

POLICY PLATFORM

WORK FORCE DEVELOPMENT



2018
EDITION

ACT's Policy Platform

WORKFORCE
DEVELOPMENT

2018 EDITION





This Workforce Development Policy Platform offers ACT's unique experience and research in education and workforce assessment to focus on the challenge of ***ensuring that the workforce is prepared to meet the demands of the American economy*** and workers have the skills needed throughout their careers.



In December 2014, ACT identified several opportunities in the workforce development sector to improve existing policies and implement new ones that would help more people succeed in the current and future economies.

Three years after the release of ACT's first workforce development policy platform, the US can point to several significant advancements. The Workforce Innovation and Opportunity Act of 2014 (WIOA) articulates a common vision and shared goals for remodeling our twentieth-century workforce system for the twenty-first century and empowers states and localities, guided by workforce professionals, to pursue innovative programs and initiatives that are helping to ensure that individuals are provided with the right services when they are needed.

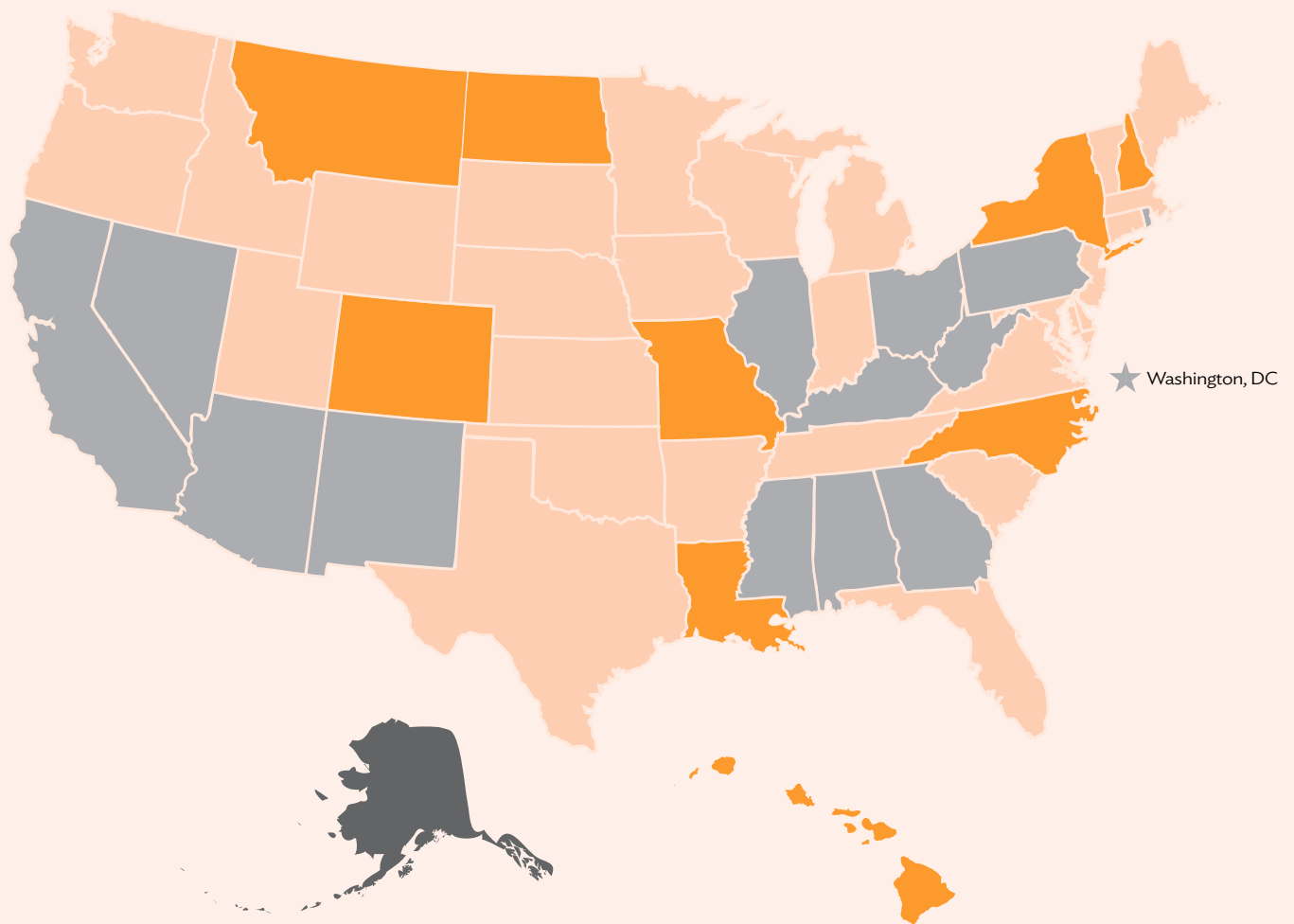
But numerous challenges remain. Higher levels of employee foundational skills—such as mathematics, dependability, and technology literacy—are needed across all current occupations, and emerging demands stemming from automation, new technologies and sectors, outsourcing, and increased consolidation in certain industries are placing additional pressure on the system. New job categories are constantly emerging, and education and training systems are struggling to ensure that the present and future workforces are prepared to meet these needs.

The normal unemployment rate, at which it may be said that the country has “full” employment, is often said to be 5 percent—the current unemployment rate in the United States.¹ However, the maps on the next two pages display some of the regional variation in unemployment, as well as what is considered the “underemployment” rate of people out of work or unable to find full-time work. Even though our economy is strong, not all Americans experience it that way: incomes in 2013 for the top one percent of American households were 188 percent higher than in 1979; for the bottom 80 percent, they were just 18 percent higher.²

UN- AND UNDEREMPLOYMENT RATES BY STATE

JULY 2016-JUNE 2017

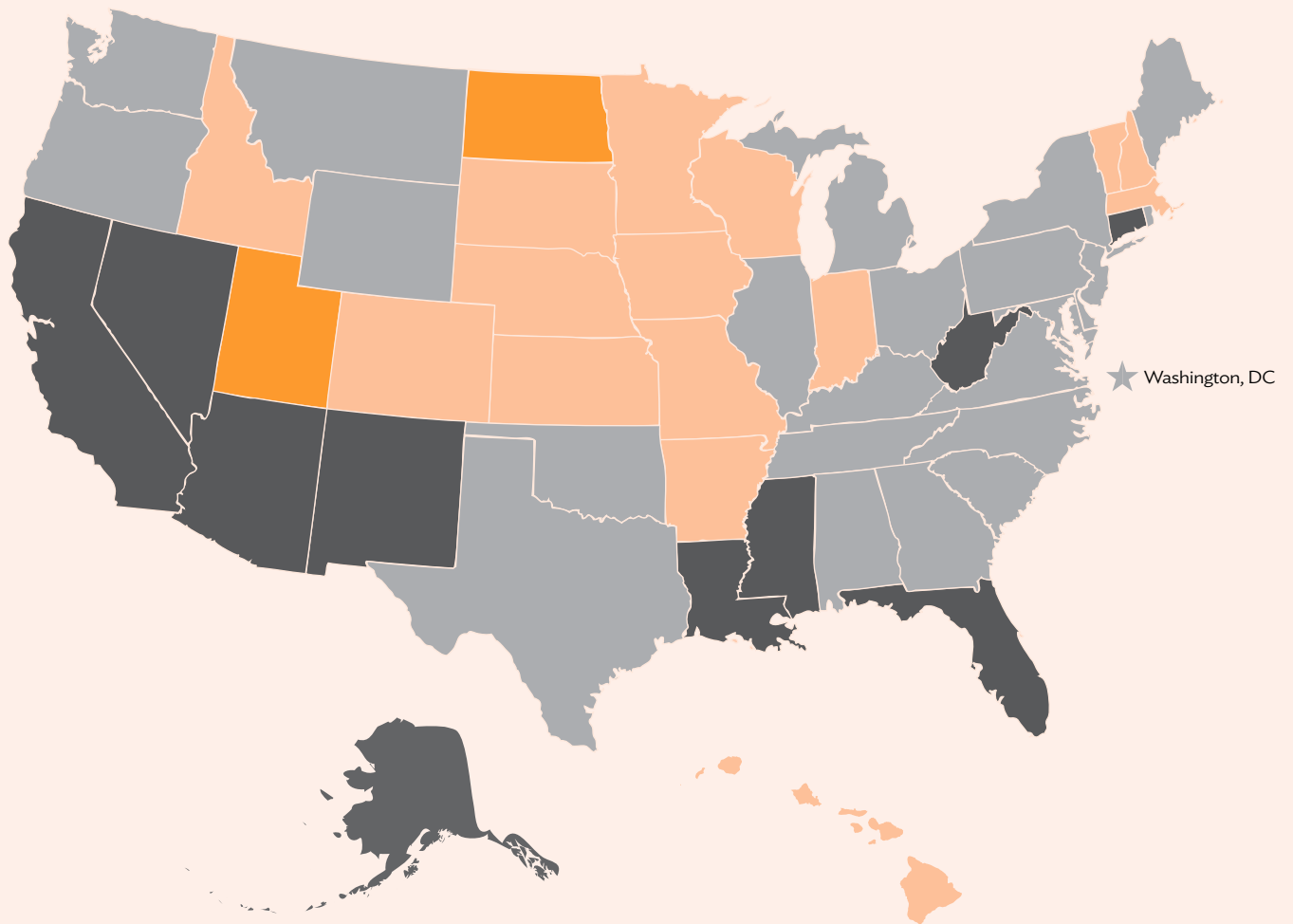
TOTAL UNEMPLOYED,
AS A PERCENT OF THE CIVILIAN LABOR FORCE



TOTAL UNEMPLOYED

<3% | 3-5% | 5-7% | >7%

TOTAL UNDEREMPLOYED,
AS A PERCENT OF THE CIVILIAN LABOR FORCE THAT ARE UNEMPLOYED, MARGINALLY
ATTACHED, AND/OR EMPLOYED PART TIME FOR ECONOMIC REASONS



TOTAL UNDEREMPLOYED
< 6% | 6-8% | 8-10% | > 10%

Source: "Local Area Unemployment Statistics: Alternative Measures of Labor Underutilization for States, Third Quarter of 2016 through Second Quarter of 2017 Averages," United States Department of Labor Bureau of Labor Statistics, last modified July 28, 2017, <https://www.bls.gov/lau/stalt.htm>.

The 2018 edition of the Workforce Development Policy Platform is organized around **three themes**:



The following sections present detailed recommendations for each of the themes.

1 INCORPORATE FOUNDATIONAL SKILL DEVELOPMENT, FROM LITERACY TO TEAMWORK TO CRITICAL THINKING, INTO EDUCATION AND TRAINING PROGRAMS.



1st RECOMMENDATION

INVEST IN PROGRAMS SHOWN TO SUCCESSFULLY INTEGRATE INSTRUCTION IN FUNDAMENTAL ACADEMIC SKILLS WITH OCCUPATIONAL AND CAREER TRAINING.

The teaching of fundamental academic skills as they are applied in the workforce is an essential component of a high-quality training program. More than three-quarters of CEOs in one survey said that math, reading, and writing skills are important, yet roughly half of the survey respondents reported that their companies experienced difficulties finding

applicants with sufficient levels of these skills.⁶ The Organisation for Economic Co-operation and Development (OECD) found in its 2013 survey that American adults were “weak” in literacy and “very poor” in numeracy, compared to other countries.⁷

These gaps can be addressed by incorporating workforce training into adult education programs. For example, Jefferson College in Missouri includes in its adult education classes (which allow adults to earn a high school equivalency [HSE] diploma) the Career Ready 101[®] program, which offers courses in business communication and critical thinking

FOUNDATIONAL SKILLS

What are foundational skills? They’re fundamental, because they are the foundation toward more advanced skill development, and portable, because they are commonly recognized by employers nationwide and across a wide variety of occupations.³

As expressed in the ACT Holistic Framework™, foundational skills fall into the following categories:⁴

Core academic skills:

English language arts, mathematics, science

Cross-cutting

capabilities: critical thinking, collaborative problem solving, technology and information literacy

Behavioral skills:

dependability, working effectively with others, acting honestly, managing stress

Education and career

navigation factors: self-knowledge of abilities, values, likes, and dislikes; knowledge about majors and occupations; education and career exploration, planning, and decision making

Unfortunately, many workers in the United States lack the level of foundational skills needed for current and projected jobs. Data collected from individuals completing ACT[®] WorkKeys[®] assessments between 2006 and 2011 show significant gaps between the cross-cutting capabilities of examinees with a low level of education and the level of these foundational skills needed for jobs requiring that level of education.⁵

and teaches skills assessed on the ACT WorkKeys tests, including Applied Math and Workplace Documents. The program also advises students on financial literacy and the job search process. This comprehensive approach to training and education helps build participants' workforce skills while also demonstrating their academic strengths through the earning of an ACT WorkKeys National Career Readiness Certificate® (NCRC) and HSE, adding value for participants and allowing them to enter the workforce with the skills needed to succeed in a career.

Another exemplary program, ABE (Adult Basic Education) Career Connections, is helping to build adult literacy and numeracy education around a career pathway at sites across the country, so that participants can advance over time both in their education and in employment.⁸ Increased and targeted financial support is needed in order to grow the capacity of these programs so that more individuals can benefit from this type of training and education.

2nd RECOMMENDATION

INCREASE RESEARCH AND DEVELOPMENT IN AND FOCUS ON PROGRAMS PROVEN TO GROW SOCIAL-EMOTIONAL SKILLS.

Social-emotional (also known as behavioral) skills are important to an individual's career success.⁹ The National Network of Business and Industry Associations sorts important "employability skills" into four categories: applied knowledge, personal skills, people skills, and workplace skills.¹⁰ Skills falling into their categories of people and personal, along with many workplace skills, can also be understood as social-emotional skills.

Today's environment is one in which 88 percent or more of both workforce supervisors and employees stated that behavioral skills such as acting honestly,

sustaining effort, getting along with others, and maintaining composure are necessary to succeed in the workforce.¹¹ As meta-analysis of the effectiveness of workforce training programs has shown some positive effect from behavioral skills programs,¹² more targeted research regarding the application of social-emotional learning programs in workforce training must be conducted and effective programs replicated.

3rd RECOMMENDATION

COMBINE TRAINING WITH INDUSTRY-RECOGNIZED ASSESSMENTS AND CERTIFICATION TO GROW WORKERS' SKILLS.

Assessments aligned to workforce standards aim to identify workers' skills and strengths and often help in the initial job placement process. For example, various certifications of work readiness, including the ACT WorkKeys NCRC, verify an employee or potential employee's possession of the foundational skills needed for success in the workplace. But **such certifications should be combined with aligned training so that they are used as tools for individuals' development, rather than disqualification.**

The Manufacturing Skill Standards Council's Certified Production Technician (CPT) training program and certification process does just that—rather than using the results of an assessment solely as a screening measure, it allows applicants who do not yet meet the cutoff scores an opportunity to use an online curriculum to improve their skills (and their scores) before retesting and ultimately entering the training program. To date, this program has led to higher pass rates for the CPT credential, as well as a higher employment rate for graduates than programs that do not use an entrance examination.¹³

2 ENSURE THAT WORKFORCE TRAINING AND DEVELOPMENT SYSTEMS ARE FLEXIBLE AND RESPONSIVE TO HELP INDIVIDUALS NAVIGATE A CHANGING ECONOMY.



1st RECOMMENDATION

HELP UNEMPLOYED AND LOWER-SKILLED ADULTS ENTER AND SUCCEED IN CAREER PATHWAYS BY INVESTING IN TARGETED SUPPORT SERVICES.

Career pathways are an excellent opportunity to increase the participation of those traditionally underrepresented in a given occupation or industry. For example, the TechHire program, with funding support from the federal government, provides resources to expand IT training programs in communities and works with technology employers to ensure that disadvantaged groups, including young people not in education or employment, veterans, people with criminal records, and people with disabilities, do not face barriers to employment. It has placed over 4,000 employees in IT careers since 2015.¹⁴

In order for unemployed and lower-skilled adults to succeed in career pathways, participant access to targeted support services (also known as wraparound services) is essential to ensuring that participants’ basic needs are met so that participants have the opportunity to truly benefit from education and training programs.¹⁵ Not only are these services important for an individual’s success, but they also help to mitigate historical inequities and encourage diverse participation in the workforce, especially for underserved and underrepresented populations. WIOA contains special provisions to allow states to direct funding toward support services for unemployed or displaced citizens who require additional assistance.¹⁶

CAREER PATHWAYS

A career pathway is an interconnected series of education and training programs, often incorporating other supplemental services, that progressively advances individuals’ skills and knowledge to ultimately prepare them for a specific occupation or industry.

HEALTHCARE CAREER PATHWAY EXAMPLE



A low-skilled adult may begin with integrated adult basic education and occupational training, enabling him or her to work as a personal **home health aide**.



The individual may enter employment and/or continue in education to become a **certified nursing assistant (CNA)**.



Later, the trainee could enter the workforce as a CNA and/or continue in education toward a two-year **Registered Nurse (RN)** degree, a four-year RN degree, or beyond.

Wraparound services may include, but are not limited to, transportation, childcare, and housing assistance, administered in conjunction with education or training programs to remove barriers to participation. For example, in the District of Columbia a minimum-wage worker would need to work full time for 54 weeks just to pay annual childcare costs for a single infant—in other words, unpaid or low-paying training programs are likely out of reach for many disadvantaged individuals.¹⁷ To mitigate this, the District uses federal and local funds to provide childcare vouchers for low-income residents while they pursue education to improve their employment opportunities.¹⁸ Childcare programs can be doubly effective from a workforce perspective in that providing high-quality childcare can raise the achievement levels of underserved children, helping to break intergenerational cycles of poverty and improving educational and employment outcomes for the next generation.¹⁹ Initiatives such as this, along with programs establishing wraparound services in other areas, should be streamlined and expanded throughout the country to help more adults to access and/or stay on a career pathway.

2nd RECOMMENDATION

ENCOURAGE HIGH-QUALITY COMPETENCY-BASED OCCUPATIONAL TRAINING PROGRAMS FOR WORKING ADULTS.

Competency-based education models, where students are measured by what they know rather than how much time they have spent in class, are especially helpful for working adults. Students can

advance without having to study competencies they have already attained through prior experience, accelerating their progress in and reducing the cost of a training program. Further, allowing students to start and stop as needed, traditionally described as taking “off-ramps” to employment and “on-ramps” into additional training, enables students to craft a training timeline that works best for their schedules.

Recognizing that need, a number of institutions of higher education have adopted online competency-based education programs that lead to career-focused college-level degrees including, at Western Governors University, bachelor’s and master’s degrees in fields such as education, nursing, cybersecurity, and business.²⁰

These programs are accredited just like their traditional counterparts; monitoring programs such as these for their ability to meet individuals’ needs and support improved employment outcomes is a critical component of their success. Federal policymakers should ensure that necessary and well-intentioned regulations do not prevent high-quality programs from offering competency-based education if they are able to provide value to participants. State policymakers should cultivate environments in their state systems of higher education in which successful competency-based programs, whether offered online or in person, can develop and flourish. However, these programs must be continuously validated to ensure that they are leading to improved employment outcomes for their participants.

3rd RECOMMENDATION

EDUCATE INDIVIDUALS AND INDUSTRIES ON THE UTILITY OF PORTABLE, STACKABLE CREDENTIALS IN MATCHING INDIVIDUALS WITH IN-DEMAND JOBS.

Research has shown that possession of a license or certificate increases income at every level of educational achievement—from workers with no high school diploma to those with an advanced postsecondary degree—and people with these credentials are less likely to be unemployed.²¹

Identifying existing and high-quality credential options also help industries avoid “upcredentialing” in job postings—i.e., simply requiring a generic bachelor’s degree as a measure of employee quality when the employer is unable to enumerate the concrete skills necessary for the job. This practice, which leads to increased time to fill positions, is not seen in jobs with high-quality licensing or certification standards where employers can easily identify proficiency in relevant skills.²²

Portable, stackable credentials are therefore exceptionally useful to both employers and

employees, but these credentials must be adopted at scale to truly make an impact in the US workforce. Initiatives such as the development of an online Credential Registry by Credential Engine are helping make sense of the diverse credential spectrum.²³ Related to this work, a sister initiative of the registry—the Connecting Credentials Framework—is working to provide a common language for credentials and uses competencies to demonstrate alignment among and between programs and credentials for students, employers, and educators.²⁴

Credentials are an excellent tool through which companies can plainly delineate the skills and competencies needed for open positions, educational institutions can more accurately target instruction, and prospective employees can clearly demonstrate that they possess the necessary abilities or identify areas in which they need further education or training. As a result, policymakers should explore innovative ways to increase access to credentialing programs, including new funding opportunities for credential-seekers.²⁵

EXAMPLE OF A PATHWAY USING STACKED CREDENTIALS



3

PUT EMPLOYERS AT THE FOREFRONT OF ENSURING THAT THE WORKFORCE EVOLVES TO MEET INDUSTRY DEMANDS.

1st

RECOMMENDATION

INCENTIVIZE EMPLOYERS TO EQUIP UNDERUTILIZED WORKERS WITH NECESSARY SKILLS, WHETHER BY RUNNING THEIR OWN DEVELOPMENT AND TRAINING PROGRAMS OR COLLABORATING WITH EDUCATIONAL INSTITUTIONS.

Employers play a critical role in improving the workforce development system and must be held accountable for building the capacity of their current and prospective workers to align with the specific foundational and occupational skills needed, especially as jobs evolve.

In 2016, 46 percent of American employers reported difficulty in filling positions due to a lack of qualified applicants. Encouragingly, there is evidence that some employers are attempting to address these hiring challenges. The number of internal development and training programs offered by global employers was 53 percent in 2016, a more than 30 percent jump from 2015, reflecting a growing international understanding of the importance of these programs; it is essential that employers across the United States fully embrace a leadership role in this area.²⁶ To this end, Business Roundtable, a large association of major American companies, has urged cooperation among business, academia, and government, detailing steps that some of its members have undertaken which include sponsoring training programs through external institutions of higher education, investing in apprenticeships, and offering tuition assistance and other learning opportunities for current employees.²⁷

These and other employer-led programs have consistently demonstrated a high return on investment for employers in a variety of fields and for a variety of job levels, from entry level to executive. For example, one company's tuition assistance program yielded a 129 percent return on investment for the company and 43 percent higher wage gains for employees taking advantage of the program.²⁸ In many successful cases, employers direct the focus of training while educational institutions supply the instruction. However, the coordination between these entities has historically been limited and should therefore be greatly expanded.²⁹

HOW PREVALENT IS THE "SKILLS GAP"?

Many industries have expressed frustration over a shortage of qualified employees; however, many outside of the business community argue that employers cannot fill positions not because of a shortage of qualified workers but because of, for example, unreasonable work experience expectations, below-market compensation offerings, and the disappearance of employer-sponsored training programs.³⁰

Whether training is conducted through employers directly or through partner institutions, employers must take the lead in determining both the demand for and the content of upskilling and training programs for their current and future employees, resulting in a mutually beneficial ecosystem that ensures workers have wage-earning skills and

employers can fill empty positions. Federal and state policymakers should incentivize the development and expansion of employer-led training programs or new apprenticeship models; this may include existing programs, such as Registered Apprenticeships, or may involve reexamining tax breaks and other financial incentives.

2nd**RECOMMENDATION****SUPPORT FLEXIBLE TRAINING PROGRAMS THAT SWIFTLY AND EFFECTIVELY ADAPT TO IMMEDIATE WORKFORCE NEEDS.**

In the modern economy, employers must quickly have the staff to adapt to new technology and markets or risk being left behind. Innovative programs must be expanded and developed in order to create opportunities for rapid training in cutting-edge fields.

Right Skills Now is a prime example of such a program, where in 16 to 24 weeks trainees can learn industry-driven skills and earn the necessary credentials to begin a career. The program combines the ACT WorkKeys NCRC, National Institute for Metalworking Skills (NIMS) credentials, and college credit that can be applied to a future associate's

or bachelor's degree through a paid internship in the field alongside relevant competency-based courses. This allows manufacturers to quickly fill job openings with motivated local workers who have embarked on a career pathway in which they can grow in their company or field. Right Skills Now only exists due to effective and meaningful collaboration between industry groups, individual employers, community colleges, and nonprofits, after a push from the federal government.³¹

Federal, state, and local governments, along with other community stakeholders, must follow this example to spur cooperation between these groups in a variety of fields in order to rapidly put individuals on a path to career success. In addition, educational institutions must support easy on- and off-ramps for their working learners. The flexibility and speed to triage current and emergent workforce demands are critical to the success of these programs.

CASE STUDY



Tri-County Technical College— South Carolina Manufacturing Certification program

CHALLENGE The Tri-County Region (Anderson, Oconee, and Pickens Counties in South Carolina) is a manufacturing hub whose workforce needs are only expected to grow, requiring skilled employees to fill positions.

SOLUTION Through ACT Work Ready Communities (WRC), the Tri-County Region developed programs at TriCounty Technical College (TCTC), including the South Carolina Manufacturing Certification (SCMC) program, which were responsive to local industry needs and allowed local residents to demonstrate their skills and develop those skills needed to be successful in a manufacturing career.

TCTC's SCMC program has as its base a required Silver-level ACT WorkKeys National Career Readiness Certificate to demonstrate participants' foundational skills, with opportunities to earn additional certifications beyond the base manufacturing credential in specific skills that are also portable and industry-recognized, including Production and Process, OSHA 10-hour safety card, Six Sigma Yellow Belt, and Hand Tool Safety.

RESULTS Participants in this program earn hands-on experience and valuable credentials, and the Tri-County Region is then able to display the region's available talents to employers such as Baxter Enterprises, which brought new manufacturing jobs to the region thanks to the workforce strength demonstrated by the region through its WRC participation and programs like SCMC.

In the first few years of the program, approximately 80 percent of the more than 1,300 graduates were employed in manufacturing careers.

3rd RECOMMENDATION

EXPAND INVESTMENT IN PROGRAMS EFFECTIVELY RETRAINING AND RELOCATING DISLOCATED WORKERS.

The US Department of Labor provides dislocated worker grants under WIOA when there have been large-scale layoffs in a community, including those triggered by international trade; these training and supportive service grants have been useful but should be expanded to include dislocated workers suffering from a variety of causes, including automation or obsolescence, even if layoffs or hiring slowdowns have occurred in smaller numbers in their area.³²

When one company or industry closes or downsizes, its former workers should have the opportunity to grow their abilities and skills to enter newly developing industries available in their area or elsewhere. Training programs must be funded at all levels of government, and include career pathways that focus on filling skills gaps for emerging roles and careers in the region (e.g., IT or advanced manufacturing jobs) while ensuring that dislocated workers have the necessary foundational skills to succeed.

4th RECOMMENDATION

SUPPORT COMMUNICATION AND COOPERATION AMONG AND WITHIN SECTORS.

Programs that bring together relevant workforce, government, and educational actors in a region are incredibly useful in developing a single comprehensive plan in which these actors are working towards the same goal and clearly communicating their needs and resources to each other and to job-seekers. Workforce Development Boards and economic development organizations, school districts and community colleges, industry associations, and employers must coordinate their approaches and investments. South Carolina and Oregon have shown success in statewide programs to bring these groups together.³³ Another excellent example of partnership initiatives are sector strategies, adopted by some states to address skill gaps, engage with industry, and align state programs and resources.³⁴

Also critical are intra-industry partnerships, the corporate benefits of which are demonstrated, for example, by insurance companies' development of a common apprenticeship program for their region.³⁵ These partnerships can often be most effectively leveraged when a government or community actor serves as a convener and/or grant maker to industry, as in the case of the Asian American Civic Association's training program for banking and finance careers in Boston.³⁶ Policymakers at all levels of government can use grants and other tools to encourage innovative collaboration models among and within the relevant sectors in their jurisdiction.



The recommendations offered in this platform continue a framework that acknowledges the importance of ***aligning the education and workforce sectors*** to help fulfill ACT's mission of helping people achieve education and workplace success.

ACT's mission is to help people achieve education and workplace success.

At a time when new job categories are emerging, and education and training systems are struggling to ensure that current and future workforces are prepared to meet these needs, this updated Workforce Development Policy Platform offers ACT's unique experience and research in education and workforce assessment to focus on the challenge of ensuring that the workforce is prepared to meet the demands of the American economy and workers have the skills needed to support themselves and their families throughout a career. The recommendations offered in this and ACT's three other 2018 policy platforms continue a framework, established more than three years ago, that acknowledges the importance of aligning the education and workforce sectors to help fulfill ACT's mission.

ALL OF ACT'S POLICY PLATFORMS ARE AVAILABLE ONLINE:

www.act.org/policyplatforms

Notes

1. “What Is the Lowest Level of Unemployment That the U.S. Economy Can Sustain?,” Board of Governors of the Federal Reserve System, last modified June 14, 2017, https://www.federalreserve.gov/faqs/economy_14424.htm; “Local Area Unemployment Statistics: Alternative Measures of Labor Underutilization for States, Third Quarter of 2016 through Second Quarter of 2017 Averages,” United States Department of Labor Bureau of Labor Statistics, last modified July 28, 2017, <https://www.bls.gov/lau/stalt.htm>.
2. Kevin Perese, *The Distribution of Household Income and Federal Taxes*, 2013 (Washington, DC: Congressional Budget Office, 2016), <http://www.cbo.gov/publication/51361>.
3. *Work Readiness Standards and Benchmarks: The Key to Differentiating America’s Workforce and Regaining Global Competitiveness* (Iowa City: ACT, 2013), <http://workreadycommunities.org/resources/Standards-and-Benchmarks.pdf>.
4. Wayne Camara, Ryan O’Connor, Krista Mattern, and Mary Ann Hanson, ed., *Beyond Academics: A Holistic Framework for Enhancing Education and Workplace Success* (Iowa City: ACT, 2015), <http://www.act.org/content/dam/act/unsecured/documents/RR2015-4-beyond-academics-a-holistic-framework-for-enhancing-education-and-workplace-success.pdf>.
5. *The Condition of Work Readiness in the United States* (Iowa City: ACT, 2013), <http://www.act.org/content/dam/act/unsecured/documents/ConditionWorkReadiness.pdf>.
6. *Work in Progress: How CEOs Are Helping Close America’s Skills Gap* (Washington, DC: Business Roundtable, 2017), http://businessroundtable.org/sites/default/files/immigration_reports/2017.06.01%20BRT.Work%20in%20Progress.How%20CEOs%20Are%20Helping%20Close%20America%E2%80%99s%20Ski...pdf.
7. *Time for the U.S. to Reskill?: What the Survey of Adult Skills Says* (Paris: OECD Publishing, 2013), http://www.oecd-ilibrary.org/time-for-the-u-s-to-reskill_5k40gxmt921.pdf.
8. “Adult Basic Education Career Connections,” US Department of Education, <https://www2.ed.gov/about/offices/list/ovae/pi/AdultEd/adultbe.html>.
9. Daniel M. Elchert, Christian A. Latino, Becky L. Bobek, Jason Way, and Alex Casillas, *The Importance of Behavioral Skills and Navigation Factors for Education and Work Success* (Iowa City: ACT, 2017), <http://www.act.org/content/dam/act/unsecured/documents/R1633-behavior-and-navigation-2017-04.pdf>. The ACT Behavioral Skills Framework, one portion of the ACT Holistic Framework, can be found at: <http://www.act.org/content/act/en/research/beyond-academics/behavioral-skills/framework-of-behavior.html>.
10. *Common Employability Skills: A Foundation for Success in the Workplace: The Skills All Employees Need, No Matter Where They Work* (National Network of Business and Industry Associations, 2015), http://nationalnetwork.org/wp-content/uploads/2015/05/Common_Employability_Skills-03-30-152.pdf.
11. ACT National Curriculum Survey 2016 (Iowa City: ACT, 2016), http://www.act.org/content/dam/act/unsecured/documents/NCS_Report_Web.pdf.
12. Winfred Arthur Jr., Winston Bennett Jr., Pamela S. Edens, and Suzanne T. Bell, “Effectiveness of Training in Organizations: A Meta-Analysis of Design and Evaluation Features,” *Journal of Applied Psychology* 88, No. 2 (2003): 234–245, doi: 10.1037/0021-9010.88.2.234.
13. *Case Study: Skills Credentials Aid Displaced Manufacturing Workers in Ohio* (Iowa City: ACT, 2013), https://www.workreadycommunities.org/resources/case_studies/MSSC_case_study.pdf.
14. “Tech/Hire,” TechHire, <https://techhire.org/>; “TechHire Initiative,” The White House: President Barack Obama, <https://obamawhitehouse.archives.gov/node/325231>.
15. *What Works in Job Training: A Synthesis of the Evidence* (Washington, DC: US Departments of Labor, Commerce, Education, and Health & Human Services, 2014), <https://www.dol.gov/asp/evaluation/jdt/jdt.pdf>.
16. Portia Wu, “Advisory: Training and Employment Guidance Letter WIOA No. 3–15” (Washington, DC: Employment and Training Administration, US Department of Labor), July 1, 2015, https://wdr.doleta.gov/directives/attach/TEGL/TEGL_03-15.pdf.
17. “The Cost of Child Care in Washington, DC,” Economic Policy Institute, 2016, <http://www.epi.org/child-care-costs-in-the-united-states/#/DC>.
18. Muriel Bowser, *District of Columbia Workforce Innovation & Opportunity Act (WIOA) 2016–2020 Unified State Plan* (Washington, DC: Government of the District of Columbia, 2016), https://dcworks.dc.gov/sites/default/files/dc/sites/dcworks/publication/attachments/WIOA_DC_Unified_State_Plan_Final.pdf; *Important Information and Facts About Child Care: The Child Care Subsidy Program* (Washington, DC: Government of the District of Columbia), https://does.dc.gov/sites/default/files/dc/sites/dhs/service_content/attachments/Child%20Care%20Fact%20Sheet.pdf.
19. Hirokazu Yoshikawa, Christina Weiland, Jeanne Brooks-Gunn, Margaret R. Burchinal, Linda M. Espinosa, William T. Gormley, Jens Ludwig, Katherine A. Magnuson, Deborah Phillips, and Martha J. Zaslow, *Investing in Our Future: The Evidence Base on Preschool Education* (Society for Research in Child Development and Foundation for Child Development, 2013), https://srcd.org/sites/default/files/documents/washington/mb_2013_10_16_investing_in_children.pdf.

20. Michelle R. Weise and Clayton M. Christensen, *Hire Education: Mastery, Modularization, and the Workforce Revolution* (Boston: Clayton Christensen Institute for Disruptive Innovation, 2014), <https://www.christenseninstitute.org/wp-content/uploads/2014/07/Hire-Education.pdf>; “Degrees & Programs,” Western Governors University, https://www.wgu.edu/degrees_and_programs#.
21. “Labor Force Statistics from the Current Population Survey: 2016 Data on Certifications and Licenses,” United States Department of Labor: Bureau of Labor Statistics, last modified April 27, 2017, <https://www.bls.gov/cps/certifications-and-licenses.htm>.
22. *Moving the Goalposts: How Demand for a Bachelor’s Degree is Reshaping the Workforce* (Boston: Burning Glass Technologies, 2014), http://burning-glass.com/wp-content/uploads/Moving_the_Goalposts.pdf.
23. “What is the Credential Registry?,” Credential Engine, <http://www.credentialengine.org/credentialregistry>.
24. For more information on the Connecting Credentials initiative, see <http://connectingcredentials.org/>.
25. For more information about one current federal Pell Grant pilot program for credentials, see <https://ifap.ed.gov/fregisters/attachments/FR101515InvitationtoParticipateintheExperSitesInitiative.pdf>.
26. *Skilled Talent: It’s at Your Fingertips* (Milwaukee: ManpowerGroup, 2016), <http://www.manpowergroup.com/wps/wcm/connect/8ccb11cb-1ad4-4634-84ea-1656ee74b3ed/GlobalTalentShortageSurvey-PressRelease.pdf>.
27. *Work in Progress*, Business Roundtable.
28. *Talent Investments Pay Off: Cigna Realizes Return on Investment from Tuition Benefits* (Indianapolis: Lumina Foundation, 2016), <https://www.luminafoundation.org/files/resources/talent-investments-pay-off-cigna-full.pdf>.
29. Robert I. Lerman, *Are Employers Providing Enough Training?: Theory, Evidence and Policy Implications* (prepared for the National Academy of Sciences Symposium on the Supply Chain for Middle-Skill Jobs: Education, Training, and Certification Pathways, Washington, DC, 2015), http://sites.nationalacademies.org/pgs/cs/groups/pgasite/documents/webpage/pgs_168146.pdf.
30. Peter Cappelli, “Why Companies Aren’t Getting the Employees They Need,” *The Wall Street Journal*, October 24, 2011, <https://www.wsj.com/articles/SB10001424052970204422404576596630897409182>.
31. *Right Skills Now: Providing Skilled, Credentialed and Work-Ready Manufacturing Talent Now* (National Network, 2016), <http://nationalnetwork.org/wp-content/uploads/2016/02/Right-Skills-Now-Model.pdf>.
32. “National Dislocated Worker Grants Program Guidance” (Washington, DC: US Department of Labor Employment & Training Association, 2015), https://wdr.doleta.gov/directives/attach/TEGL/TEGL_02-15_Attachment_II_Acc.pdf.
33. For more information, visit <https://www.workreadycommunities.org/>.
34. Lindsey Woolsey and Garrett Groves, *State Sector Strategies Coming of Age: Implications for State Workforce Policymakers* (Washington, DC: Corporation for a Skilled Workforce, National Skills Coalition, and National Governors Association Center for Best Practices, 2013), <http://www.nga.org/files/live/sites/NGA/files/pdf/2013/1301NGASSSReport.pdf>.
35. Alexia Elejalde-Ruiz, “Apprenticeships Come to Insurance and Financial Services Industries,” *Chicago Tribune*, March 7, 2016, <http://www.chicagotribune.com/business/ct-insurance-apprenticeships-aon-zurich-0308-biz-20160307-story.html>.
36. “Careers in Banking and Finance,” Asian American Civic Association, <http://aaca-boston.org/programs-services/job-training/banking/>.

