positions requiring creative and dynamic thinking, like frontline management, are also comparatively safe. Instead, the best place to begin retraining is with the positions most vulnerable to technological unemployment.

Many positions in record-keeping and accounting could be vulnerable to automation. For e-commerce companies, order fulfillment could see substantial disruption in the next few years, potentially seeing many positions automated. These roles are the best places to begin the reskilling process.

Unemployment is an issue that’s too important to ignore. It’s not a partisan issue, nor is it isolated to specific trades or industries. That’s why private companies can — and should — take the lead on this process. It’s the best way to ensure a healthy and sustainable future marketplace. The more action we take now to help workers adapt to new roles and challenges — and the more aggressively we pursue that plan — the better off we’ll be.

“The more action we take now to help workers adapt to new roles and challenges, the better off we’ll be.”

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Coding Bootcamps in 2019: Trends and Best Practices



Sarah Gallo is the associate editor at Training Industry, Inc. and co-host of [The Business of Learning, the Training Industry podcast](#).

[The National Center for Women in Technology \(NCWIT\)](#) predicts that while there will be 3.5 million “computing-related” jobs in the U.S. by 2026, 83% of them could go unfilled due to a lack of college graduates with related degrees. To meet this demand, organizations must reskill their workforces and look to candidates who have learned in-demand technical skills through [alternate forms of education](#).

In recent years, [coding bootcamps](#) have succeeded in training a diverse group of workers for careers as web, full-stack and software developers, among other roles, as well as reskilling people already in those professions. However, several major coding bootcamps have also closed in recent years, including [Dev Bootcamp and The Iron Yard](#) in 2017.

What are surviving bootcamps doing to succeed in an industry marked by constant change? Let’s take a deep dive into the mentoring and coaching strategies, learning methods, diversity efforts, and other best practices coding bootcamps are using to ensure learner and organizational success.

Increased Learner Support

From learning multiple coding languages (e.g., JavaScript, R and Python) to understanding complex technical concepts, learning to code can seem daunting to even the most motivated learners. To overcome this apprehension and improve learning, coding bootcamps are offering mentoring and coaching support. For example, Code Fellows, a Seattle-based coding academy, implements a one-to-six student-to-teacher ratio to ensure learners have the [personalized instruction](#) they need during class and lab time, says Mitchell Robertson, vice president of Code Fellows. For additional support, the company has a tutoring program, where learners can receive help from past graduates and industry experts, and career coaching that covers topics such as business etiquette, creating a professional network and managing behavioral interview questions.

At Geekwise Academy, mentoring is ingrained in the learning process. “Our Geekwise instructors are not just the instructors; they are actual mentors,” says Terry Solis, director of Geekwise Academy. “They coach. They’re project leads. They have work

experience in the industry, so they draw from their industry experience working in tech teams and developing and delivering software projects.”

As [the demand for technical skills continues to rise](#), employers must also support the [upskilling of their existing workforce](#) to keep up with industry advancements. Nickolay Schwarz, chief technology officer at BenchPrep, encourages organizations to “do good by your team members, provide ample opportunities to learn and verify skills, because failing to [do] these things will end up being more costly in the long run.”

“Employers must support the upskilling of their existing workforce to keep up with industry advancements.”

Trilogy Education Services supports upskilling through its technical training courses offered at 49 universities across the globe. For example, Trilogy partnered with Georgia Institute of Technology to help upskill existing information technology (IT) and technical workers at GE Digital in areas like web development, data analytics and [cybersecurity](#). “More and more, it’s important that employees have literacy, have the ability to interact with technology and technology teams as more of the world turns to software and [AI](#) and those types of tools,” says Dan Sommer, CEO of Trilogy.

Learning Methods for Success

To prepare learners for roles in the tech industry, coding bootcamps should create an environment that’s representative of the work environment they may encounter when entering the industry, Solis says. Project-based, real-time learning is one effective tool to replicate the workplace. Further, she adds, Geekwise works to “instill confidence and soft skills in addition to ... current programming languages and tools.”

“Bootcamps should create an environment that’s representative of the work environment learners may encounter in the industry.”

Similarly, Code Fellows simulates a professional environment to prepare learners for their tech careers by ensuring its courses remain interactive, collaborative and hands-on. Its program also uses “stack-module learning,” which Robertson describes as “teaching in a way that builds upon concepts that go deeper each day to improve

retention and ignite graduates' ability to continue learning well beyond their time with us.”

With constant advancements appearing across the tech field, it's also important for coding bootcamps to adapt their curriculum based on the skills employers are looking for. At Trilogy, Sommer says, “We built a curriculum that was driven by industry, and we've been able to modify the curriculum itself over 700,000 times based on input that we get from learners, from faculty members at universities and from industries. It's a constantly dynamic and changing curriculum.”

Pathstream, an education technology company that partners with software developers to create online courses, also works with higher education institutions to help solve [technical skills gaps](#). Eleanor Cooper, CEO and co-founder of Pathstream, says, “Community colleges have a long history of working with local employers, and responding to specific workforce needs, so they were an obvious first partner for us. We also chose to work with several online universities, because they tend to design programs that are flexible and responsive to the economic realities of non-traditional students.” Cooper says these educational partnerships, along with in-house training programs, will continue to thrive as companies look to upskill their workforces through technical skills training programs.

Committing to Diversity

The need for [greater diversity in the tech sector](#) has become an ongoing conversation. NCWIT [reports](#) that, while women earn 57% of all undergraduate degrees, they earn only 18% of undergraduate computer and information sciences degrees. Further, the Equal Employment Opportunity Commission (EEOC) [reports](#) that 83.3% of tech executives in the U.S. are white, and 80% are men. By making technical training more accessible, [coding bootcamps can help diversify the industry](#).

For Code Fellows, advancing diversity has always been an integral part of the business. “When we launched in 2013, we set out with that mission in mind: that we wanted to find ways to make education more accessible to those who have traditionally not been able to obtain it,” Robertson says. To help fulfill this mission, Code Fellows launched its diversity scholarship fund, which funds up to 70% of the cost of education to learners who fall under a “non-traditional background” (e.g., minorities in the industry). Today, the scholarship has awarded nearly \$3 million, Robertson says.

Another way coding bootcamps are improving diversity is by [growing professional networks and creating valuable connections](#) for learners. “Through new networks, you’re able to give access to groups that traditionally maybe were not represented in fields like technology,” Sommer says. “By building a network of over 49 universities that partner with Trilogy, we’ve broadened access into communities that perhaps didn’t have access to this level of tech training before.”

“Coding bootcamps are improving diversity by growing professional networks and creating valuable connections for learners.”

Trilogy also works with employers that are working to bring [diversity and inclusion](#) to their workforce, and connecting these employers with learners globally helps promote diversity as well, Sommer says. For other coding bootcamps looking to improve diversity in tech, Solis suggests lowering program costs and eliminating aptitude tests and entrance exams, which she says are often biased.

Today’s coding bootcamps are faced with numerous challenges, including keeping curriculum relevant in a constantly advancing field, identifying effective training methods and diversifying the industry. By tackling these challenges through mentoring and coaching, using hands-on learning, partnering with educational institutions, and ensuring accessibility and inclusion, coding bootcamps can position themselves for success — and help more learners access the technical training they need to succeed in the future of work.

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Evolve or Die: Why Businesses That Invest in Upskilling Can Beat the Talent Shortage



Michael Green is vice president at ServiceNow recruitment firm [Nelson Frank](#). With almost a decade of specialist recruitment experience under his belt, Michael works to match developers, architects and other technical professionals with great jobs in the ServiceNow ecosystem.

Technology is fantastic, making advances with earth-shattering speed that help us achieve more, connect with each other and do things that a mere decade ago we wouldn't have believed possible.

Even previously technophobic businesses are beginning to warm to the idea of [digital transformation](#) as cutting-edge developments become more accessible, widespread and — crucially — essential for those who want to remain competitive.

Technology doesn't exist in a vacuum, though. To achieve the most out of the tools on offer, businesses need to employ people who know how to use them. But finding and keeping professionals with the high-caliber skills needed to drive their vision is becoming increasingly challenging.

The Global Skills Crisis

Given [technology's well-publicized skills gap](#), keeping up with the latest developments isn't as straightforward as implementing a new platform and hiring the developer, administrator or consultant of your dreams. There simply aren't enough technical professionals to meet the ever-growing demand, and the ones who are in the market can't always upskill quickly enough to keep pace with the changing landscape.

Traditional education establishments are too unwieldy to overhaul their syllabuses in response to every emerging trend, at least not at the speed that would be necessary to turn out skilled graduates by the time the trend hits the market.

So, how can businesses gain the skill sets they need in the face of a worldwide talent shortage? It could be time for them to shift their focus inward.

“To achieve the most out of the tools on offer, businesses need to employ people who know how to use them.”

Creating a Culture of Lifelong Learning

Even if you're able to find and attract professionals with the skills you need today, it's only half the battle. If you want long-term success and viability, you need to be thinking about what you might need tomorrow. And, in an age of rapidly evolving technology, "tomorrow" is closer than ever. In fact, the World Economic Forum estimated last year that 54% of all employees will have to upskill and reskill considerably by 2022.

In an already tight talent market, it's clear that organizations that want up-to-the-minute technical skills can't rely exclusively on external recruitment to fill these positions. It's easy to believe that the hypothetical next hire will solve your organization's skills gap, but in reality, it takes a business-wide shift in focus to nurture the talent you need.

In an effort to ensure they have the right skills and offset the effects of the sector's talent crunch, many businesses are stepping up their internal training efforts, concentrating on equipping existing employees with new skills. These organizations are fostering a culture of lifelong learning and benefiting not only from cutting-edge knowledge and skills but also from the boosted productivity that comes with content employees who feel like they have the opportunity to grow.

Your current employees are your secret weapon when it comes to developing technical know-how. They're obviously talented (you hired them, after all), and they already understand your business. You know what their strengths are and where they'll excel. You just need to help them do so.

Pay for certifications and certificates. Send employees to events. Invite industry leaders to hold seminars and workshops at your company. A recent survey of the ServiceNow community asked tech professionals whether their employers had contributed toward the cost of their certifications. Roughly two-thirds reported that their employers paid for their certifications. That support is the kind of encouragement you should offer your employees.

**"Your current employees are your secret weapon
when it comes to developing technical know-how."**

Of course, all of this upskilling costs money. But so does hiring new staff — and replacing the ones who leave because they feel like they're stagnating. Good training comes at a premium, but you can also foster that culture of learning by giving your teams time for [self-directed learning](#), individually or as a group. For example, set aside one afternoon each week for online courses, working in [sandboxes](#), or going off site to take part in local courses.

Setting up spaces where employees can [share what they've learned](#) with their teams is also a great way to disseminate knowledge and encourage enthusiasm about learning. Mentoring programs are another essential tool for businesses that want to promote lifelong education. It helps employees grow, [nurtures soft skills](#) like people management and prevents all the eggs you've invested in developing from going into one basket.

Training: The Turnover Killer

The [technology sector has the highest turnover rate](#) of any industry, so working toward [retaining the technical professionals](#) under your roof is critical. Offering a development path and access to training in house is an incentive for technical employees not only to join your organization but to stay there. The opportunity to learn is [among the top reasons](#) candidates accept job offers.

One-job careers may be a thing of the past, but if you give employees space and support to develop the skills that your business needs, you can not only reap the benefits from having home-grown technical experts on your team but slash turnover, too.

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Displaced by Automation: Reskilling Workers for Health Care Careers



Sarah Gallo is the associate editor at Training Industry, Inc. and co-host of [The Business of Learning, the Training Industry podcast](#).

As the skills employees need to support business operations are evolving in the digital economy, and as [there are more open positions in the U.S. than there are people to fill them](#), nearly all industries are impacted by skills gaps. Further, the problem seems to be growing: Future Workplace found that the U.S. skills gap widened by 12% from 2018 to 2019, with 52% of human resources (HR) leaders surveyed reporting a skills gap in 2018 and 64% reporting a skills gap in 2019.

The skills gap is especially present in health care. [Jobs in this industry are expected to grow](#) three times the rate of the rest of the economy during the next decade. The demand for home health aides and other direct care workers, such as certified nursing assistants (CNAs) and personal care aides, are especially seeing significant growth: [PHI projects](#) nearly 8 million direct care job openings by 2026.

At the same time, there are numerous workers, typically in low-wage industries such as hospitality and retail, whose [jobs are at risk of being displaced](#) as automation, such as [artificial intelligence \(AI\)](#) and [machine learning \(ML\)](#), advances. The benefits of training these workers for in-demand health care roles are twofold: putting workers at risk of displacement on more sustainable career paths and filling open health care roles.

Chris Hedrick, co-founder and CEO of NextStep, says, “I think that it’s our responsibility as a society to help people that are being displaced through no fault of their own, just through changes in technology and the overall economy.” Rather than leaving these workers to fend for themselves, Hedrick says, “It’s a whole lot better to give somebody the skills they need to have a good job and the start to a successful career.”

NextStep’s mobile health care training platform seeks to “reduce the friction” between employers, which are struggling to find candidates for in-demand health care roles, and learners, whose jobs may be automated away in the future. “What we’re trying to do at NextStep is to bridge that gap by providing a platform and content that is easily used and easily accessible by people who are busy, maybe working two part-time jobs, maybe have kids, [and] allow them to learn most of what they need ... to be successful at these jobs,” Hedrick explains.

“The demand for home health aides and other direct care workers are especially seeing significant growth.”

A Little Help Goes a Long Way

Training for a new position can be challenging for anyone, but low-wage workers often face additional hurdles, such as juggling multiple part-time jobs, child and elder care responsibilities, and securing reliable transportation, that can disrupt the learning process. Training professionals can help ease these challenges by offering student and career support services and ensuring content is readily accessible.

For example, WorkAdvance, a workforce development model developed by nonprofit social policy research organization MDRC, includes fees for licenses, tools and uniforms; transportation vouchers; and referrals for housing and mental health and substance abuse assistance. The model was designed to “improve economic outcomes” for low-wage workers through training and placement into jobs across high-demand sectors that have “strong career pathways,” including health care, according to Kelsey Schaberg, an MDRC research associate and one of the WorkAdvance project’s leaders.

A randomized controlled evaluation of four providers’ use of WorkAdvance found that the model improved wages at some sites. Across all four sites, participants were more likely to report that they developed new skills in their jobs and were offered opportunities for career advancement, Schaberg explains. She says the support services included in the model likely contributed to the high occupational skills training completion rates at all four providers.

Delivering content in a [mobile-enabled format](#) can also ease some of the challenges low-wage workers face when training for health care roles. For example, Penn Foster Healthcare Academy, which offers training and certificate programs for in-demand health care roles, uses a digital training model to make it “much more accessible” to learners, says Keri Dogan, senior vice president of vertical solutions and social impact at Penn Foster. “We have short-form content, so they can do 20 or 30 minutes on the train on their way home. They can do it at night after they put their kids to bed.” Making training accessible anywhere, anytime, allows learners to learn “at their own pace, on their own time,” she adds.

NextStep also follows a digital training model, offering short courses on specific skills through its mobile-enabled platform. “Most of the folks that we’re reaching out to, their only computing device is a cell phone,” Hedrick says. “So, you need to go where they are and make it convenient for them.”

“When training low-wage workers for more sustainable career paths, it’s important to offer career and coaching services.”

When training low-wage workers for more sustainable career paths, it’s also important to offer career and coaching services. At Penn Foster, Dogan says, “We have coaches who will call out to learners when it looks like they’ve stalled. When they’re having trouble with certain content, we have an academic team that supports the learners when they need extra help or tutoring in other areas.”

At Ultimate Medical Academy (UMA), students are required to complete a full career readiness course, which includes a mock interview, resume assistance and other support. “We begin to work with them from a career services perspective before graduation,” says Brandi Yates, director of career services training at UMA. Each student also has a “career services advisor” to help him or her with everything from buying professional, low-cost interview attire to landing their first job post-graduation. “Our career services advisors work in a territory, so they’ll build relationships with employers in that area and will work with graduates in that area,” Yates says.

A Stepping Stone

Although some entry-level health care positions, like home health aides and other caregiving roles, don’t typically offer high wages, they do offer job security — and the opportunity for upward mobility — for people whose jobs are at risk of displacement. Becoming a home health aide or CNA often acts as a stepping stone for individuals looking to move into higher-level health care roles, like becoming a licensed practical nurse, which offer a significant salary increase. “What we’re helping to do, in the longer term, is move beyond the entry-level health care jobs and move up those steps to those that require not necessarily a degree but higher levels of skills and training,” Hedrick says.

By offering holistic support services and leveraging mobile learning for increased accessibility, learning and development (L&D) professionals can successfully train

workers whose jobs are at risk of being displaced by automation — and broaden the health care talent pool. As for how automation and AI will impact the health care field in the future, Hedrick explains, “Absolutely, technology will play a part in supporting folks in long-term care and older folks as they age, but that’s not going to replace the human element that we’re training people for, and the skills we’re training people for, which are very hard to automate away — at least, for the foreseeable future.”

“By offering holistic support, L&D can successfully train workers whose jobs are at risk of being displaced by automation.”

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Beyond Closing Skill Gaps: Market Adaptability Requires Progress to Proficiency



David Yesford, senior vice president of [Wilson Learning Worldwide](#), has more than 33 years of experience developing and implementing human performance improvement solutions around the globe. He frequently authors articles and papers and speaks at international conferences focusing on issues such as sales and sales strategy, leadership, employee and customer engagement, brand, and strategy implementation.

In today's market, companies must adapt almost as quickly as new information becomes available. The information-driven era in which we do business today produces insights that shift markets within weeks, days or even hours, depending on the industry.

[According to Domo](#), between 2016 and 2017, we produced 2.5 quintillion (that's 18 zeroes) bytes of data each day. As of January 2019, over half the world's population were internet users, contributing to the production of exponentially more data. For example, people search Google almost 4.5 million times per minute.

Imagine that your learners are standing at the edge of an ocean with a teaspoon. As a tidal wave of data washes over them, they are easily swept away in the current, lost in a swirl of information.

Today's knowledge workers need a way to dip into a specific part of the ocean with the right-sized bucket to capture only what they need to achieve success — theirs and your organization's.

People have an amazing capacity to adapt. Learning is the most critical method by which we can respond to the world's data dump without drowning. As a result, keeping up in the information age requires organizations to embrace a [learning culture](#).

“Keeping up in the information age requires organizations to embrace a learning culture.”

We need to expand our thinking about learning to include more than traditional classes and seminars. A learning culture consists of ongoing interaction, [coaching](#) and competency development and produces sustainable change that drives company strategy. The wisdom of “learn something new every day” must become part of the organizational DNA and embedded in the way we work.

Creating and maintaining this learning culture gives you the strategic lever you need to dip into the ocean of data and knowledge with a tanker instead of a teaspoon. Instead of striving to fill skill gaps the same way for everyone, resulting in incremental changes at best, a learning culture provides a more focused approach, ensuring individuals have access to learning that is relevant to their professional development needs.

The progress to proficiency (P2P) model — the synthesis of selection, development and environment — produces this learning culture. The absence of any one of these three factors impedes progress, while optimizing each one accelerates progress.

Selection

First, selection involves choosing the right people for the training — assuming that the organization has hired the right people into the right roles.

Traditionally, learning meant bringing people together, face to face, to receive the same information simultaneously. This format usually precipitated one-way conversations about the skill itself. Contemporary face-to-face learning (in conjunction with other learning channels) encourages participants to talk about the relevance, importance and application of skills in their roles. Learners gain new insights that enable them to internalize new skills and immediately apply them to their work.

P2P advances more quickly and effectively when learners converse and interact with one another, sharing ideas, insights and personal “war stories.” Participants engage as learners and teachers, shifting the culture toward ongoing adaptability that drives not just employee success but market success.

Proper selection must incorporate the right mix of people who can learn from and teach or mentor one another.

Development

As we expand our thinking about learning and the learning culture, the ideal experience focuses on the activities and associated competencies tied to the business’ strategy. The most successful learning solutions incorporate [multiple modalities for learning](#) to ensure relevance and immediate applicability.

Sometimes, training participants may not recognize the need to improve their competencies until they are faced with the challenge of proving they can do more

than just talk about what they know. In a group of thoughtfully selected colleagues, participants may become keenly aware of how much they don't know. The “aha!” moments in the classroom usually connect several dots: The participant connects a personal skill gap to the knowledge or skill he or she needs and then connects the capability to the company's strategy.

When employees connect themselves and their personal development to their functions' goals and the success of the company, they start bringing bigger buckets to the ocean, taking personal responsibility of their development on a day-to-day basis.

“The ideal learning experience focuses on the activities and associated competencies tied to the business' strategy.”

Environment

The best training programs leverage the environment — ultimately, wherever and with whomever an employee works. We want learners to take the competencies they've practiced and internalized — whether through web-based, book-based, classroom-based or any other place-based methods — and connect them to strategic execution, actively supported by their manager. When practice in a learning environment becomes doing in the work environment, progress accelerates.

For organizations to succeed in today's data-saturated environment, they must optimize learning opportunities. Combining selection, development and environment accelerates progress to proficiency and makes learning the strategic lever needed to fill skill gaps in a meaningful and profitable way.

“Combining selection, development and environment accelerates progress to proficiency.”

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ADDITIONAL RESOURCES

The Business of Learning: Closing Skills Gaps With Adaptive Onboarding

Unlike traditional onboarding, which is often seen as an HR or administrative check-the-box task, adaptive onboarding is designed to meet the specific needs of individual employees. This personalized approach to onboarding can better engage, shape and retain new talent. Learn more [in this episode of The Business of Learning, the Training Industry podcast](#), with Melissa White, director of business operations at The Kool Source, and Nina Redding, senior learning resource consultant at Alberta Motor Association.