

Modernizing Apprenticeships and the National Apprenticeship Act to Promote Inclusive Economic Growth

The most significant challenges to increased labor productivity growth in the United States are insufficient skilled labor supply, uneven technology adoption, and stalling investment.¹ In fact, in less than a decade, one-third of the United States workforce will need to learn new skills and find work in new occupations.² Many workers will need to upskill and reskill throughout their lives to adapt as shifts in the labor market occur, especially those brought on by automation and technology, including artificial intelligence (AI).³ The skills mismatch—the misalignment between the skills workers possess and jobs require—stifles inclusive economic growth. Earn and learn strategies, which ensure workers are paid while they complete work-based learning,⁴ can help to address the skills mismatch and promote inclusive growth by allowing workers to develop skills without forgoing a salary. Apprenticeships, a type of earn and learn strategy, combine paid on-the-job training with formal classroom or online instruction to help workers master knowledge, skills, and competencies needed for career success.⁵ Apprenticeships can play a critical role in helping students and workers upskill and reskill, with nearly all surveyed Registered Apprenticeship sponsors citing apprenticeships as helping to meet their need for skilled workers in a survey of 1,000 sponsors.⁶

JPMorgan Chase provides youth and adult apprenticeships in various areas such as technology, business operations, and finance. The Business Roundtable (BRT), an association of more than 200 CEOs of America's leading companies,⁷ has launched the Apprenticeship Accelerator Corporate Initiative to help companies in various industries develop or scale their Registered Apprenticeship programs to expand opportunities to workers without a four-year degree.⁸ The private sector recognizes apprenticeships as a talent pipeline strategy to address labor market needs and promote inclusive growth.

While apprenticeships can benefit many industries, the majority of Registered Apprenticeships are currently in construction, public administration, educational services, and manufacturing industries.⁹ Registered Apprenticeships are underutilized by certain industries in part because the Registered Apprenticeship Program system needs to be modernized to align with current skilling efforts. In addition, women and many people of color have not been able to access Registered Apprenticeships at the same rate as their counterparts.¹⁰

Modernizing apprenticeships, expanding apprenticeship programs in new industries, and expanding access to apprenticeships for disadvantaged and underrepresented populations, including youth, can help to address the skills mismatch and promote inclusive economic growth.

Careers & Skills

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Recommendations

1. **Expand access to apprenticeship programs in new industries** like technology and financial services to better meet the needs of our economy.
2. **Connect apprenticeships to credit-bearing postsecondary coursework** so that workers and students are on career pathways with multiple on- and off-ramps.
3. **Expand access to apprenticeship for disadvantaged and underrepresented populations** to facilitate inclusive growth by supporting recruitment efforts and advancing pre-apprenticeship programs and work supports.
4. **Support youth apprenticeships** to allow youth to earn while they learn.

By the numbers



87%

of companies experience or expect a skills mismatch



0.2%

of active apprentices in the finance and insurance industry, just 1,053 of the roughly 550,000 active U.S. Registered Apprentices in FY21

Expand Access to Apprenticeship Programs in New Industries

The majority of Registered Apprenticeships are in industries such as construction and manufacturing.¹¹ However, 87 percent of surveyed companies either face a skills mismatch in their workforce or expect to experience it within a few years.¹² Expanding apprenticeships in other industries, such as technology and financial services, can help students and workers upskill to prepare for in-demand careers. In a survey of 1,000 Registered Apprenticeship program sponsors, nearly all of them cited their apprenticeship programs as helping meet their need for skilled workers.¹³ To expand access to apprenticeships in new industries, state and federal actions can be taken to provide support for apprenticeships beyond the skilled trades and modernize apprenticeship standards and processes.

Provide Support for Apprenticeship Programs in New Industries

State and federal actions can be taken to grow apprenticeships in new industries. At the federal level, the National Apprenticeship Act (NAA), which established the Registered Apprenticeship Program and permits

Registered Apprenticeships

Work-based learning is a continuum of experiences that help prepare students for postsecondary education and careers. Work-based learning includes a range of activities such as mentorship, internships, and apprenticeships.⁴² Apprenticeships can be registered or unregistered.⁴³ Registered Apprenticeships are approved and validated by the U.S. Department of Labor or a State Apprenticeship Agency. Registered Apprenticeships are paid jobs that are industry-vetted and provide structured on-the-job training and mentorship, supplemental classroom education, and a portable, nationally recognized credential.⁴⁴ Registered Apprenticeships benefit both workers and employers. Ninety-three percent of apprentices who complete a Registered Apprenticeship retain employment with an average annual salary of \$77,000.⁴⁵ For every dollar employers invest in an apprentice, they get back \$1.44 in benefits.⁴⁶

Intermediaries

An intermediary is an organization that helps businesses create, launch, and expand apprenticeship programs.⁴⁷ Intermediaries conduct outreach to industry, aggregate employer demand for apprentices, and broker placements for participants.⁴⁸ Intermediaries are often community-based organizations, industry associations, joint labor management organizations, community colleges, workforce boards, or Chambers of Commerce.⁴⁹

the Department of Labor to issue regulations that protect the welfare of apprentices and prevent discrimination in apprenticeship programs,¹⁴ can be modernized by providing support for developing and growing apprenticeships in new industries. States can take steps to assist apprenticeships in growing in new industries, for example by [establishing councils](#) to separately support the skilled trades and apprenticeships in other industries, thus ensuring that the unique needs of industries are being met.

Modernize Apprenticeship Standards and Processes

Many employers do not participate in Registered Apprenticeship programs in the U.S. because of the administrative requirements associated with them or because they find that Registered Apprenticeship program standards do not align with their current skilling efforts.¹⁵ To incentivize employer participation, the registration process for employers can be simplified and streamlined to address administrative barriers, such as having to re-register the same programs in multiple states. Additionally, intermediaries can be leveraged to educate employers about Registered Apprenticeships; assist with registration and compliance with apprenticeship regulations and track progress of apprentices; and work with state and federal leadership to improve coordination across multiple apprenticeship systems and streamline tracking across multiple databases.¹⁶

In addition, the standards for Registered Apprenticeship programs can be modernized without sacrificing quality to recognize different industry approaches to skilling. For example, some industries may be better positioned to take a more flexible, competency-based approach to apprenticeships, as opposed to a time-based approach.¹⁷ While the Department of Labor recognizes competency-based Registered Apprenticeships, apprentices in those programs must still complete at least 2,000 hours of on-the-job training in the program.¹⁸

Connect Apprenticeships to Credit-bearing Postsecondary Coursework

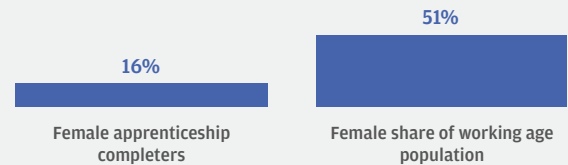
Apprenticeships are often viewed as an alternative to “formal” credit-bearing postsecondary education programs. However, students and workers should not have to choose between receiving meaningful postsecondary credits and skills training. Rather, apprenticeships should be designed to more strongly connect to credit-bearing postsecondary coursework so that workers and students are on career pathways with multiple on- and off-ramps. One approach to achieve this goal is to prioritize this connection in the Reauthorization of the National Apprenticeship Act. An interagency agreement between the U.S. Department of Labor and Department of Education can be created to support the creation and expansion of youth apprenticeships, college consortia, and data-sharing agreements in order to build greater alignment between “formal” educational programs and apprenticeships.^{19,20}

At the state level, efforts can be made to more strongly connect apprenticeship programs to credit-bearing coursework at community colleges and other public institutions of higher education. For example, states can convene relevant stakeholders, including industry partners and community colleges, to determine how to more strongly align apprenticeship programs with credit-bearing coursework.

Expand Access to Apprenticeships for Disadvantaged and Underrepresented Populations

Currently, women and many people of color are underrepresented in Registered Apprenticeship programs compared to their counterparts,²¹ and occupational segregation by gender exists in apprenticeship programs.²² Removing barriers to employment, which in low- and moderate- income communities include lack of access to training, transportation, and childcare,^{23,24} can help to address the underrepresentation and occupational segregation of populations. State and federal actions, such as strengthening work supports and recruitment efforts, can be taken to ensure that people of color, women, veterans, older adults, people with disabilities, justice-involved individuals, and other populations that may face barriers to employment are able to access and succeed in apprenticeship programs.

Women are highly underrepresented in Registered Apprenticeship programs



Source: Department of Labor⁶⁴

Support Recruitment Efforts and Advance Pre-Apprenticeship Programs and Work Supports

Efforts to recruit individuals from underrepresented populations in high-quality apprenticeships can be made to help close participation gaps and address occupational segregation. Federal and state agencies can provide technical assistance to program sponsors,²⁵ the lead party in the planning, partnership management, and delivery of an apprenticeship,²⁶ and facilitate partnerships between program sponsors and affinity groups and employment service providers seeking to refer individuals to programs²⁷ to increase enrollment of disadvantaged and underrepresented populations. At the federal and state levels, policymakers should prioritize recruitment efforts in apprenticeship policies.

Modernizing Apprenticeships

Employers increasingly recognize the value of apprenticeships for industry-specific jobs.⁵⁰

- For example, certain companies that are members of the New York Jobs CEO Council, a nonprofit membership organization whose goal is to provide access to high-potential jobs for 100,000 low-income New Yorkers, have partnered with the City University of New York (CUNY) colleges to create apprenticeship-based Associate of Applied Science degrees.⁵¹
- The Business Roundtable (BRT) has launched the Apprenticeship Accelerator Corporate Initiative to help companies develop or scale their Registered Apprenticeship programs to expand opportunities to workers without a four-year degree.⁵² JPMorgan Chase, a member of the New York Jobs CEO Council and participant in BRT's Apprenticeship Accelerator Corporate Initiative, has apprenticeship programs for youth and adults in topics ranging from technology and business operations to finance.
- In collaboration with CareerWise New York, JPMorgan Chase offers youth apprenticeships that allow high school students to develop skills related to business operations or software engineering through blended classroom training and on-the-job experience at JPMorgan Chase.
- To help address the firm's entry-level talent needs, JPMorgan Chase in collaboration with NY Jobs CEO Council is offering an apprenticeship connected to CUNY where students pursuing an Applied Science Associate's Degree in Business Management with a specialization in finance and banking can earn eight college credits for their on-the-job training.
- In Illinois, the firm is a member of the Chicago Apprenticeship Network, which helps businesses in Chicago establish apprenticeship programs⁵³ and works with the City Colleges of Chicago, the local community college network, to offer a technology Registered Apprenticeship.
- In collaboration with Apprenti, the firm offers a Registered Apprenticeship in cyber operations, which has placed candidates in Delaware and Texas. Also, in collaboration with Franklin Apprenticeships, the firm offers Registered Apprenticeships focused on roles in the mainframe computing space, which has placed candidates in Texas.

While such models have been beneficial to helping JPMorgan Chase create its own diverse talent pipeline, more can be done to modernize apprenticeships to work for an array of employers.

Individuals from underrepresented populations must also be equipped with the skills and supports to succeed in those programs. Pre-apprenticeship programs, which provide instruction, preparation, and supports that enable participants to advance to apprenticeships,²⁸ can help students and workers succeed in apprenticeship programs. These programs can be delivered by a variety of entities, including community colleges, workforce agencies, high schools, and community-based organizations.²⁹ At the federal level, the reauthorization of the National Apprenticeship Act should include support for pre-apprenticeship programs. At the state level, states can leverage existing resources to provide preparation and support to those seeking to participate in apprenticeship programs. Lack of access to key work supports, such as childcare and transportation, can prevent students and workers from participating and succeeding in apprenticeships. States can [braid or leverage existing funds](#), such as Temporary Assistance for Needy Families (TANF) and Supplemental Nutrition Assistance Program Employment and Training (SNAP E&T) funds, to provide critical work supports to participants.

Support Youth Apprenticeships

Youth apprenticeships, which are specifically designed to serve in- and out-of-school youth between the ages of 16 and 24,³⁰ allow youth to participate in paid, industry-aligned work experiences. Between 2010 and 2020, youth below the age of 25 registered as apprentices earned an average of \$31, which exceeds the average wage for workers in this age group by approximately \$18 per hour.^{31,32} Early data from state youth apprenticeship programs indicate that youth apprenticeships can help young adults enter industries with good jobs and advancement opportunities.³³ However, there are many barriers to the growth and success of youth apprenticeships.

Define Youth Apprenticeships at the Federal Level

There is no federal definition for youth apprenticeships, leading to a diverse collection of youth apprenticeship programs³⁴ across the country lacking disaggregated data at the federal level. The U.S. Department of Labor's Registered Apprenticeship Partners Information Database System (RAPIDS), which pulls together learner-level data from 25 federally administered and 18 state-administered Registered Apprenticeships systems,³⁵ does not differentiate between youth- and adult-focused programs, making it challenging to gauge the experiences of youth apprentices.³⁶

A youth apprenticeship framework to guide program design and quality should be established.³⁷ The framework should include a definition and principles for high-quality apprenticeship programs as well as standards for the duration of a youth apprenticeship, skill development, connection to coursework, and outcomes.

Address Barriers to Participation

Employers face many challenges when trying to host youth apprentices including scheduling and credit, transportation, and staff and supervision issues.³⁸ Employers can [leverage intermediaries](#) to reduce administrative requirements.³⁹ Given the important role intermediaries play in making youth apprenticeships possible, policymakers should develop a model to provide sustained support for intermediaries.⁴⁰ Additionally, transportation issues may be addressed by allowing youth apprentices to access transportation supports provided by community college or school districts, such as bus passes or vouchers, regardless of whether apprentices meet standard eligibility requirements.⁴¹

Conclusion

Apprenticeships, a type of earn-and-learn strategy, play a pivotal role in promoting inclusive economic growth. Apprenticeships help youth, students, and workers upskill and reskill to meet labor market needs. They are a proven strategy to help students and workers obtain high-wage jobs and develop critical skills that will enable them to progress along their career pathways. Yet, they can be modernized to better serve employers and workers. To maximize the positive impact of apprenticeships, policymakers should prioritize expanding access to apprenticeship programs in new industries, connecting apprenticeships to credit-bearing postsecondary coursework, expanding access to apprenticeships for disadvantaged and underrepresented populations, and supporting youth apprenticeships.

Principles of High-Quality Youth Apprenticeships

The Partnership to Advance Youth Apprenticeships (PAYA), a multi-year initiative that supports efforts in states and cities to expand access to high-quality youth apprenticeships, released principles for youth apprenticeships⁵⁴ that can inform federal definitions and standards:

- **Career-Oriented:** Learning is structured around knowledge, skills, and competencies that lead to careers with family-supporting wages.
- **Equitable:** Learning is accessible to every student, with targeted supports for those adversely impacted by long-standing inequities in the education system and labor market.
- **Portable:** Learning leads to postsecondary credentials and transferable college credit that expand options for students.
- **Adaptable:** Learning is designed collaboratively to be recognized and valued across an industry or sector.
- **Accountable:** Student, employer, and program outcomes are monitored using transparent metrics to support improvement.

Emerging state practices to modernize and expand access to apprenticeships

| Challenge | State Action |
|---|--|
| <p>Providing Intentional Support for Apprenticeship Programs in New Industries</p> | <p>In Colorado, the State Apprenticeship Agency created two subcommittees to advise the State Apprenticeship Agency on Registered Apprenticeship performance, standards, and rules. The Committee for Apprenticeship in Building and Construction Trades advises on building and construction trades, while the Committee for Apprenticeship in New and Emerging Industries, made up of experts from fields with high-demand jobs, advises on all other industries.⁵⁵</p> |
| <p>Connecting Apprenticeships to Credit-Bearing Postsecondary Coursework</p> | <p>The Colorado legislature enacted a law in 2019 that required the Colorado Community College System to convene a working group to determine the best way to transfer program credit from Registered Apprenticeships in the construction industry to college credit. The working group had to consider how best to align the apprenticeship curriculum with community college courses and whether the apprenticeship curriculum coursework can culminate in significant progress toward a degree.^{56,57} As a result of this law, the Colorado Community College System worked with state agencies, industry, K-12 school districts, institutions of higher education, and industry to develop strategies to allow individuals completing Registered Apprenticeships in the construction occupational pathways to receive college credit.⁵⁸ A similar approach can be taken to support aligning apprenticeship programs in new industries with credit-bearing coursework.</p> |
| <p>Supporting Pre-Apprenticeship Programs</p> | <p>In Mississippi, the Moore Community House Women in Construction (WIC) trains women for apprenticeships and career pathways in construction, skilled craft trades, and advanced manufacturing.⁵⁹ The program received a grant from the state, through federal funds the state receives through its Temporary Assistance for Needy Families (TANF) state grant, to provide child care to participants of the program, and a separate grant from the Department of Labor’s Strengthening Working Families (SWFI) initiative to provide childcare to participants after graduation. Since including childcare in their program, enrollment in the program has nearly tripled.⁶⁰ States can take a similar approach to support pre-apprenticeship programs that advance participation in apprenticeship programs in new industries.</p> |
| <p>Addressing Administrative Requirements</p> | <p>In 2013, Kentucky launched a youth apprenticeship program, Tech Ready Apprentices for Careers in Kentucky (TRACK), which utilizes the state’s existing CTE infrastructure to put high school students on a path that culminates in an industry-recognized credential, paid work experience, and in many cases, advanced standing within a full Registered Apprenticeship program.⁶¹ Upon the launch, the state realized employers had concerns about not having enough human resources capacity to take on student apprentices. To address this, Adecco, a national staffing firm, served as the intermediary to assume the administrative elements associated with the program.⁶² Two years after the initial launch, the state doubled the number of programs and expanded beyond manufacturing to include construction and health science fields.⁶³</p> |

Endnotes

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