

UNSTUCK IN THE MIDDLE

To close the middle skill gap, a new taxonomy
of skills attainment needs to take its place

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"Middle skills" is a misnomer. The term conjures a relatively finite subset of roles or occupations that require some training beyond high school – but not a college degree.

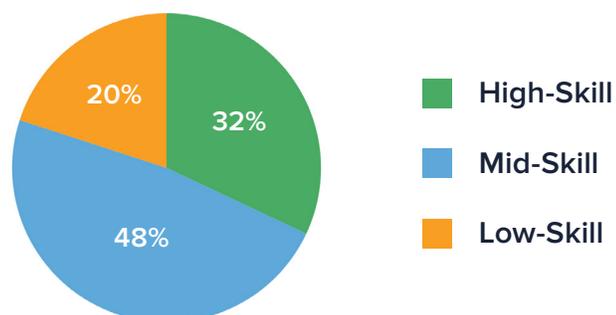
■ INTRODUCTION

The landscape of opportunities between the high school diploma and the bachelor's degree is broad, complex, and growing.

An array of credentials, qualifications, and educational experience options make the "middle skill" vernacular more ambiguous than declarative, more catch-all than career-focused. They reflect a blend of both hard and sought-after soft skills and a [complex patchwork](#) of 1,100 licensed occupations, fewer than 60 of which are regulated in all 50 states — and they serve as the foundation for much of America's productivity and prosperity.

In fact, so-called "middle skill" positions now [make up](#) the majority of the U.S. labor market. But by suggesting a homogenous "middle" level of skills, the term threatens to undervalue the level of skill acquisition required for success in these roles, which are often highly skilled and specialized. And, simply put, in the words of a recent Bain [report](#), "a bachelor's degree is not essential for most good jobs."

Job Openings by Skill Level, United States, 2014-2024



Source: NSC analysis of long-term occupational projections from state labor/employment agency.

<https://www.nationalskillscoalition.org/resources/publications/2017-middle-skills-fact-sheets/file/United-States-MiddleSkills.pdf>

But workers trained to the middle skill level face a paradox. Despite a growing number of available jobs, they are often locked out of opportunity by a confluence of factors — including employers’ reliance on historic proxies (like degrees) even for jobs that have not historically required them. A lack of clarity about the skills needed to succeed in the workplace, and the need for credentials that designate skills beyond the degree, compound the challenges facing the labor market. As a result, the Strada Institute for the Future of Work estimates that as many as [44 million](#) working Americans with less than an associate’s degree are unable to earn a living wage.

Shifting away from a binary understanding of skills attainment toward one that defines and categorizes the landscape of skills and experiences along a spectrum can, in turn, unlock opportunities on both the supply and demand sides of the labor market.

We need a new way of conceptualizing middle skills, and we need it quickly as the urgency of a widening skills gap is growing. We need a taxonomy of skills that reflects the diversity of these jobs and enables more specific, actionable insight to inform the development of innovative policies, educational experiences, and skills-based hiring practices.

Recent years of labor shortages, particularly for skilled trades and in healthcare, and rapid technological advances in the workplace are compelling employers to look for new sources of talent, and new ways of connecting that talent to opportunity. Those labor market dynamics have become a catalyst for the emergence of new training models and providers that offer accelerated training in hard and soft skills.

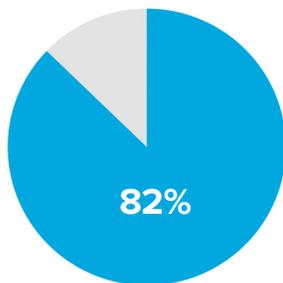


■ THE GOAL OF A SKILLS SPECTRUM

The goal of a skills spectrum is to help millions of Americans who are stuck in the middle. It's about creating a lexicon that will enable employers to close skills gaps by articulating their needs with greater specificity and empowering individuals to identify relevant educational experiences and training that can help to close them. It's about unlocking economic opportunity by bringing greater clarity, precision, and structure to a labor sector that encompasses more than half of all jobs in the country.

[The Manufacturing Institute](#) found that 82% of executives worried that the skills gap and lack of qualified workers would impact their ability to meet consumer demand.

For policymakers, employers, and workers, a skills spectrum can provide a more comprehensive understanding of the breadth and diversity of jobs. It also allows policymakers and employers to better identify where training does not meet the demands of work. Overall, the clearer perspective that a skills spectrum provides will help policymakers, employers, and workers better understand and meet demand in a rapidly shifting labor market.



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■ WHAT DOES A SKILLS SPECTRUM ACTUALLY LOOK LIKE IN PRACTICE?

Developing the spectrum starts with identifying, defining, and understanding what skills actually are. Then, determining how to communicate those skills in a transparent way; organized along a continuum that is relevant to employers and employees. The foundational elements of the spectrum should include:

Defining the Skills

A necessary first step in the development of a skills spectrum will be to determine what a “skill” actually is. The U.S. Department of Labor’s Occupational Information Network, or [O*NET](#), uses a specific set of criteria to help individuals and employers understand the requirements of a particular job. “It’s important to say that O*NET was groundbreaking when first launched,” notes Maria Flynn, CEO of JFF. “But it has its limitations. We need to determine how to make it more useful given today’s dynamic labor market — and also have a more thoughtful conversation around the role of private versus public investment in such tools.”

O*NET [defines skills](#) as “developed capacities that facilitate learning or the more rapid acquisition of knowledge.” But this approach to skills faces many of the challenges set forth earlier in this paper: they are defined broadly (e.g., “spreadsheet software,” “critical thinking,” “equipment maintenance”) and not directly connected to signals of skill attainment. According to Spencer Thompson, founder of the career matching platform Sokanu, “The structure of O*NET is not set up to respond to the needs of today’s employers or job-seekers. We need better — and better organized — data in order to help connect individuals with job opportunities that fit their interests and skill set.”

While existing tools like O*NET (and related tools, like its [competency model framework](#)) can help job-seekers and businesses make broad connections between skill sets and occupations, an effective skills spectrum will likely depend on a more granular approach — more akin to what O*NET calls “tasks.” An example of these tasks would be measuring materials or distances using a measuring tape, t-square, or ruler to lay out work.

Creating a spectrum based on these more specific, discrete elements of a job could help bring clarity to the technical skills needed to perform effectively.

Mapping Credentials

Credentials or certifications can effectively signal skill attainment to prospective employers. At present, the marketplace of postsecondary credentials is massive, disorganized, and largely disconnected from either individual skills or skill sets. “The lack of clarity around the relationship between skills and credentials means that, in many ways, employers, workers, students, and education providers are flying blind,” said Scott Cheney, Executive Director of the nonprofit Credential Engine. “This is especially important for middle skill workers, since the four-year degree continues to serve as a catch-all indicator of career readiness for employers.”

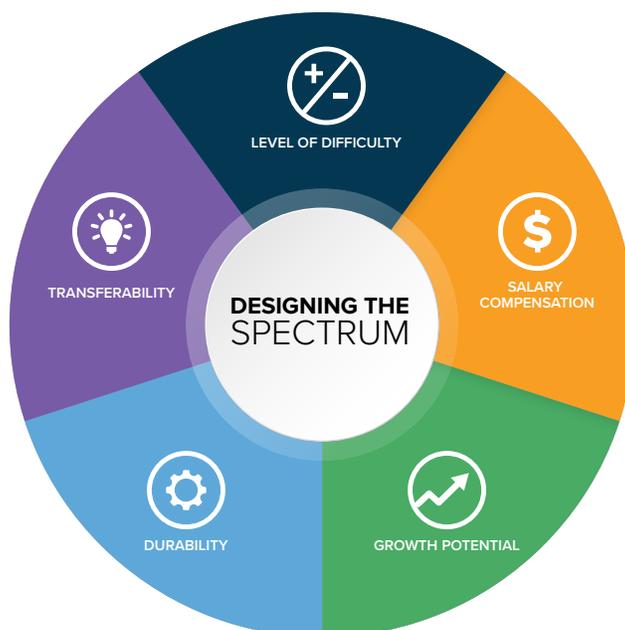
Credential Engine has led the effort to map the sprawling landscape of postsecondary credentials, and link those credentials more closely to specific skills — which, they argue, will form the foundation of a more transparent labor market. Credential Engine [now estimates](#) there are approximately 750,000 credentials, including high school diplomas, postsecondary degrees and certificates, registered apprenticeships, certifications, licenses, alternative degree programs, and bootcamps.

Just as the skills spectrum may depend on a more granular definition of skills, it may also benefit from the emergence of microcredentials. Often delivered as digital badges, microcredentials enable educational institutions to reward skill attainment in a much more targeted way — and give employers a clearer picture of a candidate’s abilities and potential than a degree or certificate.

Data Transparency

Ultimately, one of the goals of the skills spectrum is to encourage education institutions and credential providers to look “under the hood” and develop credentials that are more clearly linked with particular skills. In the [words](#) of Jonathan Finkelstein, CEO of the digital credential provider Credly, “A transcript is itself a collection of credentials, but breaking it down into smaller pieces can more clearly signal a person’s skills to the market.”

“There’s a growing understanding among employers and education providers that credentials and skills are not synonymous. In many cases, there is no clear way to translate between one and the other,” notes Finkelstein. “Creating a common taxonomy to classify and recognize skills can help employers create a unified talent management strategy — one that bridges hiring, recruiting, and L&D to not only help find the right talent from the outside, but also develop internal talent to address skill shortages.”



■ DESIGNING THE SPECTRUM

A skills spectrum is, by definition, a continuum: a way of mapping, measuring, and comparing skills based on certain agreed-upon dimensions. This section explores five potential dimensions that could be included in a skills spectrum: level of difficulty, salary/compensation, growth potential, transferability, and durability.

By categorizing skills based on more specific, measurable characteristics, the skills spectrum can rid us of the “middle skill” vernacular that has stigmatized this sector of the workforce and, in turn, better attract, develop, and produce quality training programs and graduates. Potential dimensions to start discussions include:



LEVEL OF DIFFICULTY

A skills spectrum based on difficulty could compensate for varying degrees and levels, categorizing skills from foundational to advanced. The National Skills Standards Board has already attempted to [develop](#) and encourage the adoption of a “complexity level scale” across various dimensions of a skill area, a great first step.

This also reflects the way that educational institutions already scaffold certification and training programs, and provides clarity to workers and students regarding how they can advance their skill sets. It helps employers align open positions, and perhaps compensation and benefits, along the continuum.

As discussed above, microcredentials can help capture the progression of difficulty levels by allowing workers to demonstrate ongoing development — and eventually mastery — of a specific skill or skill set.



SALARY/COMPENSATION

Expected or projected compensation may be the most straightforward way to measure the value of a skill. In theory, skills that take longer to master will be in shorter supply and higher demand, therefore driving up the salaries for individuals with those skills. As such, a skills spectrum based on compensation may serve as a rough proxy for skill difficulty.

In addition to serving as a metric for measuring skills, increasing transparency around the relationship between salary and skill attainment can provide much more granular, meaningful data to employers, workers, and policymakers tasked with stimulating local economies. Creating a skills spectrum based on salary, however, will need to account for differences in industry pay, given that any measure of compensation will ultimately be attached to a specific job and based on labor market data.



GROWTH POTENTIAL

Policymakers, employers, and individuals all have a vested interest in understanding the extent to which a given skill will be in demand in the future. As such, it may also be worthwhile to consider a measure of growth potential (e.g., projected future demand) as part of a skills spectrum.

LinkedIn's annual [Emerging Jobs Report](#) provides an example of how growth potential could be measured. By analyzing changes in demand for certain jobs over time, LinkedIn identifies the occupations where demand is growing the fastest, and maps those jobs to relevant skills. A similar approach for the “middle skill” field could help individuals find training opportunities focused on the skills that are most relevant for employers in their area.



TRANSFERABILITY

As rapid technological change makes the labor market increasingly volatile, skills that are widely relevant and more easily transferable between occupations will be a critical asset for workers who need to reskill or identify new job opportunities.

In a recent [report](#), LinkedIn and the Inter-American Development Bank (IDB) examined the transferability of skills between different occupations, with the aim of creating “networks” of related jobs based on the similarity of their skill requirements. The authors note that transferable skills can help “individuals to better withstand labor market disruptions in a dynamic digital economy, as they are applicable to many occupations.” With portability as one of its dimensions, the skills spectrum could help individuals better understand the skills with broad utility beyond their current role — in ways that create clearer pathways to career mobility, even in a dynamic labor market.



DURABILITY

The rise of automation has already impacted many jobs in this sector, either replacing them outright or significantly reducing how much human interaction is needed. The continued evolution of technology is sure to continue this trend, and a skills spectrum ought to take into account the durability of individual skills in an increasingly dynamic labor market.

McKinsey's seminal 2018 [research](#) outlines some of the skills that are most likely to be affected as machines take over routine tasks — such as inspecting and monitoring patient vitals, operating medical equipment, and manual jobs like driving, packing, and retail shelf stocking. It also notes that social and emotional skills like communication and negotiation, leadership, management, and adaptability, often referred to as “soft skills,” are expected to see increasing demand.

Similar to the growth potential criteria above, a durability metric may provide information for individuals deciding what skills to acquire, as well as policymakers creating programs to soften the impacts of technological change on displaced workers. With a unified definition or expectation of the durability of certain skills, workers, employers, and educational institutions can all operate under the same pretenses. This metric can also help workers, employers, and policymakers decide how best to allocate resources toward learning or training specific skill sets.



■ CONCLUSION: WHAT'S NEXT?

Developing — and disseminating — a new taxonomy of skills is, of course, an incredibly complicated process that will involve input from a broad range of stakeholders, including employers, education providers, and policymakers.

By its very nature, the skills spectrum is not as simple or “user-friendly” a signal as a college degree. An effective skills spectrum would — by design — include more detail, nuance, and specificity.

Further research and discussion will be needed to respond to the wide range of questions that employers, policymakers, and other stakeholders should consider:

- **What factors are most important to consider as part of a skills spectrum?**
- **How can existing — or new — policies support the development and implementation of a skills spectrum?**
- **How should the skills spectrum be conveyed to employers and individuals?**
- **How should the skills on the spectrum be linked with specific jobs?**
- **How should the spectrum be disseminated, and how can adoption be encouraged?**

And this is just the beginning — creating a model that could bring much-needed clarity and nuance to the sector that makes up the majority of the U.S. labor market is a long and complicated process. There are much-needed discussions to come that will bring together diverse — and divergent — voices to talk of the changing nature of skills and credentials in the workforce, and expand economic opportunity for American workers.



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