21
Transforming Employer Signaling in the Talent Marketplace

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There are competing points of view on the cause and severity of the skills gap, but one point on which most agree is that there is a fundamental disconnect between how employers "signal" (or communicate) their hiring requirements and how students and job seekers communicate what they know and are able to do in relation to those requirements. Many have argued that at least part of the problem is the inability of employers to be consistent in communicating their hiring requirements and preferences in a rapidly changing economy and labor market (Tyszko, Sheets, and Reamer 2017). The result is a perpetual misalignment between education, workforce, and credentialing systems and employer hiring practices, which has stymied education and workforce reform efforts for decades.

Whether it is how employers organize their jobs; determine the skill, competency, and credentialing preferences for those jobs; or identify their most trusted and preferred talent development partners, employer signaling remains elusive and unclear. Unclear signaling contributes toward a persistent and growing skills gap that is negatively affecting employers, students, and workers alike. For businesses, talent-sourcing challenges are reducing their ability to compete and grow, as nearly half of all open positions are going unfilled, and for longer periods of time (Tyszko, Sheets, and Fuller 2014). In addition, nearly 40 percent of companies cannot take on new work because they have an insufficient workforce to meet the demand. For students, the results are no better, as nearly half of all new college graduates are either underemployed or unemployed (Tyszko, Sheets, and Fuller). Past attempts to engage employers and predict employer needs have come up short, especially in an economy that is becoming more dynamic, not less. This signaling challenge has created inefficient labor market transactions in

nearly every industry sector, and it will only get worse as the economy becomes more dynamic over time. For example, according to a 2012 Burning Glass Technologies report, there were approximately 1,000 open positions for data scientists in the United States. Within four years, that number had grown to more than 14,000 (Restuccia, Taska, and Bittle 2018). Increased automation is also predicted to rapidly reshape the labor market, affecting blue-collar and white-collar jobs alike across nearly every industry. According to *McKinsey Quarterly*, existing technologies have the potential to automate 45 percent of activities and job tasks found in today's labor market (Chui, Manyika, and Miremadi 2015). Failure to address the challenge of rapidly shifting skill demands will result in the U.S. economy not having the workforce it needs to compete in a global economy. This is a growing economic imperative that requires a solution, one that draws support from both the public and private sectors.

We argue here that the central problem is that existing tools of action are incapable of providing the granular, short-term, dynamic signaling required to keep pace with changing employer needs. However, new organizational models and tools show exciting promise for improving how employers signal their hiring requirements in ways that improve labor market transactions and education and workforce system outcomes, both in terms of employment and in terms of improving the qualifications of job candidates.

This chapter explains these models and tools, and it argues that adoption of them would result in a more efficient talent development system and labor market. Through clearer employer signaling, we can achieve faster and more accurate communication between employers seeking workers with certain skills and job seekers that have those skills. The result will be more Americans transitioning quickly and successfully into the workforce, and more employers having access to a skilled workforce that can improve their ability to grow and compete.

This chapter begins by describing how most employers traditionally communicate the qualities they seek, and how education and workforce systems take these into account. Next, it identifies three new types of employer signaling needed in today's economy, and it examines promising examples of their use. Finally, the chapter makes a series of recommendations for how to improve on these promising practices, while also highlighting key challenges that will need to be overcome by both

public- and private-sector stakeholders if improved employer signaling is to become a reality.

PAST ATTEMPTS AT PREDICTING EMPLOYER NEEDS, AND THEIR LIMITATIONS

There have been many attempts to ascertain employer needs. The reasons for this have been both to target education and workforce investments accordingly and to improve job matching and placement services. Many—but not all—of these efforts have been advanced through and supported by public sector initiatives, whether at the local, state, or federal level. The two most common approaches for understanding and validating employer hiring needs and job requirements have involved 1) local advisory boards and other intermediaries, such as workforce boards, and 2) governmental statistical surveys, and more recently the use of real-time labor market information aggregated from online job postings and job boards. Both approaches have met with limited success when it comes to understanding and communicating employer needs.

The Traditional Approach

For decades, the strategy of choice has been to convene employers as advisers and have them communicate their needs to key stakeholders, such as public policy leaders, education and workforce providers, or other interested human service and community stakeholders. They ascertain employer needs through a variety of formal and informal methods, such as going through the process of developing a curriculum or by providing reactions to information presented to them on labor markets to determine its accuracy.

Advisory boards take many shapes and forms. The most prominent advisory boards are local or regional and have input at the program level with colleges and universities as well as other career and technical education providers, such as vocational schools. The workforce system organized under the federal Workforce Innovation and Opportunity Act (WIOA) includes state and local workforce boards that require a majority of employer representatives to make decisions. These boards

help set policy, review labor market information, maintain eligible workforce provider lists, and help prioritize education and workforce investments.[1]

While the advisory board strategy is the most common of practices when it comes to attempting to understand employer needs and hiring requirements, it is often quite unreliable. For example, the number of participating employers on non-WIOA advisory boards is often small and not representative of the full breadth and diversity of needs in any given industry sector. Many small to midsize enterprises cannot spare the time that advisory boards require, resulting in low levels of participation, which is doubly problematic because small to midsize enterprises make up the bulk of job creators in the United States.

In addition, it is often unclear what role employers play on advisory boards and whether they are customers of the programs to which they are contributing input, or merely good corporate citizens providing high-level input and validation of information presented to them by others. More often than not, it is the latter. The result is a persistent challenge to keep employers engaged.

Another mechanism for engaging employers is through federal and state grant making. Many education and workforce grants, such as the recent Trade Adjustment Assistance Community College Career Training (TAACCCT) grants, require eligible grant recipients (e.g., community colleges) to organize employer partners to have input on the program design and to assist with its execution.[2] For those workforce systems driven by training grants, it is government's role to manage eligible training provider lists based on criteria set by public workforce policy. When awarding grants and funding, it is government agencies that pick which providers will receive financial support to provide workforce services to a company or industry. These decisions are based on criteria that are most important to the government agency involved, not necessarily based on where employers have historically sourced talent from or where they plan to in the future. Nor are the performance and accountability systems tied to those programs and grants aligned with the performance expectations of employers.

The other widely used source of information about employer job and hiring needs is aggregate data about job vacancies, skill requirements, and occupational growth projections. Generated by government surveys, these data are increasingly supplemented by real-time labor

market information provided by private firms. These labor-market information tools are designed to capture employers' job needs by level and qualification, but they have inherent limitations.

The federal government, through the Employment and Training Administration (ETA) at the U.S. Department of Labor (USDOL), in collaboration with the Bureau of Labor Statistics (BLS), produces short-term (2-year) and long-term (10-year) industry and occupation projections for 800-plus federally defined occupations in the Standard Occupational Classification (SOC) system. These resources, and related tools such as the Occupational Information Network (O*NET), the Occupational Requirements Survey (ORS), and many others, create a rich statistical system that attempts to forecast workforce demand by industry, occupation, and skill and credentialing level (Tyszko, Sheets, and Reamer 2017). The occupational projections are released in standardized reports that project current employment levels by occupation, job openings due to growth (new jobs added), and replacement openings due to incumbents retiring or leaving the occupation.

More recently, real-time labor market information vendors have been supplying advisory boards as well as talent development partners with information aggregated from online job postings and job boards. This information is often combined and "cross-walked" with government statistical survey data to gain better insight into employer hiring demand and requirements. Use of real-time labor market information has grown because of the increased availability of online job postings. These services scan thousands of jobs boards and websites to gather the most recent job-posting data available. The reports they provide aggregate data by similar jobs and provide number counts of job openings by occupation as well as an analysis of common skill and credentialing requirements. Whereas government statistical surveys are free to the public, real-time labor market information is a purchasable service provided by data vendors.

While real-time labor market information systems are more current than government labor market information reports, and may provide better details about employer job and hiring needs, they too have limitations. For instance, employers vary in their talent sourcing strategies and the extent to which they use online job ads and postings. Some employers use them only as a complement to other sourcing strategies, such as referral networks, job fairs, internal promotion, etc. Some

employers also post positions based on anticipated job openings, not actual ones. These tools are frequently criticized for overrepresenting the number of jobs requiring a college degree and underrepresenting significant vacancies in more blue-collar occupations, such as in construction. When it comes to aggregating employer jobs ads and postings, there is also a challenge with combining different job titles and staffing patterns. The aggregation may result in an industry-wide average but does not reflect the specifics of an actual employer's hiring needs and requirements.[3]

While both government statistical surveys and real-time labor market information provide useful trend data for understanding employer demand in terms of types of jobs, numbers of position openings, and skill and credential requirements, they are not capable of providing all the information needed today by job seekers, students, and the organizations that educate, train, and advise them.

Moving from "Demand-Driven" to "Employer-Led" Education and Workforce Systems

While advisory boards and labor market information may be enough to understand general trends, they do not provide the level of information needed to align with employer demand in a constantly changing labor market and economy. What is needed is a shift from "demand-driven" to "employer led" labor market information. This can be accomplished through new and emerging practices and tools that, if widely adopted, would transform how employers organize and signal their requirements to the market, including job seekers, education and training providers, and workforce intermediary organizations, in ways that can generate a clearer value proposition and return on investment for businesses and workers.

TYPES OF EMPLOYER SIGNALING

It is clear that the strategies and labor market information resources we have today are incapable of providing the granular, short-term, dynamic signaling required to keep pace with changing employer needs.

However, new and emerging organizational models and tools of action suggest new ways of understanding and communicating employer needs and hiring requirements. In this section, we explore three distinct ways in which employers can improve how they do such signaling to boost labor market transactions.

Talent Pipeline Management

Since 2014, the U.S. Chamber of Commerce Foundation, through its Talent Pipeline Management (TPM) initiative, has collaborated with a number of employers and business associations to experiment with new approaches to signaling employer hiring needs and requirements.[4] The TPM initiative is a business-led solution for closing the skills gap by supporting employer-led education and workforce partnerships that are performance driven. A critical component of this movement is organizing employer signaling in ways that support employer-led talent development partnerships and deliver a return on investment for participating employers.

In TPM, employers serve not as advisers but as "end customers" of flexible and responsive performance-based education and workforce partnerships. This contrasts with more traditional public-private partnerships, which convene employer advisory boards and make use of government statistical survey data on jobs and job projections supported by real-time labor market information analytics. Many employers are hesitant to share details regarding their talent-sourcing strategies or hiring requirements for fear of jeopardizing their competitive advantage.

Instead, through TPM, employers are given the space, incentive, and tools to generate their own labor market information, related to their hiring needs and based on their requirements, in ways that protect their competitive advantage and generate a return on investment. The information they produce is then shared with their most trusted and preferred education and workforce partners, whom they rely on for talent. This process ensures that employers are only sharing the information they need to with preferred and trusted partners, which can best help them achieve a better return on investment.

In TPM, employers, through their collaboratives, produce their own labor market information tied directly to their workforce needs. This information sends better, clearer signals about their talent development

needs and priorities. In TPM, there are three distinct ways in which employers can improve their signaling around jobs and hiring requirements, resulting in better overall labor market transactions. These signals include how employers: 1) organize their workforce and forecast demand, 2) communicate their hiring requirements, and 3) identify preferred providers of talent.

Organizing Jobs and Forecasting Demand

Employer collaboratives play a critical role for employers and the larger public-private partnerships that they engage in. Through collaboratives, employers go through a systematic process for determining their most critical jobs and competency, credentialing, and other hiring requirements specific to the companies that make up the collaborative.

One of the signals employer collaboratives can send is in identifying the critical jobs that make up their workforce and where there is a shared talent need, shortage, or "pain point." A shared pain point is one where employers cannot successfully locate, hire, and retain sufficient numbers of people to carry out the most critical work inside their companies. This can be measured in terms of the time it takes to fill positions, the cost associated with screening unqualified candidates, the qualifications of applicants, the cost of onboarding and training, and the rate of retention.

Employer collaboratives make use of government statistical surveys and real-time labor market information to help them ascertain where those pain points might be and what the level of need is, but this is no substitute for employers generating their own labor market information tied directly to their company's need. In fact, the most important, trustworthy, and powerful information comes from employers, because it is tied directly to the way they organize and manage work.

Vermilion Advantage, an economic development organization located in Danville, Illinois, is an example of what employer collaboratives look like and how they organize workforce priorities. Vermilion Advantage staffs four sector-based employer collaboratives in: 1) manufacturing, 2) health care, 3) logistics, and 4) technology and services (Tyszko and Sheets 2015). Vermilion Advantage's employer members can opt into one or more collaboratives to address their shared workforce needs. These collaboratives go through a process by which they

identify their most critical workforce positions and forecast demand for those positions across each company in the collaborative.

Elevate Virginia, Virginia's state workforce development board, recently led an effort to organize an information technology employer collaborative in northern Virginia. The companies went through a systematic review of government labor market projections and real-time labor market information that were aggregated from job posting data in the region. The business members were able to examine the data and identify specific instances where occupation titles were combined or disaggregated in ways that were inconsistent with how companies organized their workforce. As a result, the participating companies were able to take a half dozen or more job titles and get them down to two core business functions that aligned with their hiring needs. They were then able to project more accurate forecasting data for those two employer-defined business functions based on an agreed-upon set of assumptions, such as whether anticipated government contracts would be included (Tyszko and Sheets 2015).

Communicating Hiring Requirements

When employers organize themselves and use a systematic process to contribute company-specific data related to their jobs, they send better, clearer signals about their workforce priorities, including how they organize jobs, what the level of demand is for those jobs, and the skill sets involved.

In TPM, employer collaboratives organize their own hiring requirements and preferences. This includes employability skills (i.e., soft skills), such as "communication" and "teamwork," as well as technical skills and competencies. It also includes required or preferred credentials and academic level.[5] The goal is not to create common hiring requirements or a skill taxonomy that applies universally to each of the employer members or that aims for the lowest common denominator. Rather, it is to create a shared language for communicating competency and credentialing requirements for the jobs they defined based on their workforce needs. Through this shared language, employer collaborative members can signal competency-based hiring requirements to preferred partners and better delineate similarities and differences in those requirements.

This information is particularly valuable for states, which are now under pressure to develop industry-recognized credential lists that education and workforce systems can integrate into their career pathway programs. The challenge is that there is no consistent and scalable way to produce these lists outside the advisory boards mentioned earlier. What is needed is more dynamic signaling from employers to truly understand which credentials are required or preferred at any given time.

Returning to our Elevate Virginia example, the participating information technology companies were able to respond to a survey of hiring requirements that they cocreated as an employer collaborative. Each company was able to signal how important each skill or competency was and at what level (i.e., entry level, midlevel, or senior level). They were also able to identify required or preferred academic levels as well as which industry credentials were preferred. The collaborative was able to reconvene postsurvey and review where there was consensus on shared hiring requirements, and where there was variance that needed to be discussed, harmonized, or communicated more clearly so that talent development partners were aware of this need for customization.

TPM has demonstrated that, when given the opportunity and tools, employers will provide more comprehensive and actionable information related to their hiring needs and requirements, and they will use a shared language and terminology to signal those requirements. However, this must be a collaborative and bottom-up process based on shared information among employers. It requires open and shared job classification systems and competency frameworks that are available to employers and their talent-sourcing partners. It cannot be accomplished by imposing a predefined occupational classification system using a predetermined language for communicating hiring requirements.

Communicating need is not just an employer engagement challenge; it's also a technological one. It has been argued that the human resource (HR) technologies and services employers rely on for processing job applicants inadvertently pass over otherwise qualified applicants (Cappelli 2015). Much of this can be attributed to the limitations of HR technologies that rely on word searches of résumés and insufficient specifications and descriptions in job profiles.

To address this need, the U.S. Chamber of Commerce Foundation is creating a job registry service for employers and their HR information

systems and related HR vendors. This solution can directly address the HR tools, systems, and processes that signal demand for skills and credentials and that are used to review the qualifications of job applicants. This job registry service will focus on the development, benchmarking, and alignment of competency and credentialing requirements using HR open-data standards that are supported by standards organizations such as Schema.org and the HR Open Standards Consortium. The services will also make use of advanced web-based technologies, such as "linked data," which enable companies to dynamically signal a change in hiring requirements.

In practice, this means that HR professionals will be able to select their preferred language for describing competency and credentialing requirements attached to jobs that fit their staffing model. Through a shared technology solution, employers would also be able to more easily signal similarities and differences in competency and credentialing requirements with other employers, even when looking at the same occupation. It would also allow for harmonization of job requirements, whereby employers can select competency descriptions and requirements used by other employers in order to arrive at a common language for describing skill needs for a job or industry. Employers would also be able to more quickly signal their hiring requirements and any changes that occur to those requirements (Tyszko, Sheets, and Reamer 2017).

The result is better, faster, clearer signaling from employers to education and workforce stakeholders. The structured data employers produce for their job profiles can be linked to credentialing data systems and learner record systems in ways that allow for employers to better find and connect with talent suppliers and the most highly qualified talent. It will also provide more accurate, up-to-date labor market information that can be used to improve government statistical systems without increasing the reporting burden and regulatory risk to employers.

Identifying Preferred Providers of Talent

In addition to transforming how to communicate workforce priorities and demand, employer collaboratives can signal where they source their talent from. This information is critical for career guidance systems tasked with informing students and learners about which education or workforce programs deliver the best results.

Employer collaboratives can start by back mapping where they have historically sourced their best talent, including employees they wanted—and were able—to retain. This process identifies which education, training, and credentialing providers were best able to meet the employer's hiring requirements. When employers back map together, they produce better career pathway data and insights.

Collaborative members can go a step further and engage in talent flow analysis to determine what their capture rate is of talent from a particular provider or program and how much talent is being lost to other employers or regions. This analysis allows employers to identify whether existing talent-provider networks are capable of meeting the level of demand forecast by collaborative members or whether new providers need to be accessed in order to meet projected demand.[6] Employers can also signal where they plan to source talent from in the future.[7]

Gateway Community and Technical College provides an example of how a talent provider can improve the quality of its programs and achieve better job placement outcomes for students when employers provide better signals. Gateway was able to take the hiring needs and requirements provided by a newly formed manufacturing collaborative and revamp an underutilized machining program. It rebooted the program as an enhanced operator program, made it competency based, streamlined the learning outcomes, reduced the time it takes to complete, and reduced the cost of delivering the program by half. Since the program was revamped, Gateway has been able to increase recruitment and improve job placement as well as improve the qualifications of those hires (Praiswater 2017).

RECOMMENDATIONS, OPPORTUNITIES, AND CHALLENGES

Improving employer signaling in the ways discussed above will require support and buy-in from both public and private sector partners. There are a number of ways that education and workforce systems can use existing flexibility found in current legislation to both encourage and leverage improved employer signaling. However, employers too must adopt a new role in "pushing" their signals to trusted and preferred

partners and not waiting on advisory boards, surveys, and job-posting data analytics to "pull" these signals. Included here are three immediate opportunities.

Recommendations

1) **Activate new employer collaboratives using WIOA resources.** Under WIOA, sector-based partnerships can be rebooted and transformed to become more employer led. State and local workforce boards can use their resources and ability to recognize partnerships in order to seed new employer-led collaboratives that are staffed by business and economic development associations. These collaboratives can produce more granular and actionable labor market information, which can be shared with education and workforce providers to improve curriculum and training alignment. They can also be used to provide feedback on employer results and inform the next generation of employer satisfaction measures based on employer return on investment.
2) **Continue to develop implementation tools, technologies, and supports that help employers organize and send better signals.** This includes expanding the TPM movement and its newly formed TPM Academy to provide training at scale to business and economic development associations. This also includes continued experimentation with structuring employer hiring-requirements data through the proposed job registry service to provide better, clearer, faster signals on changing employer hiring requirements.
3) **Further experimentation is needed with employer-led quality assurance.** Such a process can provide an alternative to higher-education accreditation and workforce-eligible provider lists (Tyszko 2017; Tyszko and Sheets 2016). Such a system can better signal which programs and institutions are best able to meet employer hiring needs. It can also be extended to cover a wider variety of earn-and-learn models, which combine employment with education and training, resulting in documented learning outcomes and credentials. Such models are not presently covered under any quality assurance system.

These recommendations will be successful only if there is broad buy-in and support, both by business and by educational and workforce training partners. This includes employers—particularly small to mid-size companies—engaging in new collaboratives and working together through preferred intermediaries to send better labor market signals. It also requires vendors of HR information systems and application tracking systems to adopt new technologies and standards as part of their existing products and services. Last, it requires workforce and training providers to make use of new employer leadership and signaling as part of their programs, credentials, and career services.

CONCLUSION

Economists and business leaders may debate the severity and causes of the skills gap, but most agree that one major factor driving it is the disconnect between how employers communicate or "signal" their hiring requirements and how students and job seekers communicate their knowledge, skills, and abilities in relation to those requirements. A serious disconnect involves how employers communicate the competency and credentialing requirements tied to their most critical jobs, on which their competitiveness depends. Addressing this problem will only grow in importance as we continue to live in a dynamic, innovation-based economy with constantly changing hiring and skill requirements.

Employer signaling has remained a persistent challenge in aligning education and workforce systems to the needs of the economy. The existing strategies for convening employers and anticipating their workforce requirements are incapable of providing the granular, short-term, dynamic signaling required to keep pace with a rapidly changing economy. However, by leveraging new organizational models and tools, employers can change and improve how they signal their hiring requirements and preferred talent-development partners in ways that bolster outcomes and return on investment for employers, students, and job seekers alike.

Notes

1. For information on the WIOA legislation and how it is implemented at the state and local levels, see USDOL (2018b).
2. For background information on TAACCCT grants, see USDOL (2018a).
3. See Strategy 2 of the TPM Academy curriculum (Tyszko and Sheets 2017).
4. For information on the TPM movement, see U.S. Chamber of Commerce Foundation (2018).
5. See Strategy 3 of the TPM Academy curriculum (Tyszko and Sheets 2017).
6. See Strategy 4 of the TPM Academy curriculum (Tyszko and Sheets 2017).
7. See Strategy 5 of the TPM Academy curriculum (Tyszko and Sheets 2017).

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