6
Power Skills for Jobs of the Future

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CHANGE IS OUR ONE CONSTANT IN THE NEW WORLD OF WORK

Award-winning historian Norman Davies once compared historical change to an avalanche: "The starting point is a snow-covered mountainside that looks solid. All changes take place under the surface and are rather invisible." The one certainty for anyone in the path of an avalanche is that standing still is not an option. This analogy can be applied to how individuals, teams, and organizations navigate the new world of work.

We begin our discussion by examining the forces of change that are impacting how work gets done. In broad terms, three forces are changing work and the workforce: the experience economy, and technological and demographic shifts. The workplace of the future is about creating and enhancing the experience at work—what I call the *experience economy*, as outlined in *The Future Workplace Experience: 10 Rules for Mastering Disruption in Recruiting and Engaging Employees* (Meister and Mulcahy 2017). Essentially, the experience economy shows how the last best experience we all have in our personal lives is becoming the minimum expectation for what we expect in the workplace—how we learn, communicate, and recognize others. Next, technological advances in artificial intelligence, virtual reality, augmented reality, and sensors at work are changing how job candidates discover potential employers and how employers use these technologies to grow and develop employees. Finally, demographics are shifting the composition of the workforce. Workers are working much longer, and the new normal can be 60-year careers, according to Gratton and Scott (2017). These forces of change are reshaping the workforce. First, with the growth of the gig economy—nearly 35 percent of all workers now

work in alternative work arrangements that either supplement full-time work or are composed of "gigs"—more workers with in-demand skills are opting to work on their own terms. Second, the emergence of intelligent technologies is creating a "blended workforce," one that is made up of workers plus artificial intelligence assistants. This blended workforce is demanding a new set of power skills that include not just digital literacy but also uniquely human skills, such as emotional intelligence, people management, and learning to learn. Finally, this change is affecting individual workers, teams, and organizations in new ways, such as a deeper commitment to continuous learning; identifying new power skills for success; and experimenting with a range of new credentials, such as digital badges. Figure 6.1 shows how organizations are thinking about navigating the future workplace and the implications on individuals, teams, and organizations.

HOW THE FAST PACE OF CHANGE IMPACTS THE NEW WORLD OF WORK

The world of work operates at a rapid pace and is filled with paradoxes. While unemployment is down, it is taking longer to fill key job roles. The ratio of unemployed people per job opening in the United

Figure 6.1 Future Workplace Model

Three forces of change	Workforces redefined	Impact on:
• Experience economy • Technological • Demographic	➤ Gig economy workers ➤ New blended workforce: worker plus AI assistants	**Individual workers** Continuous learning Desire for skill development **Teams** Team intelligence Full timers plus gig workers **Organization** New power skills Digital badges

States is below 1.5, but the amount of time it takes to hire a new worker has reached a postrecession high of about 26 days. According to the U.S. Department of Labor's monthly Job Openings and Labor Turnover Survey (JOLTS), job openings in the United States have reached their highest point since the government started tracking the series back in 2000 (Bureau of Labor Statistics 2017). However, hiring has been low in comparison to job openings. This data can be interpreted in several different ways. The gap between hires and openings—and the time it takes to fill jobs—could be a sign that employers are being more selective, but I believe the issue behind this data is a persistent skills gap between the types of skills employers require and the skills workers have in the marketplace.

According to the 2016/2017 Talent Shortage Survey conducted by Manpower Group (2017), 40 percent of U.S. employers report a skills gap and difficulty filling positions. More recent research by Future Workplace entitled *Closing the Skills Gap* finds that, of the 600 surveyed human resources leaders in North America at the vice president level and above, over half believe there is a skills gap in their organization, and over a third say filling their open positions to close the gap was harder in 2018 than it was in 2017.[1] Seventy percent of these leaders say up to 500 job openings have gone unfilled at their respective companies in the past year, and almost half attribute these openings to a shortage of qualified job candidates.

To combat this issue, companies are turning to investments in training and development to try to offset the pressing skills mismatch. JOLTS predicts that in 2020 there will be 1.4 million more software development jobs than applicants who can fill them (Bureau of Labor Statistics 2017). Educational programs can't seem to produce candidates for these positions fast enough. Employers report difficulties in filling these positions because of a lack of both available applicants and technical competency. This talent shortage has increased as an issue in six of the nine largest global economies between 2015 and 2016. The number of employers investing in training and developing existing employees to fill open positions has doubled from one in five to over half in the past year (Manpower Group 2017).

By the year 2020, 47 percent of revenue for the biggest Fortune 500 companies will be driven by digital technology (Fenwick 2015). Amber Grewal, vice president of Global Talent Acquisition at IBM, believes

this will have a huge impact on how companies attract, retain, and develop talent. She says, "As technology becomes a large part of the company's operating model, digital skills are impacting all industries and functions. Whether you are in technology, finance, marketing, or HR, adopting an agile way of working, being comfortable using all the technologies you have access to at work, and leveraging design thinking to understand the needs and expectations of individual segments of your employees will be the foundational components to thriving in the digital age."[2] This means that companies will increasingly incorporate artificial intelligence, data analytics, and other social and mobile technologies to transform and personalize the candidate experience.

ORGANIZATIONAL IMPLICATIONS IN THE NEW WORLD OF WORK: THE NEW POWER SKILLS

What is the impact on individuals, teams, and organizations in this new world of work? First, with digital technologies impacting all industries, more jobs will require a mix of digital and human skills. Some employers are starting to focus on both of these areas. Take, for example, former General Electric CEO Jeff Immelt's 2015 announcement that every new hire will learn to code. Immelt sees coding as a new way for learners to build critical thinking skills. Many countries have already integrated coding into their curricula. In 2014, England made computing part of its national primary curriculum, and Estonia has already started coding classes in its schools as early as first grade. The Netherlands, Belgium, and Finland also have national programs.

In the United States, some states are adjusting their K–12 curricula to align with this new emerging skill. In February 2016, the Florida State Senate approved a first-of-its-kind proposal to allow computer coding to fulfill a foreign language requirement in high school. The bill's sponsor, Sen. Jeremy Ring, a former Yahoo! executive, contended that in a competitive job market, computer skills are as important as speaking another language, and that computer coding is a skill more aligned with liberal arts than math or science (Hager 2016).

Yet, digital skills are not enough to thrive in the future workplace. To stay employable in the age of automation, one needs to acquire "core power

skills"—what I define as the combination of cross-functional skills such as creativity, emotional intelligence, and people management skills. These are included in the World Economic Forum listing of skills needed for the future, the core power skills identified by Future Workplace research in *Closing the Skills Gap*, and input from clients of Future Workplace, including heads of human resources and corporate learning at Fortune 1000 firms (see Table 6.1).

Table 6.1 Twenty Core Power Skills Needed for the Future Workplace

1. Complex problem solving	11. Strategic thinking
2. Critical thinking	12. Executive presentation
3. Creativity	13. Project management
4. People management	14. Analytical skills
5. Coordination	15. Understanding the impact of AI
6. Emotional intelligence	16. Leadership ability
7. Service orientation	17. Change management
8. Judgment	18. Team intelligence
9. Negotiation	19. Digital literacy
10. Cognitive flexibility	20. Computational thinking

SOURCES: Created by author from World Economic Forum and Future Workplace LLC.

As the World Economic Forum (2016) has detailed, complex problem solving, critical thinking, and creativity will become the most crucial skills a worker can develop to obtain and retain a job. As new technologies, artificial intelligence, and automation replace jobs we thought were safe from automation—such as knowledge-based work in insurance, legal, and journalism professions—it will become increasingly important for workers to develop uniquely human skills. In my work as founder of the Future Workplace Network, we regularly query our clients on the core "power" skills they expect of workers. Our clients acknowledge the ever-shorter shelf life of skills and the growing importance of learning to learn. As evidence, the massively open online course (MOOC) "Learning How to Learn" has been one of the top-enrolled MOOCs for the past four years by Class Central, the online search engine for tracking MOOCs.

Employers are also expanding the definition of skills expected of workers to include what I refer to as "higher levels of uniquely human skills." One example is team intelligence, which is knowing how to work with and develop the best teams by focusing on their strengths and understanding their team dynamics. Team intelligence is becoming increasingly important as global teams collaborate to get work done. Creating the right team environment can lead to improved levels of productivity, innovation, and employee engagement.

In addition to the importance of these uniquely human skills, HR leaders see a growing importance in developing deep cross-functional capabilities, because job growth in hybrid jobs—those that require deep technical skills as well as a strong set of soft skills such as creativity, problem solving, teamwork, writing, and research—has been robust (see Figure 6.2).

Finally, our clients identified a new set of workplace power skills, including understanding the impact of artificial intelligence on how works gets done, building computational thinking skills to approach

Figure 6.2 Percentage of Job Postings Requesting Specific Types of Soft Skills, Data Science and Analysis Jobs vs. All jobs
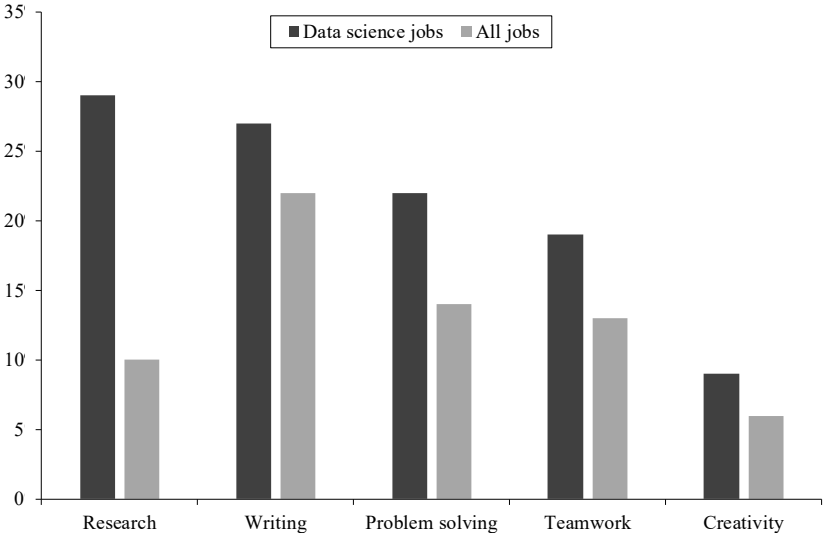
SOURCE: Sigelman (2017).

new problems at work, and understanding how to work effectively in a team. These power skills are becoming increasingly important in the workplace.

## WHAT COMPANIES CAN DO TO BUILD NEW POWER SKILLS FOR THE 2020 WORKPLACE

How are companies navigating the new world of work? First, both companies and individual workers need to pay more attention to the importance of continuous learning. Going forward, employers can do three things that continue to close the skills gaps.

1) Build Cross-Functional Skills

Jobs that require only one skill set are in significant decline. As reported by Dr. David J. Deming (2017) of Harvard University, many jobs that require only mathematical skills have been automated, but roles that combine mathematical and interpersonal skills (such as economists, health technicians, and management analysts) are projected to be in high demand. As noted in Figure 6.3, significant proportions of employers will expect that their managers have both data science and analytical skills by 2020. In some fields, such as finance and accounting and marketing and sales, the majority of employers will expect managers to have these skills. These are technical skills that go beyond leadership, people management, and interpersonal skills that likely originally qualified someone for a management position. Cross-functional skills are important for labor market success going forward.

The notion of developing cross-functional skills is not new; in fact, "T"-shaped skills were first described in 1991. T-shaped individuals combine both a depth and breadth of skills possessing deep functional expertise with well-honed social skills to collaborate across disciplines. Now, with automation potentially impacting up to 60 percent of occupations, it is becoming more important than ever for individuals to demonstrate these T-shaped skills combining uniquely "human" skills (executive presence, empathy, and communications) with technical ones (Meister 2017).

**Figure 6.3 Percent of Employers That Will Require Their Managers to
           Have Data and Analytics Skills by 2020, by Field**
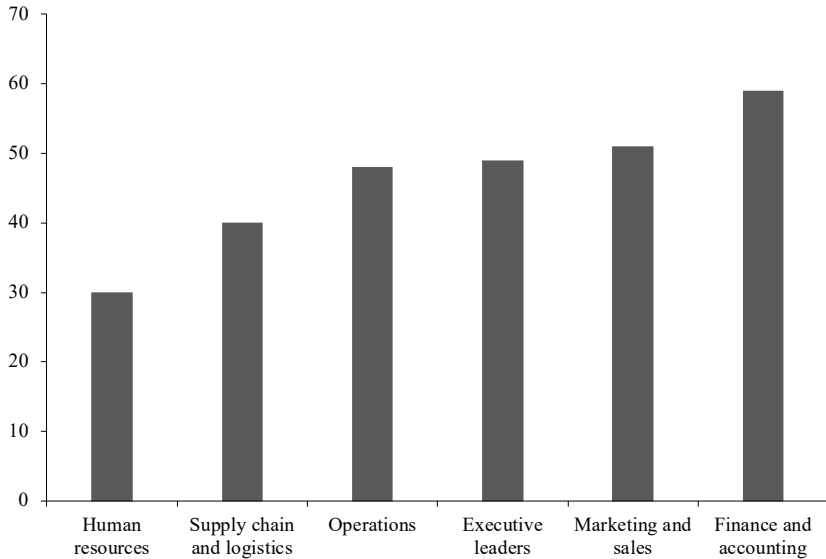
2) Use Investment in Learning to Both Develop and Recruit New Employees

We are seeing more companies use their investments in training to both develop new skills and identify new talent with the skills needed for success. To do this, organizations are investing in learning and development to attract the best people in the marketplace.

One example of this is the newly designed MOOC, developed in partnership between Price Waterhouse Cooper (PwC) and the online learning firm Coursera, entitled "Data Analysis and Presentation Skills: The PwC Approach Specialization."[3] As Michael Fenton, chief people officer of PwC, says, "PwC's collaboration with Coursera is about more than creating a new course; it's about helping people become more confident as they face the future."[4] This five-course MOOC specialization focuses on both understanding and applying data analytics tools, as well as crafting business presentations to identify insights uncovered in the data analysis. To date, over 14,000 learners in 192 countries have

enrolled in this MOOC, and another 71,481 non-PwC learners enrolled who are interested in enhancing their skills. Certainly, the non-PwC learners create an immediate talent pool of prospective employees who have mastered an important skill set in data science and presentation. These learners then have the option to opt into the PwC Talent Network to learn more about data analysis industry news and current openings at PwC.

3) Build Corporate/Higher Education Partnerships

As part of the Future Workplace *Closing the Skills Gap* research, we surveyed 600 leaders of human resources in North America and discovered that nearly 40 percent of companies are not collaborating with institutions of higher education to ensure their college curriculums are responsive to the needs of employers. This is leading to a mismatch between the supply and demand of skills.

Employers are experimenting with various ways to close the skills gap. IBM, for example, has partnered with an institution of higher education, Northeastern University, to offer college credits for completion of an IBM online learning program, "Cognitive Class Analytic Technologies." When learners complete the 30 hours of work associated with this online course and earn a score of 85 percent or higher, they earn an open digital badge from IBM, as well as three credits within the Northeastern University Masters in Analytics program. This corporate/higher education partnership is unique because it verifies learners' credentials and shows employers what learners know, where they learned their skills, and why an employer should hire them. "The combination of digital badges plus college credit is a huge motivating factor to complete an online learning program," says David Leaser, senior program executive, Innovation and Growth Initiatives, IBM. "People benefit from a stackable credential at the university level, and this also enhances their personal brand."[5] For example, a LinkedIn study found that open digital badges on a person's LinkedIn profile can increase profile views by up to 600 percent (Leaser 2016).

Digital badges provide a platform to empower students and working adults to share their verified learning achievements. According to Peter Janzow, vice president of Credly (IBM's digital badge platform partner), digital badges are verified in real time and contain rich meta data

of an individual's skills, which gives the learner an easy way to broad-cast their skills.[6] By going beyond paper certificates to digital badges, credentials can be shared and verified on the Web for maximum vis-ibility on networks like LinkedIn, Facebook, and Twitter. Corporations that can use digital badges to upskill their workforces also reap benefits. Compared to informal individual peer assessments, these badges may have increased value since they represent verified and résumé-worthy learning achievements.

As we look to the future of skills and jobs, one thing is clear: employees and employers are operating at a relentless speed to keep up with massive disruptions in the marketplace and are experimenting with ways to close the skills gap.

No industry is safe from having its "Uber moment"—in fact, these Uber moments will only become more commonplace across all indus-tries spanning from transportation to financial services and publishing.[7] Investing in continuous learning, recognizing the need to develop a new set of power skills, and partnering with universities to offer and accredit digital credentials are some of the strategies used to develop workers who can adapt to the ever-changing workplace. As Norman Davies warns, we cannot stand still in the middle of an avalanche. Companies must prepare employees today to develop the power skills of tomorrow.

Notes

1. The Future Workplace's *Closing the Skills Gap* research will be available as a graphic of key findings. For a copy of this, email info@futureworkplace.com.
2. Personal communication with the author, January 3, 2018.
3. For more information visit https://www.coursera.org/specializations/pwc-analytics (accessed April 24, 2018).
4. Personal communication with the author, June 21, 2017.
5. Personal communication with the author, April 19, 2018.
6. Personal communication with the author, April 19, 2018.
7. An Uber moment is defined as a moment in time when disruptive forces nega-tively impact the current state of employment in an industry. For example, it is predicted that a large number of banks will disappear over the next few years as a result of digital disruption.

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