



BEYOND THE HEADLINES

At a Glance: Future of Work

NOVEMBER 2019

FOCUS: EMPLOYABILITY SKILLS

Future of Work: Part III¹

Automation is increasing the value of essential skills

Automation is changing the nature of work. Despite a variety of predictions about what work will be like, there is general agreement about what skills are most necessary for success now and moving forward. Rather than technical skills, a broad set of **essential skills** that are centered on human interaction and adaptability—how a person works with an relates to others and new situations—will be in demand.



Figure 1. Essential skills in entry-level jobs posting in Seattle MSA³

These essential skills are core skills employers seek regardless of industry. They can be divided in three thematic categories: **higher order cognitive, social and emotional, and technological skills.**¹ Higher order cognitive skills are those used in problem-solving, creative work, and decision-making versus the basic cognitive skills involved in data entry. Social and emotional skills are those we use to relate to others and manage our own emotional state so we can adapt and learn new skills and information. Based on

¹ In 2019, SJI has been looking at the Future of Work in our Beyond the Headlines. This three-part series has examine the impact of automation and Artificial Intelligence on the workforce. Parts I and II can be found here: http://www.seattlejobsinitiative.com/wp-content/uploads/BeyondHeadlines_JAN2019.pdf http://www.seattlejobsinitiative.com/wp-content/uploads/BeyondHeadlines_JULY2019.pdf

job postings in the Seattle MSA, the mix of essential skills varies by skill level, but social and emotional skills are in demand across skill levels (Figure 1 and 2).

These skills are important for two reasons. First, given that many jobs are changing quite rapidly, many technical skills may become obsolete quickly. Being an adaptable life-long learner is increasingly important even for people who do not change careers. Second, automation will increasingly take over routine technical tasks, shifting the balance of workers' time to the things that computers are not yet good at—relating to other human beings and less routine tasks.

The top three essential skills in-demand across industry and skill level are: **communication, organization, and writing.**² In the Seattle metropolitan area, for entry-level positions that require no prior experience or training, communications is specified as a skill needed in 14% of job postings and the fourth most commonly listed of all skills.³

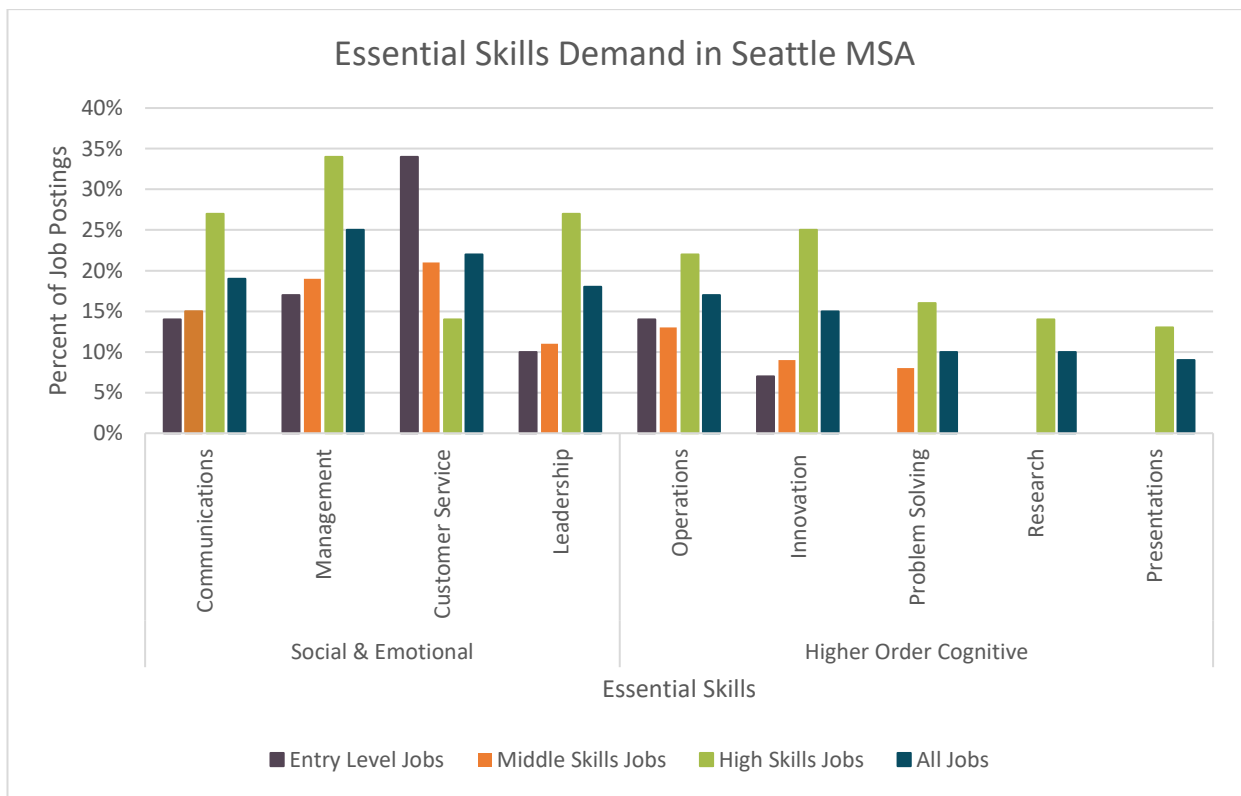


Figure 2. Essential Skills Demand in Seattle MSA³

Essential Skills & Bias

Unlike technological skills, many social and emotional skills and higher order cognitive skills are often context-dependent and are culturally coded by race, ethnicity, and age.

Implicit biases shape how skilled managers and instructors perceive people of color, particularly Black people, to be.^{4,5} In addition, these skills are often developed secondarily on the job and during formal technical training. In the past, people have gained workplace-specific essential skills in their first, low-stakes job as a teen. However, teen employment has been in long-term decline.⁶ Internships are replacing them; however, internships are significantly less accessible to teens and young adults who come from low-income households or do not have connections to workplaces with internships.⁷

This creates a vicious cycle in which it is difficult for these individuals to access or succeed in skills training and the workforce.⁸ Those who are most marginalized by educational institutions and in the workforce have the fewest opportunities to hone these skills and are least likely to have their skills recognized.^{9,10}

Assessing Essential Skills

Many essential skills are not typically evaluated independently. Ironically, there are some AI-driven solutions that purport to assess these skills using algorithms to reduce race and gender bias.¹³ However, many of these assessment tools measure proprietary combinations of personality traits, values, and preferences relative to each other (e.g.,, which of these three things is most and least important to you) rather assessing a standard set of skills relative to benchmarks or even relative to other respondents.

Even for programs that do directly measure essential skills, the other hazard remains with AI: the nature and quality of its decision making is dependent on the data used to train it.¹⁴ The programs assess how closely respondents match what has previously been identified as “competent.” If the data is drawn from a homogenous group, such middle-age white men, the program may fail to account for how race and ethnicity, gender, and age influence how skills are expressed. Using AI is no guarantee that bias is removed. On the contrary, it is highly likely to codify years of managers’ biases, screening out people of color and other groups underrepresented in the roles, organization, and industry.

As the workforce becomes increasingly diverse, as it shifts from Boomers to Gen-Z, and automation leads to a premium on essential skills, it will become ever more important to

expand opportunities to develop those skills and to diversify leadership and minimize the impact of biases about what constitutes “professional ” and “skilled.”¹⁵

Recommendations for Employers & Policymakers:

- **Invest in employees’ essential skills through diverse learning opportunities.** Employers indicate they are experiencing critical skills gaps but treat these skills as outside of their control and only acquired by way of life experience or incidentally during technical training or educational experience. However, many of these skills can be learned through explicit education and training, including on the job. Investing in these skills improves organizational/business performance along with employee adaptability.^{1,2} One of the strengths of a diverse workforce is the breadth of essential skills. Different life experiences lead to different ways of thinking, which makes for a more creative and adapting teams.
- **Account and compensate for cultural biases in defining and prioritizing essential skills.** As essential skills become more important, so does the discriminatory impact of biases in their assessment.⁵ Employers should prioritize diversified leadership and improving all of management’s assessment and valuing of these skills. This will involve implicit or anti-bias training but equally important will be developing and implementing organization-specific anti-bias practices and policies.¹⁶
- **Collaborate on opportunities to develop essential skills.** To build an inclusive economy and access currently untapped talent, it is essential for those who are furthest from opportunity and who experience systemic oppression to have opportunities to develop these skills. It requires collaboration of industry, public sector, educational institutions, and nonprofits to create and maintain these baseline opportunities.^{1,2,4}

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Beyond the Headlines. Policy and labor market updates for those working to help low-income and low-skill individuals advance through education, training and living wage jobs

About Seattle Jobs Initiative. Seattle Jobs Initiative creates opportunities for students, workers and business to succeed by helping education and job training programs meet the demands of a new economy. We find and apply solutions for people to gain the skills they need for good jobs that create prosperity for all in today's marketplace.

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