Apprenticeship Inclusion Models (AIM)
For Youth And Adults With Disabilities

Emerging Lessons for Inclusive Apprenticeship Programs: Managing Through the COVID-19 Crisis and Beyond

OFFICE OF DISABILITY EMPLOYMENT POLICY
UNITED STATES DEPARTMENT OF LABOR

About This Project

The U.S. Department of Labor's Office of Disability Employment Policy (ODEP) sponsored the Apprenticeship Inclusion Models (AIM) initiative. The initiative focused on building capacity for inclusive apprenticeship programs. It also focused on developing and disseminating resources and tools to make apprenticeship onboarding and recruitment, education and training, and workplace experiences and mentoring more inclusive, specifically for people with disabilities. In particular, the initiative sought to learn how inclusive practices from education, workplace, and work-based learning settings could be applied to apprenticeship and pre-apprenticeship programs. The AIM initiative used a universal accessibility lens in its work; thus, its activities were also designed to make apprenticeship programs more accessible for everyone. The initiative produced five briefs that provide information to support the scaling of inclusive apprenticeships and to inform and strengthen future national policy around inclusive apprenticeship, workforce development, and employment.

The AIM Policy and Practice Briefs

In support of AIM's objective to develop and disseminate resources and tools to make apprenticeship more inclusive of people with disabilities, the initiative has produced five briefs that provide information to support the scaling of inclusive apprenticeships and to inform and strengthen future national policy around inclusive apprenticeship, workforce development, and employment.

The entire series can be found at: https://www.dol.gov/agencies/odep

In This Series:

- Strengthening Supports for People With Disabilities in Pre-Apprenticeships Through Policy, Design, and Practice

- Funding Inclusive Apprenticeships: Strategies for Braiding, Blending, and Aligning Resources

- Using Universal Design for Learning in Apprenticeship

- Connecting Ticket to Work and Apprenticeships

- Emerging Lessons for Inclusive Apprenticeship Programs: Managing Through the COVID-19 Crisis and Beyond

Acknowledgments

We would like to thank Carolyn Jones, Scott Robertson, Kirk Lew, and the whole ODEP team for their leadership and thoughtful review of this brief. We also appreciate feedback from Debby Hopkins, Chief Workforce Officer and Program Director with the Shenandoah Valley Workforce Development Board. We thank Kate Dunham for her constructive feedback and Karen Jarsky for her careful and thorough editing. Finally, we are grateful to the following individuals for taking the time to share information about their programs:

- Rhandi Berth, Chief Innovations Officer, Wisconsin Regional Training Partnership (WRTP)

- Daniel Bustillo, Director, and Deborah Schwartz, Senior Program Manager Healthcare Career Advancement Program (H-CAP)

- Dee Gavaldon, Program Manager, Crossroads Diversified Services, Sacramento, CA

- Debby Hopkins, Chief Workforce Officer and Program Director, Shenandoah Valley Workforce Development Board

- Andy Imparato, Executive Director, Disability Rights California

- Paula Johnson, Project Specialist, Project SEARCH, Cincinnati, OH, and Portland, OR

- Lance Kaldor, Senior Workforce Consultant, and Gina Robison, Program Supervisor for Apprenticeship Programs, Idaho Department of Labor

- Karen Manuel, Business Operations Director, and Sasha Rayburn, Director of Program Operations, Apprenti

The AIM Initiative, and this briefing paper series, is a collaboration between lead contractor Social Policy Research Associates and our partners and subcontractors, JFF and Wheelhouse Group.

Findings and recommendations contained in this brief do not necessarily reflect the official position of the U.S. Department of Labor. The U.S. Department of Labor makes no guarantees, warrantees, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.

Emerging Lessons for Inclusive Apprenticeship Programs: Managing Through the COVID-19 Crisis and Beyond

Brief Highlights

Apprenticeship programs operating in the United States provide skills training and career pathways to high-skill jobs for approximately half a million apprentices, and their expansion is a key priority of the federal government. Building, scaling, and sustaining apprenticeship programs can be challenging under normal circumstances. During a crisis, such as the COVID-19 pandemic and resulting economic recession, apprenticeship programs can face disruptions. Declines in consumer demand and economic activity generally affect all aspects of business, including employee hiring, training, and development. To learn how inclusive apprenticeship programs are coping, we interviewed representatives of inclusive apprenticeship and pre-apprenticeship programs to document how they are responding to the crisis.

Most respondents reported that they adapted their programs and services to their new conditions in the early weeks of the crisis. The major adaptations included shifting from in-person classroom training to online training, creating options for remote on-the-job training, ensuring participants had access to equipment, communicating more regularly with participants, and designing online enrollment procedures for subsequent apprenticeship cohorts.

Successful adaptation depended upon several key factors that respondents identified as critical and that established a foundation for program resilience. These factors helped programs respond to the rapid and unexpected changes caused by the COVID-19 pandemic. They include:

Diversity of funding, programs, and partners. Organizations with multiple funding sources and apprenticeship programs that can support diverse occupations and multiple employers were able to more readily respond to the changes brought on by the COVID-19 pandemic. The diversity in their resources and programming enabled them to sustain apprenticeship programs even if one occupation or employer experienced a downturn. Put another way, organizations running multiple apprenticeship programs with diverse funding streams and employer partners are more likely to sustain apprenticeship in a crisis because they have more options for adapting to changing demands.

Responsiveness to changing labor market demands. Organizations that understood changing labor market dynamics and refocused their efforts quickly have been able to continue providing good apprenticeship programming. Strong industry and employer relationships and high-quality labor market information boosted program responsiveness. These factors can help programs identify skills transfer opportunities, so that when the demand for certain occupations declines, the programs are able to refocus their training on adjacent occupations or occupations that require similar skills while minimizing the loss of time or credit.

Participant support services. Organizations that participated in our interviews managed programs that already provided support services to apprentices, such as coaching or career navigation, whether directly or through partnerships. This made them better equipped to respond to the needs of apprentices during the crisis, even as those needs shifted.

Contingency planning. Most organizations did not have comprehensive crisis response plans in place prior to the COVID-19 crisis. (Healthcare providers were the exception.) These programs are now developing plans (or in some cases updating or revising plans), often with input from stakeholders and partners. Programs are also inquiring about crisis response plans with their employers and community partners. Taken together, these efforts can boost crisis response planning and preparation across training, service provider, and employer communities, as well as make sustaining high-value programming more likely under changing conditions.

Introduction

Currently, there are nearly 25,000 Registered Apprenticeship programs (RAPs) operating in the United States.[1] These programs combine applied, on-the-job training with formal classroom instruction and provide skills training and career pathways to high-skill jobs for approximately 633,000 apprentices.[2] RAPs have been embraced by employers across a variety of high-demand sectors, including information technology, health care, logistics, manufacturing, and construction.

As illustrated in Exhibit 1, RAPs present an opportunity to fully integrate employers and their employees into the nation's education and training pipelines by engaging and supporting them, at their places of work, with employers as the primary trainers. By integrating learning into the workplace, RAPs enable the flexibility needed for workers to adapt to the increasing demands brought by technological change. Moreover, apprenticeships provide career pathway opportunities that are accessible to learners with varying educational levels. This increases the pool of available talent, which is a benefit for both employers and jobseekers. Over the last decade, RAPs have been championed by the public workforce, the education system, and employer partners as a sustainable strategy to address skill shortages and to develop pipelines of qualified talent and career ladders for employees.

Exhibit 1. Core Components of Registered Apprenticeship Programs

Adapted from the U.S. Department of Labor's
Building Registered Apprenticeship Programs: A Quick-Start Toolkit

---

[1] RAPs were established through the National Apprenticeship Act of 1937, which instituted standards that safeguard the welfare of apprentices. The scope and purpose of the system, as well as the standards, policies, and procedures for programs, are outlined in Title 29, Part 29, of the Code of Federal Regulations (29 C.F.R. § 29). Title 29, Part 30 of the Code asserts that RAPs are equal opportunities and that discrimination based on race, color, religion, national origin, sex, sexual orientation, age (40 or older), genetic information, or disability is prohibited.

[2] According to the U.S. Department of Labor (2019), there were 24,788 active programs and 633,476 apprentices between October 1, 2018, and September 30, 2019.

The AIM Initiative

Expanding apprenticeship opportunities is a key priority of the federal government—one that was reinforced by the 2017 [Presidential Executive Order Expanding Apprenticeships in America](#).[3] The promise of apprenticeship is that it provides a structured pathway to skilled jobs that pay living wages for those who want to learn by doing. At a time of increasing wage inequality and a deep recession in the United States, it is more critical than ever for funders, policy makers, and RAP practitioners to consider how RAPs can be designed to be more inclusive of all job seekers.[4] Ensuring that there are multiple equitable on-ramps to apprenticeship opportunities is part of a current dialogue as we collectively consider how the good jobs of the future will be accessible to everyone, including people with disabilities.

In support of these expansion efforts, the Office of Disability Employment Policy (ODEP) at the U.S. Department of Labor (U.S. DOL) sponsored the Apprenticeship Inclusion Models (AIM) initiative. The AIM initiative focused on learning how apprenticeship and pre-apprenticeship programs can optimize learning for and inclusion of people with disabilities.[5] Specifically, the project sought to address the accessibility of apprenticeship and pre-apprenticeship programs' recruitment, assessment, mentoring, training, and instruction efforts, as well as their general approach to supportive services. In support of these objectives, the initiative has produced five briefs that provide information to support the scaling of inclusive apprenticeships. Recognizing that the recent COVID-19 pandemic and economic crisis have impacted many apprenticeship and pre-apprenticeship programs in profound ways, this brief focuses on how programs have responded and adapted to cope with new and evolving circumstances.[6]

---

[3] While Executive Order No. 13801 references both RAPs and Industry Recognized Apprenticeships (IRAPs), this brief focuses on RAPs. See U.S. DOL (2012).

[4] Guidance on targeted recruitment is specified in 29 C.F.R. § 30.8. Suggestions include recruiting from organizations and PA programs that serve underrepresented groups.

[5] The U.S. Department of Labor (2012) defines quality pre-apprenticeship programs in Training and Employment Notice No. 13–12. These programs blend classroom training with applied learning (e.g., work-based learning) and are designed to prepare individuals to enter and succeed in apprenticeships.

[6] The COVID-19 pandemic began in December 2019 and resulted in 42 of 50 states across the United States issuing shelter-in-place orders to slow the spread of the virus. These orders mandated that only essential businesses could remain open (e.g., hospitals and grocery stores), while other businesses closed temporarily or shifted to a model where employees worked from home. Consequently, in addition to the health crisis, there was a dramatic fall in consumer demand, causing unemployment rates to soar to 14.7% in April 2020, with 20.5 million jobs lost.

This Brief: Emerging Lessons for Inclusive Apprenticeship Programs: Managing Through the COVID-19 Crisis and Beyond

In April 2020, the COVID-19 health crisis caused the unemployment rate in the United States to rise to 14.7% and 20.5 million Americans to lose their employment.[7] This crisis has disproportionately affected people with disabilities. Between March and April of 2020, workers with disabilities lost nearly 1 million jobs—a 20% decline, compared with the 14% decline experienced by workers without disabilities.[8] Although the economy has since begun to recover, the economic situation has remained unstable. As such, at this time it is not possible to predict with any certainty the future direction or rate of additional job loss or recovery.[9]

Overall, research on post-recession reemployment strategies for displaced workers with disabilities in an economic downturn remains scant because data about disabilities were not included in surveys or administrative data sources prior to 2008.[10] By 2010, these data were regularly reported, enabling more rigorous analysis. A study from that year found that in the first year of the Great Recession the rate of decline in employment for working age adults with disabilities was three times greater than for those without disabilities.[11]

Subsequently, a 2011 study looked at *reemployment* strategies—those designed to help people with disabilities achieve high-quality employment in the wake of the recession. This study of 15 programs identified practices that continue to be effective today, including understanding local labor market conditions, tailoring programs to meet workers' specific needs, and collaborating with workforce partners.[12] Apprenticeship programs that include these components are more likely to help individuals with disabilities successfully navigate crises.

In light of the severity, complexity, and anticipated consequences of the current crisis, this brief focuses on how apprenticeship, pre-apprenticeship, and similar employment programs fostering access to employment for people with disabilities have coped with the crisis. It also identifies core strategies to help programs respond to and remain resilient during the early stages of a crisis.

To inform this brief, we conducted nine interviews with representatives of eight organizations that were managing apprenticeship, pre-apprenticeship, and similar employment programs supporting employment for people with disabilities.[13] They include:

---

[7] See U.S. Bureau of Labor Statistics (2020).

[8] See Livermore and Schimmel Hyde (2020).

[9] See Kessler Foundation (2020).

[10] See U.S. Bureau of Labor Statistics (2020).

[11] See Kaye (2010).

[12] See Heidkamp and Mabe (2011).

[13] Most of the respondents we interviewed were apprenticeship intermediaries managing multiple employment or apprenticeship programs, many in nontraditional industries, including healthcare, advanced manufacturing, and information technology. The remaining were social service agencies that operate employment programs that serve people with disabilities.

- Representatives from each of the AIM pilot sites—Apprenti, the Healthcare Career Advancement Program (H-CAP), and the Industrial Manufacturing Technician (IMT) Apprenticeship program.[14]

- Representatives from other apprenticeship and employment and training programs supporting participation by people with disabilities or providing technical assistance, research, or consulting services to such programs.

- Representatives from organizations with experience supporting people with disabilities and crisis management.

We also conducted a brief literature review focusing on the intersection of inclusive apprenticeship, employment services for people with disabilities, and crisis response. Finally, we reviewed a number of resources relevant to the subject matter, including podcasts and webinars.[15]

The remainder of the brief is organized into three sections:

Responding to the COVID-19 Crisis: How have apprenticeship, pre-apprenticeship, and similar employment programs and their partners responded to the COVID-19 crisis?

Preparedness and Responsiveness Lessons Learned: Which factors facilitated program preparedness and responsiveness?

Conclusion and Strategies for the Future: Which strategies can support program resilience and the sustainability of inclusive apprenticeship going forward?

We have also included two appendices. Appendix A describes specific strategies that programs have used to preserve employment, engagement, and program benefits during crises like the COVID-19 pandemic. Appendix B lists the individuals and programs that contributed to this brief.

Responding to the COVID-19 Crisis

Nearly all the programs supported by our respondents needed to make adjustments in March 2020 because of shelter-in-place orders issued by their states or localities. The orders typically permitted essential businesses (e.g., hospitals and grocery stores) to remain open, while other businesses closed temporarily or shifted to work models in which employees worked remotely.

By design, most apprenticeship programs managed by the respondents with whom we spoke focused on occupations designated as essential—manufacturing technicians and medical assistants, for example. Other programs, such as those focusing on cloud computing or cybersecurity, had the flexibility to transition to remote operations without major disruptions. Some apprenticeship programs closed for a brief period of time (no more than a few days) to shift their operations online, ensuring that staff were prepared to deliver activities and services remotely and apprentices were prepared to participate in them. Major adjustments included:

---

[14] The AIM initiative includes three pilot projects that are focused on enhancing apprenticeship pathways into high-demand, well-paying careers for people with disabilities.

[15] A list of works cited and additional resources is included at the end of this brief.

Adapting classroom training to a remote environment. Programs shifted classroom training from in-person instruction to online provision. Some programs re-sequenced their training so lessons that normally would have happened concurrently with on-the-job training (OJT) were delivered in advance of OJT. This allowed them to make use of the time while apprentices waited to return to in-person work.

Exploring remote options for on-the-job learning. Nearly all respondents reported investigating options for simulation-based training (including virtual, augmented, and extended reality technologies) that could be delivered online, and/or prioritizing pre-existing in-house efforts to develop such training.

Ensuring that participants had access to equipment and internet connectivity. Programs strived to ensure that all workers had access to laptops, tablets, and other required devices as well as stable, high-speed internet connections. For situations in which workers lacked equipment, the training providers often paid for needed devices; in other cases, the employers did. When trainees' home internet connections did not meet bandwidth requirements, programs frequently offered their facilities for connectivity (Wi-Fi). Some apprenticeship programs paid for in-home plan upgrades to trainees' internet packages.

Communicating more regularly with participants. In the absence of in-person interactions, staff made a concerted effort to check in with participants regularly to ensure they had the supports they needed. For example, one program manager connected with participants socially, to reduce isolation; another referred participants to social services, which were available remotely, to ensure their mental health needs were addressed.

Adjusting the program enrollment process. Many programs shifted their processes for enrolling participants from a paper-based system to a 100% digital system. These programs typically employed scanned versions of documents (e.g., pictures of participants' photo identification) and virtual signature services like DocuSign. Programs also shifted orientation sessions from in-person interactions to video conferences.

Most program staff with whom we spoke reported that their own transitions to working from home were relatively simple and straightforward. Several programs had already been moving toward more remote work, and the pandemic simply accelerated progress. However, some colleges and providers of related technical instruction (RTI) closed. These circumstances forced a pause in programming even when intermediary organizations or employers did not also close. Additional detail about how these programs responded is included in Appendix A.

In addition to program-level challenges, some programs faced broader socioeconomic challenges. In select industries and occupations, the demand for workers radically changed and forced inclusive apprenticeship programs to make difficult decisions about their program portfolios in near real time. For example:

Manufacturing sector employers experienced gaps in supply chains that limited their production schedules, and they adopted social distancing requirements that forced a realignment of shifts. These dynamics posed challenges for rescheduling trainings or ensuring mentor–apprentice ratios could be maintained.

Healthcare employers experienced a need for direct-care positions (e.g., urgent care nurses) as they placed other staff on furlough because nonessential procedures in the same facilities or healthcare systems were limited. Apprenticeship programs in this industry worked closely with employers to monitor these changes, accelerating some programs and pausing others.

Food service and hospitality industries are experiencing profound changes, and apprenticeship programs in these areas are developing new business models. Some programs are transitioning to industries and occupations that make use of apprentices' transferable skills, whereas others are pivoting to serve adjacent sectors, including grocery stores and delivery services, institutional food services, specialized meal services, and other food-related sectors.

The uncertainty caused by the sudden economic downturn has made many employers cautious about adding apprentices to payrolls. Programs reported that employers were largely proceeding with apprenticeships or cohorts that had already started but delaying start dates for future cohorts. Since employers typically pay for some or all apprenticeship training, the implications for new apprenticeship programs could be far-reaching if economic uncertainty continues.

Preparedness and Responsiveness Lessons Learned

As described in the previous section, responding to the COVID-19 crisis was (and remains) a trial for every organization that helped inform this brief. In the early weeks of the crisis, organizations successfully adapted their program operations to new conditions. Programs are also planning for a much longer and less certain time horizon. Reflecting on this crisis (and others, including the 2008 Great Recession), respondents identified several factors that are important to have in place early so that programs have more options in responding to crises.

Diversity of funding, occupations, industries, and partners. Having diverse funding (including savings) helps organizations keep services running and employees employed during a crisis. By leveraging diverse funding streams, intermediaries and workforce agencies that run apprenticeship programs supporting multiple occupations and multiple employers can sustain apprenticeship even when some occupations or employers experience a downturn. For example, Apprenti, IMT, and H-CAP—the three AIM intermediary organizations—all have multiple income-generating and grant-based funding sources and maintain different lines of business. H-CAP, for instance, is a national labor management organization with many responsibilities and projects beyond its apprenticeship programs. Further, all of these organizations support apprenticeships in several occupations with a range of employers across multiple states.

Capacity to respond to changing labor market needs. Organizations with robust partnerships, labor market intelligence, and program development experience had the capacity to respond to the crisis by continuing to support pre-apprenticeship and apprenticeship programming in emerging or adjacent fields or occupations. For example, an intermediary with multiple employer partners is exploring the possibility of shifting apprentices from restaurants to institutional settings and specialty meal preparation for senior meal delivery services. Deep relationships with the food service industry help make this possible. Likewise, some organizations are in the early phases of creating new

apprenticeship programs. For example, a youth apprenticeship program whose employer partner is "on pause" is building new programming around the concept of a technology navigator who will help people acquire and set up the technology infrastructure they need to live, work, and learn successfully. This occupation has been included on several "jobs of the future" lists in recent years,[16] and the pandemic accelerated rising demand. In sum, intermediaries' connections to employer and industry networks inform their knowledge and understanding of the labor market and of how to adapt and design apprenticeship programs and support apprentices in transition as the labor market changes.

Programming that includes connection to support services. Many organizations with whom we spoke designed their programs to include support staff—such as program navigators, coaches, or counselors—to aid both apprentices and employers with a full range of needs. These support staff enhanced communications and problem solving to boost participant retention and completion of learning activities, especially when challenges arose. Programs already providing these supports to apprentices, whether directly or through partnerships, are likely to be better equipped to respond to new needs and service demands during a crisis.

Contingency planning. Organizations reported that going forward they intended to strengthen their contingency planning to account for pandemic circumstances. Many employer partners, sponsors, and training providers did not previously have plans that covered a pandemic scenario (healthcare providers were the exception), but they are now developing them. For example:

- Project SEARCH is working on a Continuity of Operations Plan based on a model template used by one of its employer partners. (See Exhibit 2.)

- The Shenandoah Valley Workforce Development Board and its college partners are building crisis response plans for all training.

Even for those organizations that had plans in place, stakeholders may want to revisit two key areas: (1) how to facilitate technology access and work design in a remote environment,[17] and (2) how to address the full range of diverse needs within the community of workers with disabilities.[18] Doing so may boost program resilience during a crisis.

Exhibit 2. Developing a Continuity of Operations Plan (COOP)

A COOP focuses on resuming essential functions in a crisis environment. Such a plan requires a process to identify essential and non-essential functions, and it relies upon scenario planning to create options for delivering functions that are deemed essential. This approach can help program staff assemble solutions to specific problems in a post-crisis environment without having to develop them from scratch.

Federal government agencies, city and county governments, and hospitals regularly maintain COOPs, and these organizations can be good partners in assisting with their development. Resilient Children/Resilient Communities offers new guides, templates, and training materials suitable for an array of program-level planning on its website.

[16] See Webber (2020).

[17] See Gelles (2020).

[18] See Pulrang (2020).

Conclusion and Strategies for the Future

Responding to the COVID-19 crisis proved challenging for all organizations interviewed but, in the early weeks of the crisis, they successfully adapted their program operations to new conditions. Because of the uncertainty caused by the sudden economic downturn, as employers look long term, many remain cautious about adding new apprentices to payrolls. In spite of these challenges, organizations that support employers are focused on improving programming among inclusive apprenticeship and pre-apprenticeship programs going forward.

We conducted most of our interviews in June and July 2020 (several months into the COVID-19 crisis), and many organizations had identified new and creative opportunities for growth within their own programs and within inclusive apprenticeships. For example, respondents stressed the potential for accelerated automation within key sectors like manufacturing and healthcare—an approach that decreases demand for some technicians but increases demand for workers certified in mechatronics. As new occupations emerge (or existing ones change), inclusive apprenticeship offers the opportunity to design the job and the related training in tandem, making it uniquely suited to the current environment.

Organizations also pointed to three areas that require attention for supporting the expansion of inclusive apprenticeships:

Enhancing collaborative ecosystems and support networks. Programs serving multiple employers and/or coordinating services across multiple support partners already employ collaborative approaches and pointed to them as a source of strength. As a result of the crisis, organizations reported that they have relied more on partners for critical support and are more aware of their interdependence generally. Going forward, respondents expressed an interest in forming stronger partnerships and partnership models that can enhance their programs and support services for people with disabilities and the apprenticeship system more broadly. Specific strategies identified included:

- Improving partnerships with vocational rehabilitation programs that can serve young adults and scaffold the transition to postsecondary education and training.

- Integrating stronger engagement of certified human resources professionals or professional associations and services like Employee Assistance Programs and other employee support resources.

- Encouraging deeper and more frequent collaboration with experts in equal employment opportunity.

- Establishing stronger connections with community-based organizations that support disadvantaged populations.

Supporting more pre-apprenticeship and apprenticeship pairings. Programs are also building on-ramps to apprenticeships through pre-apprenticeship and career and technical education efforts as well as internships and other work-based learning activities. We learned during our interviews that these apprenticeship connectors are important for people with disabilities because they allow for targeted recruitment while concurrently preparing job seekers for partner apprenticeship programs. As policy makers consider new apprenticeship and pre-apprenticeship policies, it will be important to encourage pre-apprenticeships to connect directly to apprenticeships.

Identifying stable and consistent funding. Apprenticeship programs take time to build because they reflect a shared, long-term investment in workers, skills, and key occupations and industries. Currently, funding to support the creation of apprenticeships in new (non-construction) industries comes through a patchwork of federal grants, state grants, employer training funds, and foundation grants—all of which have different reporting requirements and delivery schedules. Establishing concurrent dedicated resources for system-building activities would help expand the apprenticeship model to account for more occupations. System-building activities include engaging employers and industry representatives, registering programs, training mentors, and other tasks typically performed by apprenticeship intermediaries. Together these activities can help bring the apprenticeship model to scale for a diversity of occupations.

References

Association for Career and Technical Education. (2020). *High-quality CTE: Planning for a COVID-19-impacted school year.* https://www.acteonline.org/wp-content/uploads/2020/06/Planning_for_COVID-19-impacted_Year_FINAL.pdf

Auganix.org. (2020, April 14). *Index AR Solutions works with MidAmerican Energy to digitize its gas apprenticeship program using augmented reality.* https://www.auganix.org/index-ar-solutions-works-with-midamerican-energy-to-digitize-its-gas-apprenticeship-program-using-augmented-reality/

Brunello, G. (2009). *The effect of economic downturns on apprenticeships and initial workplace training: A review of the evidence* (Discussion Paper No. 4326). IZA. http://ftp.iza.org/dp4326.pdf

CDO Workforce. (n.d.). *Your Dream Your Team: Creating career pathways for job seekers with disabilities in New York State.* https://www.cdoworkforce.org/toolkit

Doherty, K., & Cullinane, C. (2020). *COVID-19 and social mobility* (Impact Brief No. 3). The Sutton Trust. https://dera.ioe.ac.uk/35606/1/Covid-19-Impacts-Apprenticeships.pdf

Employment and Training Administration. (2017, January 12). *Guidance on Registered Apprenticeship provisions and opportunities in the Workforce Innovation and Opportunity Act (WIOA)* (Training and Employment Guidance Letter No. 13-16). U.S. Department of Labor. https://wdr.doleta.gov/directives/attach/TEGL/TEGL_13-16.pdf

Employment and Training Administration. (2019). *Registered apprenticeship national results, fiscal year 2019: 10/01/2018 to 09/30/2019* [Data set]. U.S. Department of Labor. https://www.dol.gov/agencies/eta/apprenticeship/about/statistics/2019

Executive Order No. 13801, 82 C.F.R. 28229. (2017). https://www.govinfo.gov/content/pkg/FR-2017-06-20/pdf/2017-13012.pdf

Fogg, N. P., Harrington, P. E., & McMahon, B. T. (2010). The impact of the Great Recession upon the unemployment of Americans with disabilities. *Journal of Vocational Rehabilitation, 33*(3), 193–202. http://dx.doi.org/10.3233/JVR-2010-0527

Gelles, D. (2020, July 21). An evangelist for remote work sees the rest of the world catch on. *New York Times.* https://www.nytimes.com/2020/07/12/business/matt-mullenweg-automattic-corner-office.html

Hardcastle, F. (2020, March 20). *Guide to getting the best from your apprentice when working from home.* Baltic Apprenticeships. https://www.balticapprenticeships.com/blog/working-from-home

Hebbar, L., Wolff, K., Dunham, K., Oettinger, J., Sarver, M., & Gutierrez, I. (2018). *Building new apprenticeship programs: A briefing paper for the California Apprenticeship Initiative evaluation.* Social Policy Research Associates. https://caihub.foundationccc.org/Portals/0/Documents/CAICaseStudies/cai-apprenticeship-brief.pdf

Heidkamp, M., & Mabe, W. (2011). *The Great Recession and serving dislocated workers with disabilities: Perspectives from One-Stop career centers and rapid response coordinators.* John J. Heldrich Center for Workforce Development. https://pdfs.semanticscholar.org/8688/55e688745d879bad106b6c5aa767dd043ed3.pdf

Hwang, J., & White, T. (2020, June 11). *Youth apprenticeship programs adapt to meet crucial needs in a pandemic*. New America. https://www.newamerica.org/education-policy/edcentral/youth-apprenticeship-programs-adapt-meet-crucial-needs-pandemic/

Idaho Workforce Development Council. (2020, June 18). *Expanding youth apprenticeship in Idaho: Registered Apprenticeship 101* [Meeting agenda]. https://custom.cvent.com/AABA2B4F36BF47C1B06D810976F3B4DF/files/event/4a98831900064cd5adf9f9ee22addce8/841098be5af345a7b6e6481555d216f8.pdf

Johnson, M., & Spiker, K. (2018). *Broadening the apprenticeship pipeline: Pre-employment training and affordable childcare are key to access and retention in work-based learning programs*. National Skills Coalition. https://m.nationalskillscoalition.org/resources/publications/file/Broadening-the-Apprenticeship-Pipeline_web.pdf

Kaye, H. S. (2010). *The disproportionate impact of the great recession on workers with disabilities* [Unpublished manuscript]. Institute for Health and Aging, University of California. http://secure.imarcsgroup.com/vendorimages/floridaarf/GreatRecession-WWD.pdf

Kaye, H. S. (2010). The impact of the 2007–09 recession on workers with disabilities. *Monthly Labor Review*, 133(10), 19–30. https://www.bls.gov/opub/mlr/2010/10/art2full.pdf

Kessler Foundation. (2020). *nTIDE June 2020 jobs report: Numbers up but COVID spikes may impact economic recovery* [Press release]. https://kesslerfoundation.org/press-release/ntide-june-2020-jobs-report-numbers-covid-spikes-may-impact-economic-recovery

LEAD Center. (2015). *Workforce Innovation and Opportunity Act (WIOA) from a disability perspective* [PowerPoint slides]. http://www.leadcenter.org/system/files/webinar/presentation_files/WIOA_From_Disability_Perspective_Part_One_2.25.2015.pdf

LEAD Center. (2019). *Making change happen: Virginia's cross-system accessibility taskforce addresses equal opportunity and access* [System innovation brief]. http://www.leadcenter.org/system/files/resource/downloadable_version/Systems%20Innovation%20Brief%20-%20VA_cn.pdf

LEAD Center. (2020). *Statewide cross-system training on WIOA Section 188: Broadening access for people with disabilities & other barriers to employment* [Webinar]. http://www.leadcenter.org/webinars/statewide-cross-system-training-wioa-section-188-broadening-access-people-disabilities-other-barriers-employment

Lerman, R. (2018, January 5–7). *Building a robust apprenticeship system in the U.S.: Why and how?* [Paper presentation]. Meeting of the Labor and Employment Relations Association, Allied Social Science Association, Philadelphia, PA.

Livermore, G., & Schimmel Hyde, J. (2020, May 28). *Workers with disabilities face unique challenges in weathering the COVID-19 pandemic*. Mathematica Policy Research. https://www.mathematica.org/commentary/workers-with-disabilities-face-unique-challenges-in-weathering-the-covid-19-pandemic

MacDonald, D., Shiever, H. R., Rekhelman, N., Raza, R., Gerrard, P., & Heacock, D. (2020, July 27). *Human-centered learning is more important than ever*. Boston Consulting Group. https://www.bcg.com/publications/2020/the-importance-of-human-centered-design

Martin, M., & Volpe, L. (2020). *Suddenly virtual: Delivering workforce services in the COVID-19 environment*. Heldrich Center for Workforce Development; Edward J. Bloustein School of Planning and Public Policy, Rutgers University. http://www.heldrich.rutgers.edu/sites/default/files/products/uploads/Suddenly_Virtual_Delivering_Workforce_Services_in_the_COVID-19_Environment.pdf

Office of Disability Employment Policy. (n.d.). *Youth with disabilities entering the workplace through apprenticeship: What apprenticeship employers need to know about working with young adults with disabilities*. U.S. Department of Labor. https://www.dol.gov/odep/categories/youth/apprenticeship/ODEP5.pdf

Office of Disability Employment Policy. (2015). *Registered apprenticeship programs: Improving the pipeline for people with disabilities (final report)*. U.S. Department of Labor. https://www.dol.gov/odep/pdf/apprenticeshipreport.pdf

Office of Educational Technology. (2017). *Reimagining the role of technology in education: 2017 national education technology plan update*. U.S. Department of Education. https://tech.ed.gov/files/2017/01/NETP17.pdf

Oregon State Board of Nursing. (2020, April 2). *Senior nursing students working as healthcare workers in acute care*. https://www.oregon.gov/osbn/Documents/OSBN_COVID_Clinicals_NursingEd.pdf

Parker Dewey. (2020). What is a micro-internship? https://www.parkerdewey.com/

Partnership on Employment and Accessibility Training. (2020). *Creating VR workplace training for people with disabilities* [Audio podcast]. https://peatworks.org/podcast-creating-vr-workplace-training-programs-for-people-with-disabilities/

Practera. (2020, February 18). *Practera platform allowed learning to go on during virus shutdown*. https://practera.com/2020/02/18/practera-platform-allowed-learning-to-go-on-during-virus-shutdown/

Pulrang, A. (2020, April 30). *COVID-19 teaches us a lot about differences in the disability community*. Forbes. https://www.forbes.com/sites/andrewpulrang/2020/04/30/covid-19-teaches-us-a-lot-about-differences-in-the-disability-community/#5cf727d7714e

Resilient Children/Resilient Communities. (n.d.). RCRC Toolbox. https://rcrctoolbox.org/

Schneiders, A. (2020). *Virtual mentoring best practices for remote employees*. Association for Talent Development. https://www.td.org/insights/virtual-mentoring-best-practices-for-remote-employees

Tooling U-SME. (2017). *Apprenticeships: Modernizing a proven workforce development strategy*. Tooling University. https://workforcesolutionspa.com/wp-content/uploads/2017/07/Apprenticeships-Modernizing-a-Proven-Workforce-Development-Strategy.pdf

U.S. Department of Labor. (2012). *Defining a quality pre-apprenticeship program and related tools and resources* (Training and Employment Notice No. 13-12). https://wdr.doleta.gov/directives/corr_doc.cfm?DOCN=5842

U.S. Bureau of Labor Statistics. (2020, May 8). *Employment situation news release* [Press release]. https://www.bls.gov/news.release/archives/empsit_05082020.htm

U.S. Bureau of Labor Statistics. (2010). *Data on the employment status of people with a disability.* https://www.bls.gov/cps/cpsdisability.htm

U.S. Office of Personnel Management. (n.d.). *What is an Employee Assistance Program (EAP)?* Retrieved September 21, 2020, from https://www.opm.gov/FAQS/QA.aspx?fid=4313c618-a96e-4c8e-b078-1f76912a10d9&pid=2c2b1e5b-6ff1-4940-b478-34039a1e1174

Utterback, A., Iguina-Colón, G., & Wharton-Fields, D. (2020). *Adapting employment coaching during the COVID-19 pandemic: Practical advice from Richard Guare and Colin Guare.* MDRC. https://www.mdrc.org/sites/default/files/MyGoals_Covid.pdf

van Docto, C., Koller, V., & Grey, C. (2020) *Using universal design for learning in apprenticeship.* Social Policy Research Associates.

Vornholt, K., Villotti, P., Muschalla, B., Bauer, J., Colella, A., Zijlstra, F., Van Ruitenbeek, G., Uitdewilligen, S., & Corbiere, M. (2018). Disability and employment: Overview and highlights. *European Journal of Work and Organizational Psychology*, 27(1), 40–45. https://doi.org/10.1080/1359432X.2017.1387536

Webber, A. (2020, June 29). *Data detectives and home working facilitators among future HR roles.* Personnel Today. https://www.personneltoday.com/hr/data-detectives-and-home-working-facilitators-among-future-hr-roles/

Wolff, K. E., & Grey, C. (2020). A profile of apprenticeship: Mt. Hood Community College [Manuscript in preparation]. Oregon Apprenticeship, Bureau of Labor and Industries.

Wolff, K. E., & Grey, C. (2020). *Community colleges: Key partners in registered apprenticeship* [Manuscript in preparation]. Oregon Apprenticeship, Bureau of Labor and Industries.

Workforce Innovation Cohort on Disability and Employment. (2020). *Moving forward: Innovative disability and employment service delivery* [Webinar]. https://disability.workforcegps.org/resources/2019/04/19/16/09/Moving-Forward-Innovative-Disability-and-Employment-Service-Delivery

Appendix A: Strategies for Preserving Employment, Engagement, and Program Benefits During Crises

Programs interviewed for this brief adopted several strategies to respond to the current crisis: adapting their training, ensuring participants had access to equipment, encouraging supportive communication with participants, adjusting enrollment procedures, and continuing to focus on program sustainability. We describe each of these strategies in this appendix.

Adapting Training

Many programs reported making changes to the design, sequence, or structure of their programs in the early days of the COVID-19 crisis; the programs also integrated additional safety-related and technology-support services. Common adjustments included:

Resequencing new programs so that the classroom portion of the training (related technical instruction, or RTI) occurred upfront, allowing time for companies to adapt their workplaces to new safety protocols (or re-open if they were deemed non-essential) before apprentices began the OJT portions of their training.

Shifting classroom training (RTI) to an online environment. In some cases, remote programs were purchased or substituted for previously approved content. In other cases, training that had typically been delivered in a classroom was instead delivered remotely, using recorded lessons and assessments or live instruction online. For example, Apprenti's training programs were designed to be delivered face-to-face, cohort-style, in a classroom, but the crisis prompted experimentation with a virtual cohort across multiple communities in two different states. This approach created economies of scale on the training side and also helped enable smaller employers (who were unable to hire whole cohorts) to participate in Apprenti's programs.

Substituting training components so that more OJT could occur remotely. Nearly all programs reported seeking simulation-based training (which could be delivered online) or accelerating in-house efforts to connect to alternative online training. For example, once manufacturing technician programs were disrupted, the Shenandoah Valley Workforce Board mapped completion trajectories for apprentices close to finishing their manufacturing technician and other programs. They worked with employers to substitute online courses from [Tooling U-SME](#) and the [National Center for Construction Education and Research](#) (which offers remote proctoring) for coursework that could not continue face-to-face. Likewise, H-CAP accelerated development of a virtual training institute. (See Exhibit A-1.)

Program and intermediary staff reported working closely with partner firms to implement these changes and identify opportunities for alternative placements for OJT that needed to shift. These changes occurred because firms no longer had work available or because positions could not support apprentices' health, safety, or other needs as originally envisioned. Programs focusing on group-based apprenticeships and pre-apprenticeships—rather than those serving single employers—expressed a high level of confidence in their ability to make the shift.

Exhibit A-1. Distance Work-Based Learning

Work-based learning, typically in-person, in the workplace, represents the heart of apprenticeship, pre-apprenticeship, and career and technical education programs. In the current context, more employers, programs, and licensing and accreditation bodies have experimented with alternatives:

- Remote work-based learning activities, such as virtual worksite tours, interviews with industry professionals, virtual mentoring sessions, and skill-based volunteering, can be rich and highly engaging experiences for students, interns, and pre-apprentices. Companies may have to support mentors in how to engage with trainees remotely.

- Remote or virtual internships, micro-internships, project-based learning, and clinical practice hours can count toward OJT requirements for a growing number of occupations and professions. For example, the Oregon Board of Nursing approved the use of virtual clinicals for all programs to help nursing students near the end of their programs finish on time and secure jobs in this high-demand occupation.

- Virtual reality, augmented reality, extended reality, and other high-fidelity virtual simulations can create authentic workplace scenarios for students to practice their skills. For example, MidAmerican Energy is deploying augmented reality to help convert a gas technician apprenticeship to a competency-based, remotely accessible program.

Source: Association for Career and Technical Education. (2020). *High-quality CTE: Planning for a COVID-19 impacted school year.*

Ensuring Participants' Access to Equipment

Programs ensured that all participants could access needed equipment, Wi-Fi connections, mobile communication tools, and support for making the transition to remote-based learning. In some cases, training providers paid for needed equipment and accommodations; in other cases, employers did. Most program staff with whom we spoke reported that their own shifts transpired in a fairly simple and straightforward manner. Several programs noted that they had been moving in the direction of more remote-based activities prior to the COVID-19 crisis and that the pandemic vastly accelerated progress. Programs that needed additional help often relied on community partners, such as workforce boards, community colleges, K–12 school districts, libraries, community leadership groups, or corporate partnerships, to meet these needs. Going forward, these essential services and resources will likely need to be built into program budgets.

Encouraging Supportive Communication With Participants

Programs manage coaching, navigation, and related support for apprentices in different ways. Some programs focus on coaching during their classroom training component, whereas others provide coaches or navigators throughout or emphasize peer-centered approaches. Since the COVID-19 crisis began, most programs have recognized the increasing importance of this type of support for apprentices and have been boosting capacity in this area. They have drawn upon their own experiences, the experiences of peer programs, and emerging practices—like those shared in Exhibit A-2.

Exhibit A-2. Coaching and support strategies

Key recommendations for providing coaching and related support to program participants during a crisis include:

- Conduct regular checks-ins, especially with individuals who are socially isolated.

- Encourage daily scheduling of activities and tasks.

- Create an agenda for phone and video meetings to help establish priorities and provide a sense of forward momentum.

- Break larger goals into smaller steps and focus on immediate needs, especially for individuals with anxiety and for neurodiverse individuals who benefit from structure.

- Help participants who continue to work outside the home (and who may be concerned about safety) consider and balance different and conflicting priorities; encourage them to document safety precautions their employers have taken.

- Identify and communicate strategies for applying for Unemployment Insurance and SNAP benefits, in case participants need those resources.

- Draw clear boundaries where needed.

Source: Utterback, A., Iguina-Colón, G., & Wharton-Fields, D. (2020). *Adapting employment coaching during the COVID-19 pandemic: Practical advice from Richard Guare and Colin Guare.* MDRC.

In addition, some apprentices with mental health disabilities or chronic health conditions (e.g., immunocompromised people) needed immediate information about the options available to them and help in navigating the choices. For example, a manager of a public employment program for people with disabilities expressed concern about the lack of a more coherent crisis response plan for agencies and partners, including independent living centers and community-based organizations. He began emailing program participants every day to check in on their mental and physical health needs, support needs, and needs relating to work activities or benefits. Because the agency's staff were inaccessible to participants after layoffs occurred in March, the manager called participants at home, connecting several to mental health counselors and other social supports available remotely. Having recognized the need for a more robust and connected network of service providers and a higher level of integration between them, the agency is considering platform-based tools, such as New York's recently launched Your Dream Your Team website and toolkit.

Adjusting Enrollment Procedures

Programs reported several strategies for creating simple online processes for eligibility documentation and enrollment. Using Zoom-based screenshots of applicants and their government-issued IDs—together with DocuSign and online orientation programs—staff have been able to satisfy the legal and procedural requirements for enrollment in fully virtual environments. Realizing the need to document these activities and many other practices, one organization has focused on creating remote-centered manuals for all its grant-funded programs. Some programs had already created these types of materials prior to COVID-19 to support the needs of rural communities.

Continuing Focus on Sustainability

Several programs reported using the COVID-19 crisis as an opportunity to plan for the long term at the program and intermediary levels. At least one intermediary with whom we spoke had applied for and received a Paycheck Protection Program loan, created under the Coronavirus Aid, Relief, and Economic Security (CARES) Act. Many programs reported having applied for additional grant or program dollars and/or speaking with foundation staff about realigning goals or work plans in light of changing circumstances.

Some programs that had been competing for funding prior to the crisis were able to convene partners and launch planning efforts in a more collaborative, creative, and systemic way than they had originally envisioned. They saw this situation as a positive development, even if traditional program outcomes (e.g., enrollment) would likely occur on a delayed timeline. For example:

- In June 2020, Maine launched a multi-stakeholder, inclusive apprenticeship effort for youth in which the state's Bureau of Rehabilitation Services, Division of Vocational Rehabilitation, is a key partner. The Cutler Health Center at the University of Maine convened the partnership and will serve as the backbone organization for the effort.

- Idaho had launched a major youth apprenticeship effort in early 2020. As the pandemic developed, there was concern across public and private sectors about sustaining this effort and about preserving the gains of the state's flagship Disability Employment Initiative. On June 18, 2020, Idaho convened a statewide Youth Apprenticeship Accelerator. Employers and stakeholder partners recognized that the crisis might continue for some time, and they began working together on the concept of "virtual apprenticeships."

Enhancing Safety

Respondents reported adding features to enhance the safety of employees during a pandemic. Common steps taken included:

Procuring or ensuring personal protective equipment (PPE) for apprentices who were continuing their training in the workplace, and making sure apprentices understood how to use it. In most cases, respondents reported that employers provided PPE, such as face masks, protective gloves, and hand sanitizer. However, some programs faced PPE shortages; in these cases, program intermediaries, workforce agencies, and partners assisted in meeting these needs.

Enhancing the health and safety training components of apprenticeship, pre-apprenticeship, and orientation programs. In most cases, employers provided this training to all employees in the short term. To help sustain these efforts in the long term, programs worked with employers to build new protocols into orientation programs, boot camps, pre-apprenticeship programs, and informational materials about the programs.