

CAHRS Working Group:

The Impact of
Technology on Skills
and Skill
Development
September 20, 2023

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Advances in artificial intelligence, robotics, and other technologies are rapidly shaping the future of work and are disrupting many of the assumptions that have traditionally surrounded workforce planning. Organizations are increasingly shifting from a focus on headcount to a focus on skills and are evaluating tasks and workflows to anticipate future shifts in critical work. However, many questions still remain about how to predict and respond to rapidly changing skills needs. In this working group, CAHRS members shared their lessons learned so far and discussed ongoing challenges as well as their strategies to address them.

Discussion Takeaways

1. Challenges Associated with Technology Disruption and its Impact on Skills and Skill Development

- Technological advancements can make certain jobs more marketable and appealing, and if employees find it challenging to transition into these desired roles, they may contemplate leaving. For example, many software engineers who currently do not work in machine learning aspire to enter this field. Machine learning positions, however, often require higher educational qualifications, such as holding a Ph.D. in Mathematics, and specific skills. Consequently, not all software engineers can work in machine learning and, even if they could, the number of positions in these emerging areas are often limited. This situation poses a dilemma for organizations: they are unable to accommodate every employee's desire to move into burgeoning fields, yet they want to retain their employees.
- Technological advancements also prompt the question of whether certain jobs will become obsolete and, if so, how organizations can simultaneously prepare their employees for new roles while ensuring that they continue to perform their current roles.
- Although many employees want to develop skills that will increase their marketability, their capacity to engage in learning activities is often constrained by their work context. Even when organizations allocate a specific amount of time for learning every month, employees often do not make use of it due to job demands or unsupportive leadership.
- The array of skills that employees must acquire can be daunting and difficult to attain within a short timeframe. In many situations, the demand for upskilling employees exceeds an organization's ability to quickly develop new skills, leading many to turn to the external job market to source talent.

18 attendees from 13 companies:

American Express
Bloomberg
Bristol Myers Squibb
The Cigna Group
Colgate-Palmolive
Dell
General Electric
JPMorgan Chase
KLA
Merck
Shell
TIAA
Verizon

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- For any company aiming to adopt a skills-based approach to workforce management, having a well-defined skills taxonomy is crucial. However, it remains challenging and time consuming to develop an effective taxonomy and to ensure its ongoing relevance over time.
- To address these challenges, companies need to answer a few fundamental, yet complicated, questions. First, what are the areas where they need to invest in reskilling/upskilling? What should the top priorities be? Second, who are the right people to reskill/upskill? Finally, what is the right amount of learning to prepare people for new roles and how can the learning process be accelerated, while also recognizing that people have current roles and responsibilities to fulfill?

2. Strategies to Address the Challenges & Lessons Learned

a. Overall Strategies

- HR professionals can collaborate with their enterprise strategy group to conduct scenario planning exercises with executive leaders concerning various potential tech disruptions and advancements. These exercises enable organizations to recognize talent-related implications across different scenarios and determine their no-regret strategies.
- Reskilling and upskilling demand collective efforts from the entire organization. It is crucial to embrace an interconnected, cross-enterprise mindset to facilitate swift and effective progress in skills development.
- Embarking on a new skills development strategy can be a daunting task. Organizations can ease into it by launching a pilot program involving a subset of their employee population before scaling the initiative to the enterprise level.

b. Skills & Skills Gap Identification

- Obtaining a comprehensive understanding of employees' skills enables organizations to optimize their talent pool and make well-informed strategic decisions. To facilitate this understanding, organizations can encourage employees to complete online forms in which they list their skills and upload their resumes.
- Adopting a dynamic strategy that revolves around skill inference through technological tools can be beneficial. This strategy leverages Artificial Intelligence (AI), Application Program Interfaces (APIs), and web scraping, in addition to employee inputs, to gain deeper insights into employees' daily activities, goals, and tasks. The technological tools can then create a highly contextualized and personalized model for each role, while remaining adaptable to changes in the market.
- AI and other technological tools can also assist in identifying career paths for employees and pinpointing their skills gap. This facilitates productive conversations between managers and employees regarding skills development and goal setting.

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c. Skills Validation

- Skills validation can take various forms, including formal learning certifications and exams, as well as endorsements from managers, peers, and other internal experts. The endorsement process is akin to 360-degree feedback but with a specific focus on skills.
- Organizations should selectively validate skills, focusing only on those that are most essential and those where inaccurate skills assessments could have critical consequences.

d. Skills Development

- In order to boost employee engagement in skills development activities, organizations should underscore the significance of these activities. For example, managers can initiate conversations with their employees to discuss the evolving nature of their work, define their skills goals, and outline the necessary steps to achieve them.
- Oftentimes, employees are willing to take ownership of their own careers and are eager to learn, but they require guidance on 'what steps should I take to develop myself?' This is where organizations should utilize their Employee Resource Groups (ERGs), internal social networking platforms, internal mentoring programs, and career development centers. It is crucial to offer employees a range of options and provide them with a clear roadmap, showcasing all the resources available within the organization. Organizations can enhance the learning experience by implementing the classic 70-20-10 model and facilitating collaborative learning among employees.

e. Internal Mobility

- AI and algorithms can help facilitate internal mobility by establishing a skill profile for each employee and presenting internal opportunities tailored to it. These opportunities may include project opportunities aimed at skill development or role opportunities identified based on skill adjacencies, skill matches, or skill goal matches.

This Summary Report was prepared by Brad Bell and Thao Nguyen for participants of the "The Impact of Technology Disruption and Skill Development" Working Group.

The Center for Advanced Human Resource Studies (CAHRS) is an international center serving corporate human resources leaders and their companies by providing critical tools for building and leading high performing HR organizations.

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