# DIVERSIFYING APPRENTICESHIPS

NCGrowth | Report

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# Authors

## Craston Artis II

Craston Is an educator and community/economic development consultant. He currently works with the NC Department of Health and Human Services providing fiscal and programmatic monitoring support. His project management experience also includes delivering technical assistance to businesses as a consultant for the National Center for Economic Gardening (NCEG). The NCEG partners with businesses and government agencies to implement "grow your own" local economic development initiatives.

He has also worked with multiple communities and political organizations. He founded the Community Equity Leadership Team, a consortium of organizations that worked with school board officials to address issues of equity within the district. He also led committees with the Raleigh Wake Citizen Association and local chapter of the Southern Christian Leadership Council to plan initiatives and community convenings with city and county political officials.

## Eve Lettau

Eve Lettau is a graduate student at the University of North Carolina at Chapel Hill. She is enrolled in the City and Regional Planning program, specializing in economic development. She's passionate about the relationship between good jobs and good housing opportunities. Prior to graduate school, Eve worked at the Virginia Tech Office of Economic Development and the New York City Economic Development Corporation.

## Rachael Grainger

Rachael Grainger is a Master's of Public Policy student at Duke University. She is interested on the intersections of economic development, social innovation, and human centered design. Prior to graduate school, Rachael worked for the Center on Rural Innovation (CORI) on their Future of Work team and was a Peace Corps Education volunteer in Ukraine.

# Executive Summary

Apprenticeships were created as pathways to middle-class and living wage jobs. However, apprenticeship participants are overwhelmingly male and white. With COVID-19's long-term impacts on the labor market and economy disproportionately affecting people of color and women, advancing opportunities for equitable job growth is crucial.

Trends to advance Diversity, Equity, Inclusion, and Accessibility (DEIA) in the workforce, develop skills-based jobs, and implement work-based learning are all consistent with diversification of apprenticeship programs. By diversifying apprenticeships, policymakers, firms, and organizations can equitably expand proven pathways to long-term careers and quality jobs.

### *Best Practices*

- Pre-apprenticeship programs support the recruitment and retention of underrepresented apprentices.
- Partnerships with nonprofits are vital to success, helping provide wrap around support to proactively address issues with retention.
- Successful programs work with employers who study worksite culture and conditions to identify retention barriers and opportunities to remove those barriers.

- Screening applicants for characteristics like grit, rather than test scores or GPA to diversify the candidate pool.
- High quality coaches and/or mentors support retention and allow for continuous program improvement.
- Involving current and former apprentices in program operations helps employers and program staff understand how attrition issues can be addressed proactively.

### *Recommendations*

1. Allocate and prioritize funding pre-apprenticeship programs.
2. Make the structure and schedules of apprenticeship programs more flexible and scale models that work well for target constituencies.
3. Adopt a train-the-trainer model for sponsors and mentors to create safe, inclusive working environments for new apprentices.
4. Standardize data collection to accurately collect demographic data and track progress from recruitment to full-time employment and advancement.
5. Fund and develop staff focused on retention like coaches and mentors that liaise between student and employer to mitigate and address retention issues.
6. Utilize a cohort model to reduce administrative costs and encourage peer-to-peer support.
7. Align apprenticeships with local high-quality jobs and industries that have transparent pathways to career advancement.
8. Increase diversity throughout the apprenticeship.

# Key Terms

**Competency-based program**: An approach to registered apprenticeship that requires the apprentice to reach certain milestones indicating mastery of a job-related subject and/or a task before moving on to the next step in the program. This results in credentials, credits, and/or completion of the apprenticeship program.[1]

**Mentor:** an individual who provides coaching and support for apprentices. Mentors are typically staff at the worksite. Mentorship is not standardized across apprenticeship programs. Some programs may require mentorship training, while others do not.

**Work-based Learning (WBL):** an instructional strategy that enhances classroom learning by connecting it to the workplace. There are several WBL models: internships, co-ops, on-the-job training, transitional jobs, and apprenticeships.[2]

**Registered Apprenticeship Program (RAP):** a structured program of work-based learning under mentors, resulting in an industry-recognized credential that meets standards by a Registration Agency. An apprenticeship sponsor runs the training program. Sponsors are responsible for registering individual apprentices and determining program completion. [3]

**Cohort-based model:** a model of training where a group of individuals advance through a program together. Many pre-apprenticeship programs are cohort-based, and more apprenticeship programs are adopting a cohort-based model due to scalability. Cohorts increase peer-to-peer learning, teamwork, and collaboration.[4]

**Pre-apprenticeship:** a program or set of strategies designed to prepare individuals to enter and succeed in a Registered Apprenticeship program and has a documented partnership with at least one, if not more, Registered Apprenticeship program(s).[5]

**Diversity**: the differences among individuals based how they experience systemic advantages or encounter systemic barriers in access to opportunities and resources. Race and ethnicity are not the only way in which we are diverse as a group. [6]

**Equity**: an approach focused on ensuring everyone has access to the same opportunities and resources. Equity aims to ensure everyone is given equal opportunity and seeks to balance disparity in practice. [7]

**Inclusion:** centering and amplifying the perspectives, voices, values, and needs of people who experience systemic barriers, discrimination, or disadvantages based on their identities to ensure they feel a sense of belonging.[8]

**Accessibility:** pursuing accessibility means designing for and including people with differing abilities. Accessibility makes "adaptation" unnecessary and one can benefit from accessibility without explaining their disabilities.[9]

# Introduction

Apprenticeships are a key part of the workforce development pipeline.  As the United States continues recovering from the COVID-19 pandemic and reckons with economic inequalities, apprenticeships should be supported as a mechanism key tool to accelerate recovery in communities of color.  Historically, apprenticeship participants in the U.S. are more than 75% white and more than 90% male. Identifying strategies to attract and retain underrepresented groups like people of color and women is critical to support a future workforce, economic mobility, and full economic recovery from COVID-19.

*Diversity in U.S. Apprenticeships*

- According to demographic data of 686,000 apprentices between 2010 and 2019, 77.5% identified as white, 15.3% as Black, 2.9% American Indian/Alaska Native, 2.1% Asian, 1.6% Native Hawaiian/Other Pacific Islander, and 0.5% as multi-racial.[10]
- Apprentices identifying as Hispanic represented 18.3% of all apprentices from 2010-2019, with an average annual proportion of 15.5%.[11]
- Completion rates for White apprentices reached 33% but only 24% for Black apprentices.[12]
- Women have lower completion rates in construction and other skilled trade apprenticeships, which comprises most apprenticeship programs in the U.S.[13]
- In 2019, roughly 12% of apprentices were women even though women comprised nearly half of the overall U.S. workforce.[14]
- Not only are minority groups underrepresented as apprentices, minority-owned businesses and small businesses are not typically apprenticeship sponsors.[15]

# Methodology

The recommendations in this report are informed by a mixed-method approach. Both qualitative and quantitative data was collected and analyzed to understand the scope of diversity in these programs and to enumerate best practices to increase diverse participants.

However, there are some limiting factors in our analysis. Apprenticeship programs vary in implementation, participants served, and supportive services provided based on location. As a result, some recommendations may not be applicable everywhere. Additionally, in this report, we define diversity as participants who have been previously overlooked by these programs. These populations include people of color, women, people with disabilities, justice-involved individuals, and more.

**QUALITATIVE ANALYSIS → INTERVIEWS → CASE STUDIES → RECOMMENDATIONS**

*Quantitative Analysis*

To first determine the scope of the problem, quantitative trends were explored. These trends are a result of data collected by various national, state, and local agencies tasked with evaluating the outcomes of apprenticeship programs. Because there is a lack of consistent nation-wide data, sources used to discuss trends vary.

*Interviews*

To look beyond the problem to potential solutions, we conducted interviews with firms and workforce intermediaries. The first round of interviewees was determined through general research, however then potential interviewees were contacted using a snowball approach.

These interviews were semi-structured. They began with a script tailored to the interviewee, whether a firm or intermediary. However, based on the interviewee's answers, questions varied. All interviews sought to understand how diverse applications have been and can further be recruited and retained in apprenticeship programs.

*Case Studies*

Lastly, case studies of organizations were conducted to help further create recommendations. These organizations were determined through research, team connections, and recommendations from interviewees. Case studies are categorized by private firm, intermediary, or government agency.

# Diversity Trends in Apprenticeship Programs

Systemic barriers to access and broader social inequity limit the benefits and participation of apprenticeships. People of color, youth, people who are immigrants, people with disabilities, LGBTQ+ people, and women face the greatest barriers.[16]

There are stark racial wage disparities among apprentices. Black apprentices receive lower wages than any other racial or ethnic group and Latinx women also receive lower wages than women of other ethnicities. The JFF Center for Apprenticeship and Work-Based Learning reports Black apprentices making $12 an hour less than their white counterparts within the Registered Apprenticeship system. Additionally, 25% of all Black apprentices completed their apprenticeships during incarceration, suggesting disproportionately low access to apprenticeships outside prison.[17]

A movement towards diversifying the workforce, including apprenticeships, is spurring innovation in how policy and apprenticeships are designed and implemented. The American Apprenticeship Initiative (AAI) in 2015 was the first large-scale federal apprenticeship expansion initiative in the U.S., which helped diversify occupations through grant funding for elements like pre-apprenticeship programs, employer recruitment, recruiting veterans and women, and financial incentives for potential employers.[18]  As of December 31, 2019, AAI grantees implemented 243 pre-apprenticeship programs, serving almost 9,000 pre-apprentices, 89% of whom come from underrepresented populations.[19]

The conversation around diversifying apprenticeships largely centers on apprentices rather than sponsors. Diversifying apprenticeship beyond participants to sponsors by including more minority-owned businesses is an area that researchers and policymakers have yet to fully address.
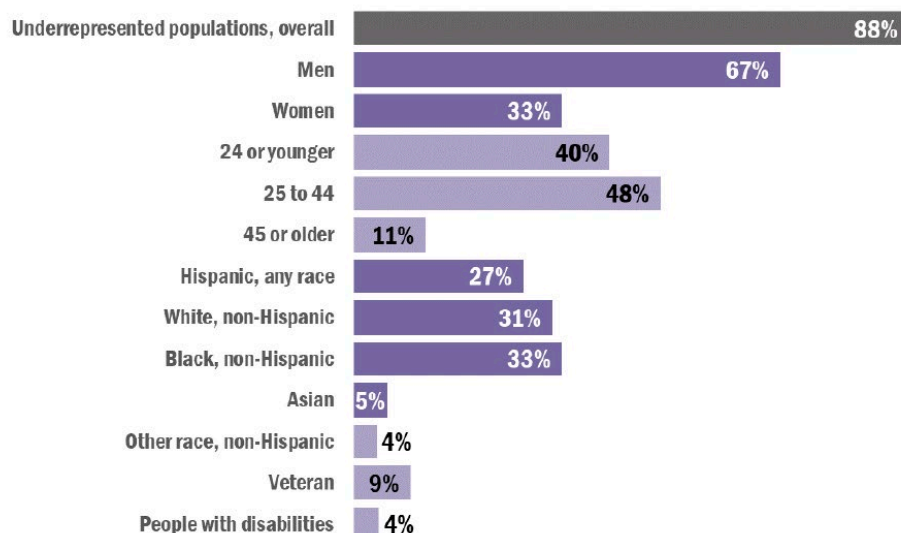

# Best Practices

The types of organizations tasked with overseeing apprenticeship programs vary widely in the United States. Firms employ and sometimes operate these programs. Intermediaries attract, recruit, and retain applicants through various methods. State agencies help operate, certify, and fund these programs.

Programs that excel at creating diverse programs ensure that all partners and stakeholders are aware of and use best practices. This section outlines best practices by organization as determined through interviews, research, and case study analysis.

### #1) Pre-apprenticeship Programs

Pre-apprenticeship programs mitigate some of the challenges in apprenticeship programs and thus increase retention and completion of apprenticeship. Over 88% of pre-apprentices from AAI grants were from underrepresented backgrounds. [20] When done well, these programs adequately prepare future apprentices to enter a new industry and working environment.

**Exhibit 1-6. Pre-Apprentice Characteristics**

| Characteristic | Percentage |
|---|---|
| Underrepresented populations, overall | 88% |
| Men | 67% |
| Women | 33% |
| 24 or younger | 40% |
| 25 to 44 | 48% |
| 45 or older | 11% |
| Hispanic, any race | 27% |
| White, non-Hispanic | 31% |
| Black, non-Hispanic | 33% |
| Asian | 5% |
| Other race, non-Hispanic | 4% |
| Veteran | 9% |
| People with disabilities | 4% |

SOURCE: Apprenticeship QPR, as of September 2020. Percentages calculated based on the number of pre-apprentices for whom data was available. Underrepresented overall N=3,074; gender N=3,457; age N=3,453; race/ethnicity N=3,271; veteran/disability N=3,490.

*Preparing apprentices to navigate a new work culture:*

Successful pre-apprenticeship programs prepare candidates for a working environment where they may encounter harassment, discrimination, and microaggressions. For example, the Ironworks union offers a 3-week women-only pre-apprenticeship program designed as a safe and encouraging introduction to the industry. The women-led program allows participants to gain confidence before they enter work sites where they may be the only woman.[21] Treehouse's Tech Apprenticeship also prepares both apprentices and employee staff for the apprenticeship by addressing harassment, discrimination, and microaggressions during training.

*Accessible bridge programs:*

Pre-apprenticeships provide an on-ramp to middle-class wages for people before a major life change. By lowering the barrier to entry for apprenticeship programs, pre-apprenticeship programs allow individuals to transition more easily. For example, ISG's (Innovative Systems Group) Cybersecurity pre-apprenticeship program recruits veterans 100 days before they separate from the military. This timing is pivotal to ensure that veterans have a foundation after the military that helps them adapt to

civilian life after service. Correctional facilities also operate pre-apprenticeship programs. The Trades Related Apprenticeship Coaching (TRAC) program provides successful students preferred entry into union apprenticeships through certification. In addition to technical training, TRAC teaches self-confidence, self-esteem, and job skills. Fewer than 5% of TRAC graduates re-offend.[22]

*Key Components of pre-apprenticeship programs*

- Full-time work-based learning
- Living wage, so apprentices can work full-time and not have to balance other jobs, which leads to attrition.
- Mixed learning models (individual + cohort-based work)[23]
- Wrap-around support like non-technical training and referrals to social services
- Directly aligns or incentivizes entry into a specific apprenticeship program
- Low barrier to entry (e.g., no degree or knowledge requirements)
- Job site visits[24]

### #2) Wrap-around support

Financial and supplemental support for apprentices from pre-apprenticeship to apprenticeship, and even after employment help with retention. At Aon, a global professional services firm, apprenticeship leadership stressed the importance of working with a trusted and vetted external partner to serve as a base and entry point for apprentices. Apprentices may feel more comfortable taking issues to nonprofit staff rather than to staff within the firm.

For example, One Million Degrees (OMD) provides wrap around support to improve retention for community college students in Chicago. OMD partnered with Aon's local headquarters to build an apprenticeship program with tutoring, career coaching, and financial assistance. OMD goes beyond traditional student support by training companies to remake internal systems like diversity, equity, and inclusion policies to ensure apprenticeship success and retention.

Examples of other wrap around support from our case studies include relevant tools or books, wi-fi, computers, childcare support, case management and referrals, tuition assistance, mentorship, transportation and career coaching.

### #3) Employer/Sponsor Readiness

Successful programs demonstrate employer commitment to study worksite culture and conditions to identify retention barriers and opportunities to remove those barriers.[25]

*Training Supervisors and Mentors*

Apprenticeship programs emphasize a train-the-trainer model to retain apprentices while they transition to a new workplace. Employee training creates a safer space for apprentices to thrive and

mitigates harm that could disrupt their success. However, it is still important to empower apprentices to report harassment and discrimination, so it is properly addressed.

Treehouse conducts diversity training for apprenticeship sponsor employees like mentors, supervisors, and HR. One Million Degrees, a non-profit dedicated to college student success, provides diversity, equity, and inclusion training to remake internal systems for Aon's apprenticeship program. In a statewide effort, the Wisconsin's Office of Apprenticeship recently revamped their training for apprenticeship sponsors. Sponsors now go through training that is DEIA focused, emphasizing how to communicate with individuals of different backgrounds and points of view.[26]

### *Representation in Leadership*

When a firm has traditionally underrepresented groups visibly in leadership positions, they demonstrate that upward career advancement is possible.[27] For example, Treehouse encourages apprenticeship programs to ask: "Does the employer have a leadership commitment to DEIA and that staff diversity is reflected across different levels of the organization?" Minority owned businesses, like ISG, inherently show apprentices there are successful pathways to advancement in the firm or industry.

### *Transparent Career Pathways and Skill-based Jobs*

A key practice for retaining apprentices is transparent pathways for advancement. Both Aon and ISG grant certifications, bonuses, and promotions during the two-year apprenticeship program. When careers are transformed into skill-based pathways, employers can reward apprentices as they gain competencies. The best programs and firms encourage and *show* apprentices how to advance during and after the apprenticeship.

### *#4) Limiting Application Barriers*

Simplifying background checks and eliminating application requirements like test scores, degrees, and GPA helped open and diversify apprenticeship applicant pools. Instead of these measurements, interviewees emphasized screening for the following characteristics: grit, tenacity, and intellectual curiosity or willingness to learn. In combination with targeting a diverse group of people, like community college students, these characteristics tend to diversify apprenticeship programs and tie into program retention.

### *#5) Mentorship & Coaching*

Chicago City Colleges see the most successful programs integrate mentors and coaches in apprenticeship programs from their inception. Coaches and mentors staffed at local community colleges create a feedback loop between students and employers. Before the apprenticeship

program, they can help design the apprenticeship in a way that proactively addresses retention issues, building in check-ins and tutoring, for example. During the program, while mentors and/or coaches support students they also provide valuable information to the employer on how to assist students and adjust the program. The best mentors and coaches are trained and aware of local resources to connect apprentices in the event they need assistance.

### #6) Empowering Apprentices in Program Development

High quality programs empower former and current apprentices to improve the program in a variety of ways. For example, Aon hires former apprentices to help with recruitment where they can spread the word to colleagues and friends. Former apprentices can provide mentorship to new apprentices and be involved in the redesign process to suggest improvements, so programs learn and adjust. This practice helps incorporate voices of apprentices in program design and allows programs to proactively address issues that can affect attrition.[28]

# CASE STUDY: TREEHOUSE APPRENTICESHIP PROGRAM

**Background:** Treehouse was founded in 2011 to make tech more accessible nationwide through affordable and engaging online education. In 2016, Treehouse signed the *TechTown PDX diversity pledge* to develop DEI strategies to equitably fill the tech pipeline.[29] Their first apprenticeship cohort was five Latinx participants that Nike and Verizon hired.[30] The organization is based in Pennsylvania serving individuals and organizations internationally.

**Careers**: software development, user experience design, data analysis, marketing, and sales. [31]

**Preparation:** Treehouse identifies an employment partner. These are typically larger firms who care about DEI work, but do not necessarily know what works. During an initial "discovery workshop," Treehouse staff meets with leaders in different departments   (i.e., Engineering, HR) to understand how certain policies, environments, and situations are currently being handled. [32]  Understanding the current situation helps Treehouse identify potential gaps and barriers that can be proactively addressed. Some key components Treehouse staff looks for:

- Policies around harassment, discrimination, reporting/open door, nonretaliation
- Existing training and requirements to complete
- Clear career path maps to encourage transparency in how people advance

Treehouse identifies a trusted community partner within the locale of the employer. The community partner helps identify potential apprentices ready for the learning journey. They also determine what potential students will need in terms of wrap around support. Treehouse works with organizations like the Boys and Girls Clubs of America and Dress for Success.

**Recruitment:** To recruit in a specific location, Treehouse releases a waiting list where interested applicants can sign up anytime. Treehouse recruits for two months after the employer partner is identified and onboarded. Once jobs are identified, they open the

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**PRE-APPRENTICESHIP**
*(3-month TechDegree program)*

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**APPRENTICESHIP**
*(3 months)*

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**FULL TIME EMPLOYMENT + CAREER SUPPORT**
*(3 years after program)*

**STRENGTHS**

- Discovery workshop also acts as an employer readiness assessment
- Non-technical apprenticeship training for upward career movement and wealth building
- Scalable model for larger employers
- Equity and diversity training sessions for HR departments, mentor matching assistance, and mentorship training.[1]

**RESULTS**

- 85-90% of students complete the pre-apprenticeship
- 80% of apprentices convert to full-time
- 401(k) annual contributions increase by 870%
- 100% of apprentices have full health insurance

waiting list to receive applications. They screen for characteristics like grit and tenacity, creative thinking, and intellectual curiosity. [33]

**Pre-apprenticeship Program**: Prior to apprenticeship, students gain an introduction to their field, such as JavaScript for software development. Students earn a living wage and learn together as a cohort on-site with an employer. During the pre-apprenticeship program, Treehouse and the employer create a program success playbook, train mentors, and select candidates to move forward.

**Apprenticeship Program**: The apprenticeship success playbook and performance plans drive the apprenticeship program. In this stage, the employer sets clear milestones and mentors/staff give frequent feedback. In addition to technical training, "21st century skills training" (e.g., time management, communication, collaboration, leadership) continues.

**Employment**: About 80% of apprentices are converted to full time employees. For three years after the apprenticeship, Treehouse supports career development through continued learning. [34] Training focuses on topics like navigating the career ladder and building generational wealth through 401(k) best practices. Treehouse tracks retention, job growth, and inclusion through data collection and check-ins.

**Wrap Around Services**: Treehouse emphasizes wrap around support for retention. Supports come from the community partner, Treehouse themselves as an intermediary, and the employer. Examples of supports include Wi-Fi access, a laptop/computer, childcare, 21st century skills training, and connections to housing and/or food assistance. [35]
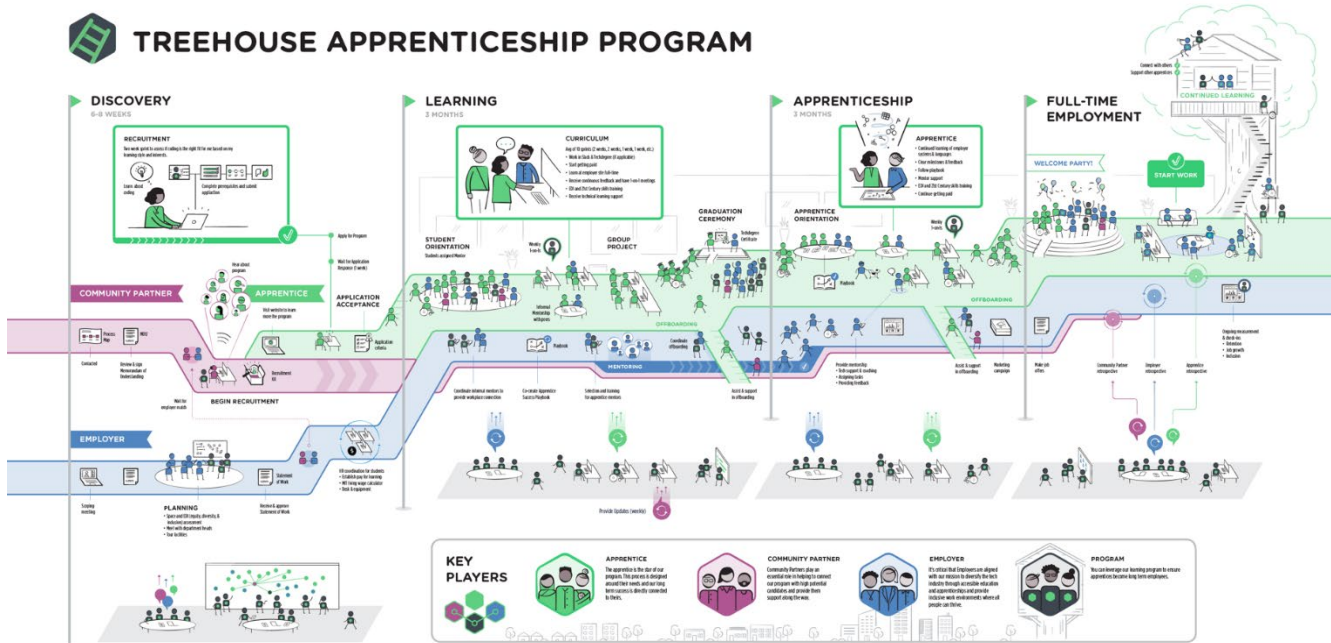
# CASE STUDY: ISG CYBERSECRUITY APPRENTICESHIP PROGRAM (ICAP)

**Background:** ICAP, based in Raleigh, North Carolina, was the first registered apprenticeship focused on cybersecurity in the U.S. ISG launched ICAP in 2012 with a focus on serving the veteran population through a strong partnership with the Department of Defense (DoD) and North Carolina Department of Information Technology. Fort Bragg is also the largest US military base, which makes it an attractive location to recruit from.[36] ISG leveraged the opportunity to fill cybersecurity jobs by matching candidates best suited for the industry. Veterans are unique because they have a history of "defending" and possess necessary security clearances. ISG also actively works with the Women's Business Center of North Carolina (WBCNC) and North Carolina state to recruit Women and disabled veterans.[37]

**Recruitment**: ISG works with the DoD to identify military personnel who are in their last 100 days of service. ISG screens for cognitive and non-cognitive skills. The executive director reported how grit, tenacity, and integrity are most important for retaining students and ensuring they are good candidates for cybersecurity work. ISG's office in Fort Bragg makes the program more accessible to veterans in their last days of service who begin the pre-apprenticeship program.

**Pre-apprenticeship:** After an initial baseline assessment, the individual begins a foundational program. Individuals learn and work full-time in a lab environment with other veterans. To advance, they need to meet the requirements of each competency. This phase typically lasts 4-6 months and ends in a certification.

**Apprenticeship:** Apprentices work for ISG, a federal contractor, and for employers like the NC Department of IT and the State Department. Through contract work with ISG, employers become familiar with apprentices through a variety of cybersecurity projects. Apprentices also get non-technical training such as Toastmasters and writing classes. The apprenticeship program typically lasts for two years, and apprentices earn stackable cybersecurity credentials.

**PRE-APPRENTICESHIP**
*(4-6 months)*

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**APPRENTICESHIP**
*(2 years)*

↓

**FULL TIME EMPLOYMENT**

**STRENGTHS**

- Strong partnerships with government and the Department of Defense create sustainable recruitment
- Deep subject matter experts develop the program and mentor apprentices
- Focus on an industry with extremely difficult jobs to fill
- Veterans in ISG leadership demonstrate role models

**RESULTS**

- Over 90% complete the apprenticeship program
- All apprentices are placed in full-time jobs with benefits

**Employment:** Through contract work in the apprenticeship stage, ISG helps federal and state agencies meet their cybersecurity needs. Many public sector agencies that contract with ISG end up hiring apprentices full-time after they complete the program.

**Wrap around support**: In exchange for full-time work, apprentices receive a stipend, full benefits, and ongoing mentorship. They earn no less than $50,000 per year with bonuses and certifications throughout the program.



*Photo: ISG Cybersecurity apprentices and graduating cohort (left). [38]*

# CASE STUDY: AON APPRENTICESHIP PROGRAM

**Background:** Aon is a global professional services firm with headquarters in Chicago, IL. Aon partnered with One Million Degrees and Chicago City Colleges to develop a DOL registered apprenticeship program for entry level roles.[39] Aon's program grew from conversations about how entry-level roles can be transformed into skill-based jobs that do not need degree requirements. After launching in 2017, Aon recently recruited their largest cohort of over 100 apprentices across 6 cities and 9 partner community colleges.

**Recruitment:** Aon recruits and talks to city college students in the business track or undecided students as well as high school students. All applicants must be 18 or older and require a GED or high school diploma. Community-based nonprofits and workforce development organizations also refer apprentices. Typically, about 20-25 apprentices are recruited per cohort.

**Apprenticeship:** Apprentices enroll in Chicago City College's Associate's Business Degree program and work at the same time. Aon is within walking distance of the college, so apprentices work first and attend class in the afternoons. To stay in the program, apprentices must maintain an academic standing of a C or better. In the last quarter of the program, apprentices are matched with another employee for business mentorship that extends after program completion.

**Employment**: Upon completion, Aon extends apprentices a full-time position. Apprentices also finish the program with an Associate's Degree and DOL apprenticeship certification.

**Retention & Wrap Around Support:** One Million Degrees provides career navigators to every cohort. Navigators refer apprentices to organizations like Dress for Success, provide financial assistance (e.g., for transportation, utilities, Wi-Fi), and tutoring. Additionally, career navigators work with apprentices to develop action plans and take steps to address issues like time management if apprentices fall behind. Aon also provides trainings to address areas for professional development unique to each cohort. Aon is interested in building a pre-apprenticeship program and providing more training to managers, supervisors, and mentors.

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**APPRENTICESHIP**
*(2 years)*

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**ASSOCIATE'S DEGREE & FULL TIME PROMOTION**

**STRENGTHS**

- Strong partnerships between Aon, Chicago City Colleges, and One Million Degrees
- Program staff-built apprenticeship policies and procedures from scratch because they are housed within the HR department.
- Strong wrap-around support system and referral system through community partners

**RESULTS**

- All apprentices placed in full-time jobs with benefits
- Model scaled to six other cities
- Consistent pipeline of local community college students

# Recommendations

The following recommendations are most applicable to state-level apprenticeship organizations and intermediaries who guide apprenticeship program development.

### #1) Allocate and prioritize funding pre-apprenticeship programs

States can diversify apprenticeships and the workforce by incentivizing pre-apprenticeship programs for underrepresented groups in high-demand industries like cybersecurity and advanced manufacturing. States can take leadership to allocate a portion of funding for the design and implementation of pre-apprenticeship programs that intermediaries and firms can access.

### #2) Make apprenticeships flexible

Some employers avoid federal registration of theirapprenticeships because of the additional paperwork required by regulators; however, the benefits of registration lost. This especially hurts small and medium size businesses. Instead of awarding funding based on federally registered programs only, intermediaries and states could allocate money towards programs and firms that are committed to successfully training and hiring women and people of color. Incentives like matching employer/sponsor contributions can give small and mid-size businesses more opportunities to expand programs that already have best practices in place.

### #3) Adopt a train-the-trainer model

One of the best ways to retain apprentices is creating a safe work environment. Intermediaries and state level staff can require DEI training for sponsors and staff like supervisors and mentors or coaches. Organizations who already offer wrap around support to apprenticeship programs can help design and/or inform training models.

### #4) Standardize data collection

Employers want evidence that apprenticeships and work-based learning diversifies the workforce and increases employee retention. As of now, federal apprenticeship data does not allow researchers to accurately compare retention data for disaggregated demographics (e.g., race and ethnicity, immigrant status, LGBTQ+, and more). Ideally, these systems should collect demographic data and track progress from recruitment to full-time employment and advancement. States and intermediaries should consider developing systems that employers can utilize to track their progress, which can be used to identify and advertise program success.

### #5) Fund and develop retention-focused staff

A major reason why apprentices drop out is because "life gets in the way." Retention-focused staff should also be prioritized to mitigate attrition. Retention-focused staff can be coaches or mentors

that have insight into the employer and student side of apprenticeship programs. This position allows the staff member to shape internal systems, so programs become better at retaining underrepresented groups of people. For Chicago City Colleges, the colleges who do have the capacity to staff individuals focused on retention create more supportive, high-quality programs.

### #6) Utilize a cohort model

Many programs use cohort models on both the employer and student side. Being in a cohort as an employer and student helps with retention and peer-to-peer support while reducing administrative costs. For example, Chicago City Colleges works with the Chamber of Commerce to administer apprenticeship programs for smaller businesses that do not have the capacity to start one.

### #7) Align apprenticeships with growth opportunities

Apprenticeship programs should align with local high-quality jobs and industries (i.e., Energy, Advanced Manufacturing, and IT) that have equitable, transparent opportunities for growth. The best programs are driven by the hardest to fill jobs that pay high wages with pathways to promotions. These hard-to-fill positions help create buy-in for employers and show individuals that apprenticeship is a path to a long-term career. As the labor market evolves, incumbent workers who require reskilling and upskilling should also be included in the benefits of apprenticeship.

Colleges are ripe to identify and align apprenticeship programs with in-demand skills and industries. Chicago City Colleges and many others work directly with organizations to identify in-demand skills, unfilled jobs, and advocate for work-based learning. In North Carolina, 51 of the 58 community colleges are apprenticeship sponsors.[40]

### #8) Increase diversity throughout the apprenticeship ecosystem

Grants and funding should support both diverse apprentices *and* minority-owned businesses through partnerships and targeted funding opportunities to fully address diversity and equity in apprenticeship ecosystems.

Prohibitive startup costs make it difficult for minority-owned and small businesses to invest in apprenticeship. While the number of minority-owned businesses apprenticeship sponsors is unknown, 99% of minority-owned employer businesses have fewer than 500 employees.[41] Larger employers constitute the largest share of apprenticeship sponsors due to high startup costs and upfront investment.

In South Carolina, the Commission for Minority Affairs recently partnered with Apprenticeship Carolina to invest in sponsorship for minority-owned businesses. The initiative connects minority-owned businesses with funding opportunities available through Apprenticeship Carolina.[42]

# Conclusion

While employers and organizations work to diversify apprenticeships, ensuring these pathways lead to generational wealth and equity across the workplace is critical.

Just as programs exist to help people prepare for apprenticeships and new work environments, employers should also prepare and examine their workplaces through a DEIA lens. Incorporating these best practices and recommendations into apprenticeships will support retention and diversity, expanding opportunities for people historically left out of apprenticeships to speed recovery from COVID-19.

While government support for work-based learning recently increased, there are limitations to this support. The federal government is focused on funding and supporting registered apprenticeships; however, because of the costs of registration, this focus thisdisproportionately excludes minority-owned businesses which are more typically small or mid-size as compared to firms owned by white men..[43]

Addressing diversity and equity across apprenticeship programs is vital for a comprehensive approach to rebuilding America's economy after COVID-19. Program designers should critically look at diversifying apprenticeship programs beyond the apprentices themselves.

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# Appendix A

# What Apprentices Earn

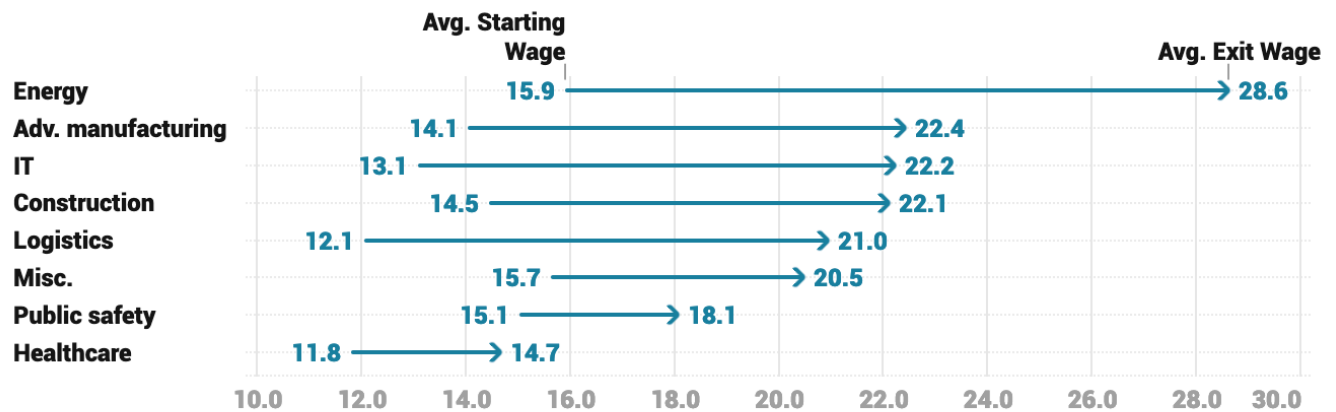**Average wages for apprenticeships in North Carolina, 2016-2020.**



Chart: Work Shift • Source: ApprenticeshipsNC • Get the data • Created with Datawrapper

Moffett, Margaret. "Apprenticeships Grow up in North Carolina." EducationNC, July 21, 2021.
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