

Meeting Tomorrow's Skills Demands Today

Ben Eubanks



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In 2014, Carnegie Mellon University had some of the world's brightest robotics minds working on its campus.

These scientists were focused on the bleeding edge of robotics research, improving upon the capabilities of existing technology, and designing incredible new systems. As with individuals conducting most academic research, the scientists hoped their discoveries would improve everyone's lives.

But then, virtually overnight, they all left.

In a shocking move, ride-sharing startup Uber lured the scientists away, scooping up a significant portion of Carnegie Mellon's robotics talent in a single hiring spree. This bold move was a step forward in the ride-sharing firm's pursuit of a self-driving fleet of automobiles, but it clearly caught the university by surprise. In hindsight, it's hard to blame Carnegie Mellon for not seeing this technology firm—in an entirely different industry—as a threat. From a logical perspective, when Carnegie Mellon considered its peers in the marketplace, it evaluated other top-shelf universities and research think tanks as competitors. It certainly didn't consider the possibility of a ride-sharing service snagging its top-shelf robotics talent.

This story offers a clear understanding of the concept of industry convergence, a trend that is disrupting today's workplace. Change may also come from technological advances, such as artificial intelligence (AI), but the end result is the same: disruption.

Look around you. Today's L&D practices are not the same as those of the past. More and more, companies are looking for ways to leverage their people as a strategic differentiator, giving them an edge over competition. New technologies and tools are shifting the conversation for learning and business leaders, enabling them to have greater insights into organizational functions, outcomes, and variables.

Yet, there are challenges that we simply can't seem to shake. Globalization is forcing employers to change how they have traditionally approached markets and talent. Disruption is affecting businesses in a wide spectrum of ways, from changes in consumer preferences to radical departures from traditional business models and methods. And greater demands for delivering memorable, engaging employee experiences continue to stress out HR and learning leaders, who are doing more with less.

Recruiting and talent acquisition practices can help companies address these challenges to some degree, but the real secret to success lies with upskilling and reskilling employees to be able to meet the impending demands. It's not only less expensive and less risky, but it can lead to better outcomes.

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

- emphasize the importance of reskilling and upskilling your workforce
- provide case studies of employers who are tackling the challenge
- demonstrate how to reskill and upskill in your organization.

Upskilling and Reskilling Defined

Look at any headline today and you're bound to see a mention of reskilling or upskilling or both. For as long as there have been jobs, there has been a degree of upskilling and reskilling occurring in the workplace. However, with the advent of new automation, algorithms, and AI, concerns about skills are at an all-time high. In a new

Lighthouse Research study, *Disruption Drives Reskilling and Upskilling*, 81 percent of learning professionals said that the current pace of change, automation, and disruption will drive a need for reskilling and upskilling employees.

While the terms are sometimes used interchangeably, reskilling and upskilling have distinctly different meanings:

- Reskilling is the development of significantly different skills to make an individual suitable for a new role—for example, retraining a former cashier to work as a personal shopper.
- Upskilling is the development of additional skills to help make an individual more valuable in a current role—for example, a software developer learning an additional coding language.

These two components are critical for employers facing a skills gap, defined as the difference between the skills mix that workers currently have and the skills mix the employer needs to accomplish its goals. In the *Disruption* study, my team found that the number 1 driver of employers' learning content demand was content to close the skills gaps.

Defining the Cost of the Skills Gap

Recent CareerBuilder research showed that the average cost of the skills gap to employers is approximately \$800,000 annually. Although the study looks at this from a recruiting perspective, the concept is still applicable to a learning context. The \$800,000 price tag includes all the related factors that come from being unable to fill key roles because of a lack of skills.

More and more, companies are looking for ways to leverage their people as a strategic differentiator, giving them an edge over competition.

This includes productivity loss and lower morale, because unfilled positions are causing other workers to stretch themselves thin to keep up business as usual. Additionally, that can lead to higher turnover due to burn-out and increased stress. When factored together, these varying components point to revenue loss due to employers' inability to hire the right people with the right skills to meet the companies' needs.

How many companies could minimize or even solve their skills gap problems by leveraging training and development instead of trying to hire their way out of the problem?

Work Institute research shows that the average cost of employee turnover is 33 percent of the position's salary, which is approximately \$20,000 for a job paying \$60,000 a year. However, according to the *Disruption* study, 95 percent of learning professionals say that it takes less than \$10,000 to reskill someone for another job.

Based on these data points, the cost to hire a new employee is at least twice as expensive as developing a current employee. Combine this with data that Matthew Bidwell at the Wharton School developed and the result is that external hires not only cost more money but also perform worse on average in their first two years on the job. It's astonishing, then, that employers prioritize hiring over training as they do. L&D professionals are in the ideal position to help employers solve this skills gap problem.

Disruption, Humanity, and Skill Development

The exact expected level of disruption in terms of skills and technology is unknown, but it is happening. Disruption is already hitting some industries and professions harder than others. For example, JPMorgan Chase created an algorithm that replaced more than 360,000 labor hours for attorneys, and the firm has plans to replace even more. Assembly line workers and other blue-collar positions are not necessarily the first on the automation chopping block. This example demonstrates that routine tasks, whether physical or mental, can be automated.

That said, some activities are extremely hard to automate, including two major components:

- soft skills that are distinctly human in nature
- nonroutine manual labor.

Determining the Skills to Target

Ask any senior software engineer about Fortran and you're bound to get a nostalgic laugh. The coding language was developed in the 1950s as a standard language for designing and coding a wide variety of applications. No one would use it today, given the other, more powerful programming languages available.

Fortran is an example of the broader shifts that require individuals to always be leveling up their skills to remain relevant and competitive within the labor market. With the benefit of hindsight, we can easily make decisions about what was and is today. However, in the midst of the disruptive change, it's much more difficult to see through the fog of war to know what is coming on the other side.

What is known: Every time in history that automation has led to job changes, the resulting jobs have been more human in design. The new jobs are often more service-based in nature and are more reliant on soft skills than previous iterations. Armed with this information, you can lay out a broad game plan for how to address a skills gap within an organization.

During a recent executive roundtable with leaders from Boeing, Dormabaka, and other award-winning institutions across a range of industries, one of the key themes that emerged was that the companies knew they needed to target specific skills with development opportunities. The problem was that they didn't know which skills were most important.

Skills for Today and Tomorrow

Employers must consider a variety of factors to understand which skills matter not just today or tomorrow but months or even years from now. AT&T is a great example of this. In 2008, the executive team realized the firm simply didn't have the talent it needed to shift from an analog voice to a digital data company. The team saw that approximately half of the firm's 250,000 employees had the right skills to handle the new direction. Not only did the other half not have the skills necessary, but about 100,000 workers were in hardware-focused jobs that wouldn't exist a decade later.

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