Inclusive apprenticeships: Advancing employment equity for jobseekers with disabilities

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Abstract.
BACKGROUND: Apprenticeships present an underutilized opportunity for people with disabilities to access in-demand jobs that provide stable employment at good wages, while meeting the needs of business for a skilled workforce. Numerous efforts are underway to increase the diversity of apprenticeships that are inclusive of people with disabilities. However, expanding the participation of people with disabilities in apprenticeship programs requires a long-term commitment to enhanced partnerships between public vocational rehabilitation (VR) and other disability programs, and state apprenticeship offices, as well as apprenticeship programs.

OBJECTIVE: This paper explores the VR system's role in partnership-building that includes mutual education and learning, and systematically addressing the full range of barriers that exist in order for people with disabilities to more readily access apprenticeship opportunities. This includes creating apprenticeship models that are flexible and can readily support and accommodate those with more significant disabilities.

METHOD: To increase the number of individuals with disabilities in apprenticeship programs, VR agencies have expanded efforts regarding apprenticeship programs as a viable employment strategy. This includes advocating for and helping inform the changes needed to make apprenticeship programs fully inclusive, equitable, and accessible.

RESULTS: While apprenticeships have tremendous potential for improving employment opportunities for people with disabilities, there are numerous challenges to accessing apprenticeships at individual, programmatic, and systemic levels.

CONCLUSION: Building more inclusive apprenticeships for people with disabilities requires a long-term systematic approach that includes building strong partnerships between the disability and apprenticeship communities, mutual learning and education, testing out various models and approaches, and addressing the fundamental barriers that currently exist.

Keywords: Vocational rehabilitation, apprenticeship, equity, people with disabilities, employment

1. Introduction

We are in an environment where businesses are facing major labor shortages and are urgently look-ing for the talent they need with the skills and abilities to meet their labor demands. This is not only a feature of the current labor market (ManpowerGroup, 2022), but also a long-term issue (Wellener et al., 2022). While there continue to be major shortages of skilled workers, people with disabilities continue to partici-pate in the labor force at a rate almost half of those without disabilities (USDOL Office of Disability

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Employment Policy, November 2022). The long-term labor market needs provide enormous potential opportunities to close this gap, but doing so requires that people with disabilities have access to career pathways that will lead to development of the necessary skills and experience for in-demand occupations. Registered Apprenticeship (RA) is a model that can provide opportunities for individuals with disabilities to obtain these market–directed skills to prepare for, enter and advance their careers, in positions that are stable and offer good wages. Apprenticeship is an "earn-while-you-learn" method that can meet the needs of both individuals with disabilities pursuing work and businesses looking for skilled employees.

Despite the apprenticeship model's proven effectiveness in increasing skills and opportunities for employment, individuals with disabilities have faced barriers in accessing, and fully participating in these programs. Over the last several years, the Institute for Community Inclusion at the University of Massachusetts Boston (ICI), has undertaken a number of initiatives focused on improving access for people with disabilities to apprenticeship. Based on this past and ongoing work, this article explores apprenticeships as a viable employment strategy for individuals with disabilities and the strategies vocational rehabilitation, other workforce system organizations, and disability service providers can use to help mitigate the barriers they face.

1.1. Defining apprenticeship

While the term "apprenticeship" is often lumped in with other work-based learning options, it is important to recognize that apprenticeship represents a very specific approach. While there are "apprenticeship-like" programs, a true apprenticeship program is one that meets specific criteria, and the context for the purposes of this paper are Registered Apprenticeship (RA) programs that meet highly defined standards, and are registered with the US Department of Labor (DOL) or state apprenticeship offices.

There are five criteria that define an apprenticeship: a) apprenticeships are paid employment, with the individual hired by an employer; b) there are scheduled wage increases (based on achieving competency levels or hours worked); c) there is a mentor, who is an experienced worker, at the job site; d) the apprenticeship includes related technical instruction (RTI); and e) the apprenticeship results in earning of an industry credential.

Apprenticeships are supported via four components: 1) An employer; 2) A sponsor (the organizing entity for the apprenticeship); 3) Related Technical Instruction provider; 4) Support services. All four of these components may be provided by an employer. However, other organizations may provide one or more of these components, and they can be spread across multiple entities.

Apprenticeships are a highly structured approach to competency development over time. Per DOL requirements, apprenticeships must be a minimum of 2,000 hours, with 144 hours of Related Technical Instruction. Apprenticeships are based on industry standards, and apprenticeships are created by breaking down positions into required competencies (Jobs for the Future, 2022).

Apprenticeships have traditionally been in building, construction, and other trades, and the majority of apprenticeships are still in these fields. However, apprenticeships are increasingly in a diversity of fields, such as healthcare, foodservice, and technology (USDOL Office of Disability Employment Policy, 2022).

A pathway to apprenticeship programs are Pre-Apprenticeship programs. Pre-Apprenticeship programs are designed to prepare individuals for apprenticeships and careers in specific fields. Pre-Apprenticeships typically consist of a combination of classroom instruction and career exploration with businesses (Apprenticeship USA, 2022).

There are numerous benefits to apprenticeships. For individuals, apprenticeships provide a highly structured, systematic earn and learn approach resulting in skill development, stable employment, and movement along a career pathway. Apprenticeships also result in positions at higher wages. The earn and learn approach of apprenticeships can also be an alternative to 2 and 4-year post-secondary education. For employers, the benefits of apprenticeships are the opportunity to systematically train individuals according to industry standards and meet their needs for a skilled and stable workforce.

There are ongoing efforts to diversify apprenticeships, which include greater inclusion of people with disabilities. In 2016, the Equal Employment Opportunity requirements for apprenticeships were updated, and among the requirements is that sponsors must ensure that outreach and recruitment efforts are inclusive of people with disabilities, with an aspirational goal that 7% of apprentices in each major occupational group have a disability. In addition, sponsors with 5 or more apprentices must have an affirmative

action plan and must request voluntary disclosure of disability by applicants and apprentices (Code of Federal Regulations, 2016). In 2021, the US Department of Labor awarded funding to 15 states (AK, CA, CO, CT, ID, IL KS, MA, ME, MI, NV, OR, RI, SC, TX) to increase the diversity of individuals participating in apprenticeships (including those with disabilities), and also funded a national technical assistance center focused on diversifying apprenticeships, the Jobs for the Future National Hub for Diversity, Equity, Inclusion, and Accessibility in Registered Apprenticeship (US Department of Labor, 2021), in which ICI is a partner.

1.2. Inclusive apprenticeship

There are four critical pillars to removing structural barriers and ensuring equity in the design and implementation of apprenticeship programs: education, access, belonging, and continuous improvement as defined below and explored in the following sections (Conrad et al., 2020).

- Education: Promoting understanding and awareness, communicating benefits, and identifying appropriate dissemination outlets to share information about apprenticeship programs with individuals with disabilities and the programs that assist them.
- Access: Ensuring the apprenticeship program design, workplace, and curriculum is accessible for all, including those with various abilities, skills, learning preferences, and backgrounds.
- Belonging: Fostering a culture of inclusion where individuals with disabilities feel equally included, represented, and integrated in all aspects of the program.
- Continuous improvement: Evaluating the inclusion of individuals with disabilities, including capturing and analyzing data about apprentices' recruitment, participation, retention, and completion rates before, during, and after the duration of the apprenticeship program.

1.3. Education

While apprenticeship programs present an opportunity for people with disabilities to obtain higher quality, better paying jobs, one of the most striking barriers that has arisen in our work with VR agencies is the lack of understanding of apprenticeship programs and the value that building a diverse pipeline of skilled apprentices can add to the workforce. VR and other disability programs and service providers understanding the key components of apprenticeship programs, is a gateway to getting more people with disabilities knowledgeable about and prepared for career pathways aligned with the most in-demand sectors. Accessible marketing is key to promoting awareness and understanding of apprenticeship programs and opportunities for people with disabilities.

1.4. Access

In 2021 there were 27,385 active Registered Apprenticeship programs with 593,690 active apprentices (DOL Office of Apprenticeship, 2021). While the Department of Labor's Office of Apprenticeship captures individual record data on a number of demographics, there is limited data on how many apprentices are individuals with disabilities. Even though the EEO regulations were released in 2016, the Federal Office of Apprenticeship only began to conduct compliance reviews regarding 29 CFR Part 30 (Equal Opportunity in Apprenticeship) in 2022. In addition, disclosure of a disability is voluntary and many individuals choose not to report. Also, only those apprenticeship sponsors with 5 or more apprentices (approximately 25% of all apprenticeships) are required to invite individuals to voluntarily self-disclose disability status. While the data on participation of people with disabilities in apprenticeship programs is limited, state vocational rehabilitation (VR) agencies report very few referrals are made to existing apprenticeship programs.

To address these access issues, there is a need to consider on a systemic and universal level how each component of apprenticeship can be addressed to expand opportunities for people with disabilities: the application and interview process, on-the-job learning, related instruction, mentorship, testing, and evaluation of learning/competency development. This includes identifying best practices in regards to each of these components, as well as necessary policies and capacity-building within apprenticeship programs so that they are more inclusive of individuals with disabilities.

1.5. Belonging

To design inclusive apprenticeship programs, there is a need to create environments where individuals can show up as their full and authentic selves and are able to express all these facets of themselves. That

Table 1
Lists of education and access strategies to address barriers to inclusive apprenticeships

Barrier	Solutions
Lack of access to information and careers advice in schools	Team approach with community partner involvement; information available at libraries, VR, schools, etc.
Pushback from family and dependence on disability benefits	Access to benefits planners, information about apprenticeships benefits including pay
Limited access to resources, training, support services	Stakeholders representing various intersections are at the table to inform design and provide resources
Transportation	Linking with local transportation officials and agencies to identify options
Internet	Mobile WIFI vans, partnering with libraries, extended computer lab hours at training centers for internet access
Workplace accessibility	Accommodations and accessibility (i.e., accessible floor plans which benefits both apprentices and customers with disabilities, assistive technology)
Languages	Availability of material in multiple languages and accessible formats

means the apprenticeship programs should leverage the full potential of all the apprentices' talent by focusing on equity, diversity, and inclusion in the workplace.

Equity is recognizing that we do not all start from the same place and must acknowledge and make adjustments to imbalances by allocating resources to address their unique challenges and opportunities that leverage their unique strengths for an individual to attain their full potential. The process is ongoing, requiring the identification and addressing of intentional and unintentional barriers arising from bias or systemic structures.

The Equal Employment Opportunity regulations for Registered Apprenticeship programs lay the foundation for equity, but programs need to take it to the next level. Employers, VR and other partners involved in the creation of apprenticeship programs should identify conscious and unconscious biases as a starting point. In addition, practices and policies need to be examined to make sure they do not create barriers and prevent apprentices and applicants from being fully engaged, supported, and able to reach their potential. Some of the barriers most often identified in accessing or successful completion of an apprenticeship program include:

- Socioeconomic factors such as lack of access to information and career advice in schools, pushback from family and dependence on disability benefits.
- Factors prompted by geographical disparities such as limited access to resources, training, support services, apprenticeship programs, transportation, and workplace accessibility.

- Stereotypes/discrimination based on age, gender/identity, ethnicity/race and disability.

1.6. Continuous improvement

The following are key questions for apprenticeship programs to consider in continuously improving the inclusion of individuals with disabilities:

- Are individuals with disabilities underrepresented in apprenticeship programs? Why?
- What data is available about participation, retention, and completion rates?
- How can you gather info about apprentice experiences?
- How are you utilizing data for inclusive apprenticeship development?

It is important to build collaborative partnerships that can work towards more inclusive, diverse apprenticeship programs, to assist apprenticeship programs in addressing these continuous improvement issues. VR agencies, for example, should partner with businesses and schools to help build program curriculum and design that best meets the needs of apprenticeship sponsors, while also ensuring accessibility for people with disabilities. The next step is to empower people with disabilities to share their feedback about the level of inclusion within apprenticeship programs and apply the lessons learned to future iterations of the program design. Collecting and analyzing data is key to understanding the barriers that impede the success of apprentices with disabilities and how to improve employment outcomes.

2. Methods

2.1. Linking VR as a key apprenticeship program partner

To expand on the limited participation of individuals with disabilities in apprenticeship programs, VR agencies have expanded efforts regarding apprenticeship programs as a viable employment strategy. VR is well positioned to advocate and help inform the change needed to make apprenticeship programs fully inclusive. In fact, VR agencies have been added to the apprenticeship planning committee in some states to help inform DEIA efforts and ensure people with disability have access to apprenticeship programs. Several of the 15 states that were awarded the State Apprenticeship Expansion, Equity and Innovation grants included VR as a partner. Some state VR agencies, for example AR, VT, WY, are coming to the table as the need for Pre-Apprenticeship programs grow. Many have existing partnerships with local and state training and education programs and the infrastructure in place to provide the foundational skills needed to create a pipeline for existing and new apprenticeship programs.

3. Results

Apprenticeship has tremendous potential for improving employment opportunities for people with disabilities. However, there are numerous challenges to accessing apprenticeships:

- Apprenticeships are highly structured, potentially lacking the flexibility that many people with disabilities need.
- The entrance requirements as well as the requirements for successful completion of some apprenticeships, are a barrier for some individuals with disabilities, particularly those with more significant support needs.
- Many apprenticeships are full-time, and for a variety of reasons (nature of disability, public benefits, etc.), people with disabilities may prefer part-time employment.
- The potential need to negotiate for accommodations during the application process, and during the apprenticeship itself, possibly across partners (employer, sponsor, provider of technical instruction) can be a challenge.

4. Discussion

To address these challenges, a multi-prong approach is required:

- VR and other disability agencies, service providers, and secondary schools, need to educate themselves regarding apprenticeship, to become well-versed in the language and details of apprenticeship.
- There is a need to build strong partnerships over time with state apprenticeship agencies, and apprenticeship and Pre-Apprenticeship programs, to understand the opportunities that are available, and how to open doors for people with disabilities.
- It is important to leverage the current emphasis on diversity in apprenticeships that is inclusive of people with disabilities, by ensuring that apprenticeship programs are actively recruiting people with disabilities, and making every effort to include people with disabilities in their programs. As part of this, VR and other disability services need to present themselves as a resource to support these efforts.
- VR, as well as other disability agencies and programs, should consider what role they can and want to play in apprenticeship. Obvious roles include as a source of recruitment and support services. However, other roles may include serving as a sponsor, provider of technical instruction, a funder, an employer of apprentices, and possibly operator of a Pre-Apprenticeship program.
- The disability community needs to create a pipeline of individuals who are interested in and prepared for apprenticeships, in part via preparing individuals during transition while in school, and expanding access to Pre-Apprenticeship programs.

5. Conclusion

Apprenticeship provides a tremendous potential opportunity for more people with disabilities to access good jobs and careers, while meeting the needs of employers and business for a skilled workforce. However, opening up increased opportunities for people with disabilities in apprenticeship, is going to require a long-term systematic approach, that includes building strong partnerships between the

disability and apprenticeship communities, mutual learning and education, testing out various approach and models, and addressing the fundamental barriers that currently exist. Expanding apprenticeship opportunities is very much a "work in progress", and it is important to continue to explore this landscape and share successes resulting in more and better jobs and careers for people with disabilities.

Acknowledgments

Conflict of interest

None to report.

Ethics statement

Not applicable.

Funding

Informed consent

Not applicable.

References

Apprenticeship USA (2022). *Explore Pre-Apprenticeship*. Retried from: https://www.apprenticeship.gov/employers/explore-pre-apprenticeship

Code of Federal Regulations (2016). *Title 29, Subtitle A, Part 30 – Equal Employment Opportunity in Apprenticeship.* December 19, 2016. Retrieved from: https://www.ecfr.gov/current/title-29/subtitle-A/part-30)

Conrad, A., Fitzpatrick, K., Jarr, K, McClarin, J., Romanillos, R., Sharp-Grier, M., Williams, B. (2020). *Equity In Youth Apprenticeship Programs*. Gap, PA: National Partnership Alliance on Equity, NAPE Education Foundation.

Jobs for the Future (2022). *About Apprenticeships.* Retrieved from: https://www.jff.org/what-we-do/impact-stories/center-for-apprenticeship-and-work-based-learning/about-apprenticeship

ManpowerGroup (2022). *ManpowerGroup Talent Shortage Survey.* Retrieved from: https://web.manpowergroup.us/talent-shortage-solutions

Rehabilitation Services Administration (RSA). (2016). Annual Report for Fiscal Years 2014–2015. Retrieved from: https://www2.ed.gov/about/reports/annual/rsa/2014-15/index.html

U.S. Department of Labor's Office of Apprenticeship. (2021). *Registered Apprenticeship National Results Fiscal Year 2021.* Retrieved from: https://www.dol.gov/agencies/eta/apprenticeship/about/statistics/2021

US Department of Labor. (2021). *US Department of Labor Awards More than $130M in Grants to Support Registered Apprenticeship Programs; Increase Employment Opportunities*. June 22, 2021. Retrieved from: https://www.dol.gov/newsroom/releases/eta/eta20210622)

U.S. Department of Labor, Office of Disability Policy. (2022). *Disability Employment Statistics – November 2022.* Retrieved from: https://www.dol.gov/agencies/odep/research-evaluation/statistics

U.S. Department of Labor, Office of Disability Employment Policy. (2022). *Apprenticeship.* Retrieved from: https://www.dol.gov/agencies/odep/program-areas/apprenticeship)

Wellener, P., Reyes, V., Ashton, H., Moutray, C., (2021). *Creating Pathways for Tomorrow's Workforce Today.* Deloitte Insights, May 4, 2021. Retrieved from: https://www2.deloitte.com/us/en/insights/industry/manufacturing/manufacturing-industry-diversity.html