

courseera for Business

2017 Report



Working Together to Close the Skills Gap



Introduction

Work looks completely different in 2017 than it did just a generation ago. Where we work looks different, how we work has changed, and the skills any given employee needs are evolving faster than we can keep up.

The pace of change has created a gap between the skills employees have right now and the skills they need to be successful. [Deloitte researchers](#) have highlighted this issue, pointing out the “declining half-life of skills critical to the 21st-century organization.”

Employers especially need workers skilled in software development, marketing and sales management, engineering, web development, and financial management, but [those jobs are taking longer and longer to fill](#). On top of those open jobs, employers will need to fill roles in emerging fields like robotics, data science, automation, and content curation — researchers predict [8.9 million new jobs](#) in those fields in the U.S. alone by 2025.

“The skills gap is a major challenge for employers, but the time for finger-pointing is over,” says Rick Levin, CEO of Coursera. “To help workers develop the emerging skills they need to be successful, we’ll all need to work together — individuals need to pursue lifelong learning, colleges and universities need to think differently to help students prepare for the evolving world of work, and employers need to take responsibility for developing their people through building a culture of continuous learning. Everyone can play a role in closing the gap by understanding the direction the world is going in.”

The solution to the skills gap doesn’t belong to one player working alone. We believe that employers, universities, and individuals will all need to invest in lifelong learning and find creative ways to collaborate. This guide lays out a framework to move everyone forward, together.

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A More Proactive Role for Employers

When it comes to evolving skills in the workplace, employers have a clear business imperative to lead the way. To keep up with the current pace of change, companies will need to invest in their employees. This may ultimately mean returning to an older model of training and development — one in which employers shared more responsibility for priming workers for success.

Leaders at AT&T have taken bold steps and made major investments to retrain the company's 280,000 employees to work with emerging technologies. Instead of a “nice to have” or a perk, CEO Randall Stephenson sees this push for training as the company's only path toward long-term success. “There is a need to retool yourself, and you should not expect to stop,” he **told The New York Times** in 2016. He added that people who do not spend five to 10 hours a week in online learning “will obsolete themselves with the technology.”

Companies certainly feel a push to employ people who are skilled in the technology and mindset of tomorrow's workplace. But hiring a workforce armed with those skills is expensive and impractical, leading many company leaders to consider building stronger in-house training programs. “Fifty years ago, a company would hire people out of college and train them, assuming they didn't know how to do the job when they hired them,” says Alex Sarlin, lead learning designer at Coursera. “We need to get realistic and invest more in training again. Maybe you hire someone who has 60 percent of the checkboxes, including the core skills they need. If you have really good internal training, you can get them to 100 percent quickly, maybe even during onboarding.”

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That was the winning approach for one major bank that partnered with Coursera. The company's team of developers was missing key skills, was slow to execute on projects because they all worked with different technical languages, and didn't have the confidence to deliver new applications. So the bank added an onboarding program for every developer. New employees now complete a full-stack web development specialization through the Hong Kong University of Science and Technology during their orientation. Existing employees go through the same program, to make sure their skills match the company's current hiring expectations.

This idea of starting early doesn't just apply to technical skills, though. Management training can be extremely important for a company's overall health, Sarlin says, but companies often don't invest in it until people are in senior leadership positions. "Studies show that people leave jobs because of their managers. But companies aren't doing leadership training. The average age people start getting leadership training is their mid-40s, but the average age people become managers is their early 30s. Millennials are desperate for leadership training, and will leave if they don't get it."

Major companies across industries are starting to recognize this management training gap. Retail brand Bonobos offers management training for managers and training for entry-level employees on "managing up" to teach skills like giving and receiving feedback. JPMorgan Chase **committed to the mobility of its entry-level and "middle-skills" employees**, training bank tellers to take on leadership roles within the company.

Governments and nonprofit groups are also finding new ways to incorporate lifelong learning (for employees and the groups they serve) into the long-term organizational strategy. One noteworthy example: The Institute for Veterans & Military Families (IVMF) partners with Coursera to train military service members who are transitioning into the civilian workforce. "Service members return home with a diverse set of skills, but often need to develop additional technical competencies to find careers in the rapidly evolving workforce," says Jim McDonough, a retired Army colonel who is managing director for programs and services at IVMF. The training allows transitioning service members to learn "at their own pace, wherever they are — empowering them with the skills they need to find their next career," he says.

Smart organizations aren't limiting their culture of learning to one-off classes. The most successful organizations are building learning into the core culture, bringing employees together to embrace new ideas and celebrate professional development.

Ian Stuart, Coursera's director of learning and development, says he has found success with a staple of college life: the study group. When Coursera employees are enrolled in the same online course, Stuart brings them together offline as well. "People take the course and get together every week to talk about it," he says. "That provides accountability, makes the material stickier, and helps people apply the theory in the course to what they're actually doing at work. These groups create a community around learning."

A Broader Role for Colleges and Universities

Traditionally colleges and universities have taken on much of the responsibility for preparing young adults for the demands of the workplace. But as the skills required for success evolve quickly, schools have new opportunities to expand and redesign traditional education by partnering with employers, providing new resources to students, and supporting alumni well beyond graduation.

That shift starts with partnering with industry experts to design curricula that align with universities' and employers' goals, says Julia Stiglitz, vice president at Coursera. "We look at what's going on in the job market and what skills employers are looking for, using real-time labor data. We use that data to inform our content strategy, and universities apply to teach that content. Creating that connection between business needs and university content enables the curriculum to be more demand-driven. Our university partners are creating the content that learners and employers are looking for."

For example, for Coursera partner the University of Colorado at Boulder's certificate in embedded systems, the instructor, an industry practitioner himself, develops the curriculum by consulting with a board of industry experts. The experts share feedback, helping the program's curriculum flex as the industry changes and technology advances.

In another successful partnership, Darden, the University of Virginia's graduate business school, partners with Boston Consulting Group through Coursera to create courses on pricing strategy, digital transformation, and lean manufacturing. BCG leaders create half the content and Darden professors create the other half. They share resources, with BCG providing advanced-presentation slide templates and Darden supplying the production facility. The result is a win-win for the university and the employer. BCG can offer the course to its employees, alumni, and customers, and the university uses the content to teach students.

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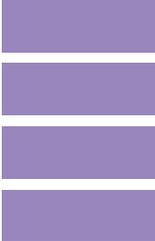
Many major employers have found benefits in working directly with university partners instead of tackling training alone. Coursera works with a major consumer packaged goods company that used to rely on custom training content and micro-learning to keep employees up to speed. The company's leaders realized that a partnership with a university was critical to bring employees the deep knowledge they need to succeed in today's market.

Jason Tyszko, who runs the Center for Education and Workforce at the U.S. Chamber of Commerce Foundation, is also an advocate for closer partnerships between industry and schools. And for freely sharing data. "We're getting employers to share job profile data," Tyszko says. That might not sound like a noteworthy change, but sharing job data is critical to understanding industry-wide needs. A lot of labor market information is gathered through job boards and government data, but Tyszko says that if employers share their actual job requirements and qualifications, students and workers can start to see more transparent career pathways, and employers can start to create industry-wide credentialing standards.

The U.S. Chamber's **Talent Pipeline Management** program takes that data and applies classic supply chain management theories to the talent pipeline. "Employers hadn't applied the concepts of supply chain management to human capital," Tyszko says. "Employees aren't widgets, but it is an interesting way to look at how you create performance-based relationships" that are beneficial to everyone involved.

That approach often leads business leaders right back to the schools that train their future workers. Leaders at Boeing, for example, looked at their most successful engineering employees and discovered that their top engineers all came from four university programs. As a result, Boeing developed more intentional partnerships with those universities.

Other schools are embracing these types of partnerships. Google has donated millions to the University of Washington's computer science department, and IBM **sponsors a group of tech-focused ("P-TECH") high schools** that emphasize STEM education.



“It’s a smart move,” Coursera’s Sarlin says. “They know those students are their future workers.” Beyond the regular coursework, universities also have an opportunity to help students and alumni better prepare for life in the workplace.

For example, St. Cloud State University in Minnesota launched a “LinkedIn Thursdays” program that matches students and alumni with recruiters at local companies. The university’s career center had been doing LinkedIn workshops, but didn’t have the manpower to individually review resumes and LinkedIn profiles. By partnering with employers, the university is helping prospective employees (both current students and graduates) understand what hiring managers and recruiters are looking for, and equipping them with tools to better tell their story.

Perhaps mostly importantly though, university leaders need to make sure they are preparing their students for their full careers, not just their first jobs. Peter Cappelli, director of the Center for Human Resources at the Wharton School at the University of Pennsylvania, says offering more vocational and job-focused training for college students isn’t necessarily the right role for universities.

“We don’t have a clear sense about what work will look like in the future,” Cappelli says. “Preparing graduates for the first job they will get with highly vocational training — hospital records administration, for example — is probably a really bad use of expensive education that should last a lifetime.” Instead of focusing on technical skills, Cappelli advocates for teaching students skills that will serve them over course of their careers — skills like leadership, critical thinking, and communication.

Coursera’s Stiglitz agrees. “Especially in fields that are changing very quickly like tech,” she says, “what you learn in high school or college isn’t going to be enough, because in a few years whole new languages and technology will emerge. Your early education can’t sustain you for your entire career. That’s why there’s a real need for a way for people to get education and learning throughout life.”

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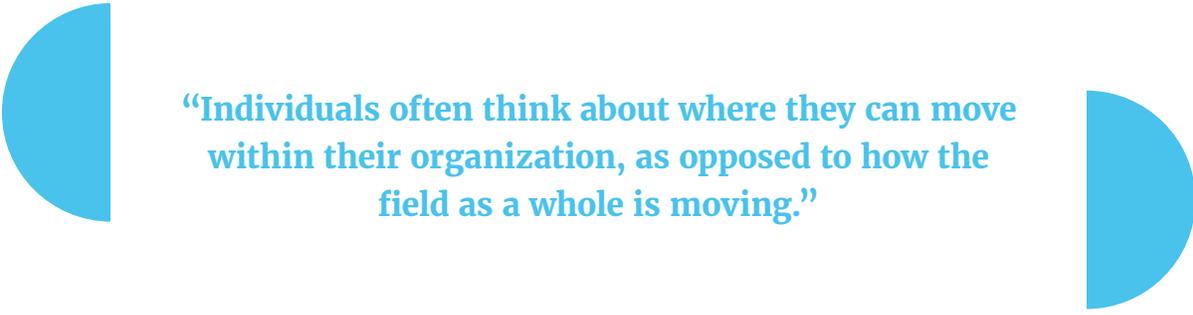
An Empowered Role for Individuals

We all have access to more information and learning opportunities — without relying on employers or formal university programs — than ever before.

And as individuals, we seem to accept personal responsibility for own learning. A [2016 Pew Research Center survey](#) found that the majority of Americans think individuals carry most of the burden for developing their skills: 72 percent of respondents said they think individuals have “a lot” of responsibility when it comes to having the right skills and education.

“Employees have to own their onward development, 100 percent,” says Tim Ragan, a career coach and co-author of *“(Re)Boot Your Career: A Blueprint for Finding Your Calling, Marketing Yourself, and Landing Great Gigs.”* “That’s a mindset shift,” Ragan adds, calling today’s generation of workers “careerists,” since professionals are more mobile and are likely to work longer, more diverse careers than their counterparts did in the past.

The foundation of this mindset is understanding how the major economic forces will affect your job, employer, and industry. Every industry has major research reports that predict what will happen in the next few years — what trends will emerge, what specialties will evolve, and what skills will be in demand. Individuals at every level can do basic research to find the futurist perspective on the industry, Sarlin says. “There’s a lot of information and discussion, and often people agree on what’s coming next,” he says. “But individuals often think about where they can move within their organization, as opposed to how the field as a whole is moving.”



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The people who get ahead of the curve and seek out training in emerging fields and skill sets will have a prime opportunity to rise above the rest. For example, Sarlin says, if you work in investment management and you realize that everyone’s talking about robo-advising as a deep, emerging trend, find the best place to learn about robo-advising. “Individuals are more empowered than ever before,” he says. “You used to have to go to the library or ask everyone you know in the field, but it’s no longer difficult to learn about the trends, tools, and skill sets you need to understand. Take for granted that new things will be coming into every field, and no one will be able to do them. You can level the playing field by being one of the only ones who’s learned the newest skills. No one will have 10 years of experience on you. No one will have any experience.”

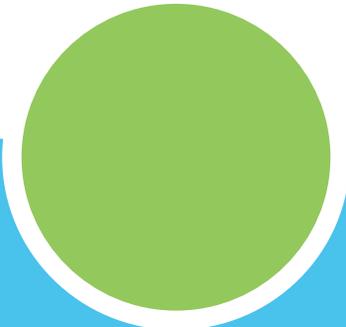
However, learning a new skill here and there won’t add up to a dramatic new career. Ragan encourages adult learners to document the work they’ve done on their own development to build a storyline they can parlay into a career jump. “Keep a record as you’re building and working,” he says. “As you start to develop your story and share your personal value proposition, you’ll want to be able to talk about the new things you did to improve and grow.”

And don’t wait until you’re behind before you start planning your learning pathway. Do you need to earn new certifications? Get a degree? Demonstrate specific experience? Look for the training opportunities you need within your current organization. If you can’t find them there, keep looking. You might find what you need through a course at a university or online training program, a mentoring program through local professional groups, or through taking on a leadership role on a board or at a nonprofit you support.

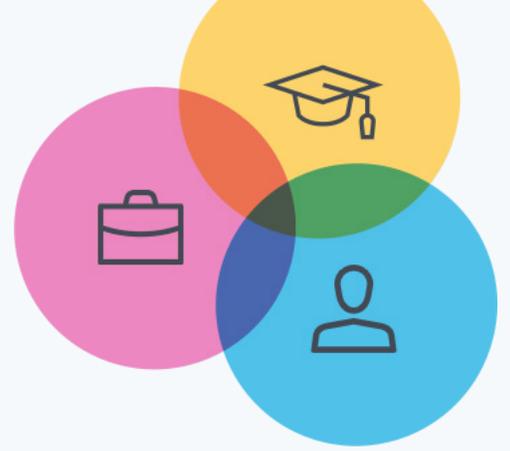
Smart employers expect you to take this sort of initiative and will welcome you as a partner in your own development. For example, Coursera customer L’Oreal has committed to the idea of bottom-up development, pushing employees to take control over their own career trajectory and development opportunities without waiting for a centralized learning and development department to tell them what they need to learn. While L’Oreal leaders provide employees with the resources they need, their goal is to leave learning decisions and career trajectory to each individual employee. If finding time and resources to power your own learning program is difficult, ask your employer for help meeting your training and development goals.

Of course, there are so many learning opportunities available — from community colleges, continuing-education programs at universities, professional associations, bootcamps, and many other providers — that it can be hard to figure out which will give you the most bang for your buck. Sarlin suggests sampling courses and programs before you sign up. “Read the books of the instructors or research their other work,” he says.

Ragan says he encourages people to put their new skills to the test early on. “The only way to learn is by doing things that are uncomfortable,” he says. “But that’s how we learn. I’ve never met anyone who learned to ride a bike by reading a book, then getting on the bike for the first time and riding it perfectly. You fall down, skin your knees, get back on, and, eventually, you learn.” He says that any career skill, from a technical skill to management, works the same way: “You can go out and learn new skills, but ultimately you have to put them into action to really learn your craft. It’s going to start slow and awkward, but it’s worth it to invest the time.”



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Conclusion

The much-discussed “skills gap” says more about the direction the world is moving in than about a fundamental flaw among U.S. employees. As work environments and the technology that drives our work continue to evolve faster and faster, the skills gap isn’t something we need to close one time. It’s a moving target that employers, schools, and individuals will all keep running to meet. The specific technical skills and specializations that employers need among talent will continue to change, but companies, schools, and individuals who build a culture of lifelong, enthusiastic, supported learning will be best prepared to thrive.

“We’re shifting from a learning model where you get education in school and then it stops,” Stiglitz says. “Instead we need to learn throughout life to stay competitive. Employees view professional development as an essential perk. They demand it. And companies can play a powerful role in supporting employees through learning.”

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