

Initial Research Question

In an environment where companies are facing increasing competition for talent, what best practices are emerging to understand and measure skills in the talent pool?

Introduction

One of the largest problems facing companies today is the shortage of available and qualified talent. This skills gap is largely going unaddressed with 60% of executives reporting that they cannot keep their workforce current on necessary skillsⁱ. In the future, this problem is likely to intensify as millions of workers are forced to reskill or change jobs or industries due to technical innovationⁱⁱ.

For these reasons, companies need to expand their understanding of qualified candidates both internally and externally. One way of doing this is to abandon the traditional signals such as experience and education in favor of a more direct approach.

Mapping Skills to Jobs

The first step to reducing the skills gap that organizations are facing is to identify the skills an organization has and needs. By incorporating AI and emerging technologies, companies can create a seamless process of measuring and identifying skills across the organizationⁱⁱⁱ. Additionally, using competency modeling to determine both future and current skill states will help companies prepare for the changes in desired competencies.

Create Competency Models

One way to discover what skills your organization has, and needs is to develop a competency model. Using a job analysis of key roles in the organization, HR can develop a list of skills associated with each job. A successful competency model should be both top-down and bottom-up^{iv}. This means that there should be some element of visionary thinking about what competencies will be needed in the future paired with the realities of the current job. Additionally, competency models should be adaptable and ready to change as work evolves^v. Having a framework in place can help organizations prepare for future skills in two ways. First, it helps organizations plan ahead for future skill gaps. And second, it allows employees to be aware of the skills their employer values so that they can choose to reskill on their own.

Incorporate AI in Strategic Workforce Planning

To elevate your workforce planning function and incorporate skill data, consider investing in artificial intelligence. IBM has developed an AI system that collects data on employees across the organization. The system is connected with many touchpoints such as the learning management system, performance management data, and employee roster to learn about and display what skills employees have^{vi}. Figure 1 shows a few key areas IBM focused on when building out their AI based strategy. Companies can leverage data from AI to identify what skills top performers have or what skills low performers lack. This enables the company to create skill specific job descriptions for roles that include current as well as desired skills^{vii}.

Skill Acquisition

After collecting data and determining what skills are required for which roles, companies must look to their internal and external talent pools. By leveraging AI, companies can more efficiently discover necessary skills internally and identify areas where learning and development can mitigate the skills gaps that exist. Alternatively, using emerging technologies in external hiring can allow companies to infer skills from public information and identify candidates to fill skills gaps.

Learning and Development

After you determine what skills are needed in the roles across the organization, you can begin to map where learning and development might be needed. For example, IBM has been able to track skills in geographies where new products have been released and push trainings to those employees when gaps emerge. This real time data will ensure learning is keeping up with the needs of the organization^{viii}.

Measurement

IBM uses digital badges to identify when employees have completed relevant learning and gained skill proficiency. Badges show a proficiency range from explorer to author with higher level badges awarded to employees who deliver or create content in a subject area^{ix}. When attempting to determine the skill and proficiencies of external candidates some experts have been turning to social media. Creating skill inference models from public information on candidates' profiles such as the demonstrated skills of candidate's connections, or the past projects of candidates can be a good proxy for skill identification^x. This allows you to infer candidate skills without lengthy assessment or questioning.

Key Takeaways and Insights

Technology

To remain competitive in the near future, organizations will have to make investments in technology that manages their human capital. Companies can vastly improve their knowledge and understanding of current skills by incorporating machine learning and AI into HR systems and be better prepared for shifts in the market. Additionally, investing in skill inference technologies and ensuring tight coordination and information sharing between those acquiring talent and those forecasting skills can allow a competitive edge in talent acquisition.

Culture

Finally, in order to build this successful skills-based approach to staffing decisions, an organization must build a culture that supports skill building and places an emphasis on recognizing and rewarding skills. IBM has begun this culture shift with their implementation of the digital badge. These badges are a way for employees to signify skill development and promote their professional development^{xi}. Additionally, this skill recognition is fueling engagement. Employees who have digital badges show more engagement on average than other employees in the organization^{xii}. By motivating employees to take charge of reskilling themselves, employers can reduce their reliance on the external talent market in addressing the skills gap.

Suggested Reading/ Resources

- [Social Media Based Expertise Evaluation](#)
- [Skill Insight can Clarify your Competitive Position](#)
- [IBM Skills Academy](#)
- [Skills based labor market data](#)

Vendors in this Space

- [TeamFit](#)
- [TalentSky](#)

 Appendix



Figure 1: Moore, T., & Bokelberg, E. (2019). How Ibm Incorporates Artificial Intelligence into Strategic Workforce Planning. *People & Strategy*, 42(4), 52–55.

Tactics to close the skills gap: What are executives using?

- Acquire talent from outside the organization
- Move talent across business units and divisions
- Reskill employees based on business priorities
- Leverage visa programs to source international talent
- Leverage apprenticeship/internship programs to train talent
- Leverage new and emerging educational programs/platforms to enhance employee skills
- Apply analytics to analyze and predict skill supply and demand
- Implement skill recognition initiatives to recognize and track skills progression
- Leverage talent through ecosystem partners

Source: 2019 Open Standards Talent Development Benchmark Study. IBM Institute for Business Value Performance Data and Benchmarking. Q: Which of the following strategies and tactics has your organization implemented or planned to implement?

Figure 2: LaPrade, A., Mertens, J., Moore, T., & Wright, A. (2019). *The Enterprise Guide to Closing the Skills Gap*. IBM Institute for Business Value.

Endnotes

ⁱ Moore, T., & Bokelberg, E. (2019). How Ibm Incorporates Artificial Intelligence into Strategic Workforce Planning. *People & Strategy*, 42(4), 52–55.

ⁱⁱ LaPrade, A., Mertens, J., Moore, T., & Wright, A. (2019). *The Enterprise Guide to Closing the Skills Gap*. IBM Institute for Business Value.

ⁱⁱⁱ Young, M., & Hollander, S. (2019). Looking Back at Strategic Workforce Planning—And Peering Ahead. *People & Strategy*, 42(4), 22–28.

^{iv} Getting past competency model PTSD. (2019, November 18). Retrieved November 20, 2019, from TeamFit HQ website: <http://hq.teamfit.co/getting-past-competency-model-ptsd/>

^v Getting past competency model PTSD. (2019, November 18). Retrieved November 20, 2019, from TeamFit HQ website: <http://hq.teamfit.co/getting-past-competency-model-ptsd/>

^{vi} Moore, T., & Bokelberg, E. (2019). How IBM Incorporates Artificial Intelligence into Strategic Workforce Planning. *People & Strategy*, 42(4), 52–55.

^{vii} Huff-Eibl, R., Voyles, J. F., & Brewer, M. M. (2011). Competency-Based Hiring, Job Description, and Performance Goals: The Value of an Integrated System. *Journal of Library Administration*, 51(7–8), 673–691. <https://doi.org/10.1080/01930826.2011.601270>

^{viii} Moore, T., & Bokelberg, E. (2019). How Ibm Incorporates Artificial Intelligence into Strategic Workforce Planning. *People & Strategy*, 42(4), 52–55.

^{ix} IBM Skills Academy- Badges. (2015, May 31). Retrieved November 20, 2019, from <http://www.ibm.com/services/weblectures/meap>

^x Wang, Z., Li, S., Shi, H., & Zhou, G. (2014). Skill Inference with Personal and Skill Connections. *Proceedings of COLING 2014, the 25th International Conference on Computational Linguistics: Technical Papers*, 520–529. Retrieved from <https://www.aclweb.org/anthology/C14-1050>

^{xi} Moore, T., & Bokelberg, E. (2019). How Ibm Incorporates Artificial Intelligence into Strategic Workforce Planning. *People & Strategy*, 42(4), 52–55.

^{xii} Do digital badges really provide value to businesses? (2019, June 18). Retrieved November 19, 2019, from IBM Training and Skills Blog website: <https://www.ibm.com/blogs/ibm-training/do-digital-badges-really-provide-value-to-businesses/>