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Education, Disrupted

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BY MICHAEL B. HORN

Employers are confronting sizable skills gaps in all parts of their operations, at all levels, and they can't seem to fill them by simply hiring new people. In today's tight labor market, there are about 7 million open jobs for which companies are struggling to find qualified candidates because applicants routinely lack the digital and soft skills required to succeed. In the face of rapid technological changes like automation and artificial intelligence, helping employees keep pace is challenging. And companies are wrestling with how to retain top talent — a critical differentiator in a hypercompetitive environment. No wonder a staggering 77% of chief executives report that a scarcity of people with key skills is the biggest threat to their businesses, according to PwC's 2017 CEO survey.

As a result, companies can no longer afford to wait for the traditional “system” to supply the workers they hope will help shape their future — the need is too acute and too urgent, particularly given that many higher-education institutions remain in denial. We must

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change how we educate both traditional college-age students and adult learners.

Last year, when 4,500 people gathered at the ASU GSV Summit in San Diego to discuss innovation both in education and in talent development writ large, it was clear that the companies in attendance were eager to find alternative paths. At this conference, political leaders and policymakers join CEOs and VCs to discuss the imperative of investing in human capital. Entrepreneurs in attendance work fervently to sell their wares or make deals, the likes of which have fueled a sharp increase in global mergers and acquisitions of education and talent development companies, up in total value from \$4 billion in 2008 to \$40 billion in 2018.¹ Executives from leading companies like Apple, Google, Facebook, Workday, and Salesforce.com attend to share ideas and learn about new ways forward.

The annual event provides a regular check-in on the state of corporate learning. In part, it's meant to coax companies to focus their efforts, because there's still a fundamental mismatch between how much they *say* they want to strategically invest in their current and future employees and what they actually *do*.

On a keynote panel last year, Leighanne Levensaler, the executive vice president of corporate strategy at Workday, bemoaned a great lack of investment in human capital despite all the buzz around the topic. Michelle Weise, the senior vice president of workforce strategies at Strada Education Network and the chief innovation officer for the Strada Institute for the Future of Work, has written that although 93% of CEOs surveyed by PwC recognized “the need to change their strategy for attracting and retaining talent,” a stunning 61% revealed that they hadn't yet taken any steps to do so.² Employees seem to agree. According to a recent survey by Harvard Business Publishing Corporate Learning and Degreed, nearly half of employees are

disappointed in their employer's learning and development programs.³

But there are some notable exceptions to this prevailing trend. For instance, in July 2019, Amazon announced that it would “spend \$700 million over six years on postsecondary job training for 100,000 of its soon-to-be 300,000 workers.” For now, Amazon says it intends to outsource that training to traditional colleges and universities. (For more detail, see “Betting Big on Employee Development,” in this issue.) But once Amazon has begun to provide the bridge for that training, it's not hard to imagine that it will be well positioned to create that training *itself*—without the “middle man” of colleges and universities—in the future.⁴ Although Amazon's competitors will undoubtedly keep a close eye on its training moves, perhaps the education industry ought to keep an even closer eye, given that those moves may herald a total transformation in the landscape of learning, from college through retirement.

To put this development into perspective, it's worth stepping back to consider how learning has already evolved in recent years before situating Amazon's announcement within the broader opportunities and challenges facing employers.

What's Next for Adult Learning?

Education is in the midst of digital transformation.

That this is true is no longer hotly debated. Online learning emerged over two decades ago as a technology category that enables a range of potentially disruptive business models. No longer do students need to convene at a central location to enjoy a real-time, interactive experience with a teacher and peers. They can instead participate from anywhere in the world, in a more affordable and convenient fashion.

This trend is growing rapidly in postsecondary education. Today, roughly a

third of students in the United States take at least one online course as part of their accredited higher-ed experience, and over 15% study exclusively online.⁵ Many of these students are adults who are employed while they learn. Countless more workers take supplemental courses on platforms like Coursera, Udemy, and edX.

Indeed, online learning has led to the creation of numerous organizations and offerings that support companies' talent development efforts. For example, Pluralsight, LinkedIn Learning (built on the acquisition of Lynda.com), Learn@Forbes, and Udacity help employers re-skill the workforce in myriad areas, often in specialized or cutting-edge fields. Startups like Guild Education and InStride allow companies to work with colleges and universities to offer learning as a benefit. Degreed has emerged to measure and help assess the learning and skills inside an organization. Coding and engineering boot camps like General Assembly and Galvanize, and other so-called last-mile education providers (many of which offer blended or fully online programs), are increasingly working directly with enterprises. And universities like Arizona State, Bellevue, Southern New Hampshire, and Ashford, as well as schools like Ultimate Medical Academy, are partnering directly with companies such as Starbucks and Walmart to offer education to employees.

The pace of innovation in corporate learning is frenetic—and highly uneven. As providers compete to serve enterprises, there is not one monolithic answer for what corporate learning will look like in the future. Just as companies have always patched together a variety of learning solutions to support their needs, they will most likely continue to do so.

But what this abundance of new approaches and players has led to is the same thing that disruptive innovation has wrought in countless other fields: far more affordable and convenient options.

In the case of learning and talent development, such offerings have the potential to allow companies to make more significant investments in their greatest asset: their employees. Which companies will leverage this opportunity to improve both their bottom lines and the welfare of their people? The answer to that is not yet clear, although it will be interesting to see whether a critical mass of organizations will follow Amazon's lead.

An Interdependent Solution to Training

In many ways, Amazon's announcement shouldn't have been a surprise. The need for better-trained talent is clear in companies across the globe, and Amazon is taking a somewhat predictable path.

Amazon's efforts resemble what we've seen happening in other technology arenas for decades, bearing out Clayton Christensen's Theory of Interdependence and Modularity. The theory tells us that in the early years of a new paradigm, in order to succeed, product and service providers must integrate across all the unpredictable and performance-defining elements of the value chain. Think of how, in the early days of mainframe computers, IBM integrated hardware manufacturing with the design of interdependent operating systems, core memory systems, application software, and so on. IBM recognized that to thrive, it had to do much more than make machines that would play nicely with modular components created by others. It had to own the whole value chain.

We are now entering a similar moment in workforce education. The status quo that existed in the industrial economy and the early years of the knowledge economy — in which the links between companies and the educational institutions that fed them were predictable and good enough — is no longer adequate.

In the case of Amazon, the step in the

value chain that's not good enough is the education that colleges and universities provide. Because the subject matter Amazon's employees need to know is changing rapidly and building the curricula through traditional higher-ed faculty and processes would be too cumbersome, Amazon has concluded that it will in essence take a much more active role in the education and training of 100,000 of its employees. What may be equally interesting to monitor is where Amazon goes with this development. The company was its own first customer for Amazon Web Services before opening up that offering to others. It's not hard to imagine Amazon doing something similar for corporate learning. Will Amazon shape the future of the global workforce through its own education programs? The company's timing, it would seem, couldn't be better.

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A Focus on ROI

For corporations to invest in learning solutions in a sustainable way, there will most likely need to be a clear and compelling return on investment. As Allison Salisbury, a partner and head of innovation at education venture studio Entangled Group, has observed, companies can take at least five different angles when investing in human capital: providing on-ramp programs, upskilling, re-skilling, outskilling, and education as a benefit.⁶ Some of these approaches may be more sustainable than others, but each one has a distinct ROI. For instance, on-ramp programs bolster the quality and diversity of candidates for hard-to-fill

roles by offering short-term training that creates a direct pipeline for employers. Outskilling programs, which are growing, help employees who don't have a future at a company build a skill set to change careers. Companies offering such services become more desirable places to work and enhance their reputations in the labor market.

In today's economy, where there are more job openings than there are unemployed Americans, the imperative to invest in many, if not all, of these categories is evident for employers. Companies are competing for a scarce resource: people qualified to execute mission-critical tasks. Hence the Amazons and AT&Ts of the world are announcing major half-billion-dollar-plus bets on training.⁷

But are these just fair-weather investments? When the economy inevitably

turns south, which of these categories will companies abandon? If the past is any guide, the most vulnerable categories will be those where the returns are the least direct — areas such as outskilling, perhaps, where the immediate benefits to the company are more reputational than financial. Even upskilling will probably be at risk — despite its obvious economic upside, given the widely acknowledged skills gaps that businesses urgently need to fill — unless employers can show a clear ROI that is *better* than other potential investments in automation and the like, as Mike Echols, formerly the director of Bellevue University's Human Capital Lab, has written.⁸

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The Measurement Challenge

The biggest challenge for companies that want to invest sustainably and heavily in human capital may lie in figuring out what kinds of people they need. For all their apparent sophistication in data analytics, few employers have a clear sense of the underlying skills, competencies, and habits of their most successful employees — never mind their future workforces. As a result, they don't know what to look for when they post jobs, interview candidates, and hire new employees.

A key sign of the imprecision of the hiring process is that nearly 50% of newly hired employees fail within 18 months.⁹ And that failure has significant costs — \$15,000 on average, according to a CareerBuilder Survey.¹⁰

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Why do employers struggle to understand what is important to succeed in certain positions? Partly, it's because experts are notoriously bad at knowing what they know. According to the book *How Learning Works*,¹¹ as individuals gain expertise in a particular role or field, they go through stages, from novices who *don't* know what they don't know to novices who *do* know what they don't know to experts who *know* what they know to experts who *don't know* what they know. The reason is that automating knowledge — essentially moving it into an individual's subconscious as background information — is critical to freeing up space for the complex and creative tasks that an expert performs. As a result, though, asking top performers in a company to write a job description, for

example, or to say precisely what skills are at the heart of correctly doing a job, is not as simple as it sounds, because the experts literally don't recall. They are good at their jobs *because* much of their knowledge has been automated, so they aren't able to easily articulate what skills are essential. What's the solution to this problem?

For years, one of the most trusted ways to identify key competencies was cognitive task analysis, a process of observing and documenting the underlying activities involved in performing a job. But cognitive task analysis is relatively costly and time-consuming, so most employers don't do it.

Herein lies an opportunity — and so a wave of providers is sweeping in to offer new ways to measure the skills of

employees. Degreed, for example, has built a platform that records all the learning employees do, in an effort to understand their various learning pathways. It also offers a range of skill assessments to certify experts in various domains. LinkedIn Learning offers similar assessments, along with learning software to help people upskill, and tracks people's self-reported skills and their connections to various jobs.

If players like these are successful in capturing the real skills at the heart of work and measuring their attainment, that could translate into more precise measurement of the return on investment in human capital. And that could, in turn, lead employers to take far better advantage of the emerging slate of disruptive tools dedicated to helping people learn

in a sustainable and strategic way rather than an episodic and ad hoc way.

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