



RESEARCH REPORT

Rural Apprenticeships for Young People

Challenges and Strategies for Success

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Rural Apprenticeships for Young People

Apprenticeships in the US have expanded in recent years in what has been dubbed an “apprenticeship renaissance.” But even though such opportunities continue to grow, rural communities demand greater attention. The expansion of apprenticeship may leave rural communities behind because they face unique obstacles, such as lack of public transportation options, small employers with limited resources, limited broadband infrastructure, and health disparities. Rural registered apprenticeships for young people (defined here as 16- to 24-year-olds) experience these challenges even more acutely because young people have more limited mobility than adults in reaching work sites. Still, expanding rural youth apprenticeships is worth pursuing to enhance job quality in rural communities, help employers attract top-tier talent, widen career options for rural young people, and combat rural “brain drain.”

This report evaluates four rural registered apprenticeship programs in Maine, Arizona, Missouri, and Mississippi—which have succeeded despite challenges imposed by their environments—and identifies the key strategies in their approaches. We begin with defining rural apprenticeship programs and exploring their obstacles and benefits. We then discuss each of the four cases and conclude with several policy recommendations for decisionmakers seeking to expand apprenticeship access in rural communities.

A Definition of Rural Apprenticeships

Defining what makes a single place “rural” can be a complex task. For this study, we developed a working definition of rural apprenticeship using both the formal definition of rural laid forth by the Census and a set of less-formal defining characteristics. The Census defines an urban area as an area with 50,000 or more people, while an urban cluster has between 2,500 and 50,000 people.¹ The Census considers all areas not in an urban cluster or an urban area as rural.

Defining what makes an apprenticeship program “rural” is even more complex, as programs can feature multiple locations—technical schools, union halls, company headquarters, apprentices’ homes, job sites, and so forth. Do each of these locations have to meet an agreed-upon definition of rural? Is a program still rural if the training facilities are based in a nearby city? What if all work and training occur in a single city but the program’s apprentices all live in the surrounding countryside?

In our definition, a rural apprenticeship program must operate or have apprentices in rural areas—that is, either the apprentices’ homes or places of work must fall outside an urban area or urban cluster (Ratcliffe et al. 2016).² Although it is possible that some apprentices’ homes, jobs, and training sites are all in rural areas, it is more common that at least one of these functions occurs in an urban area or cluster, which often serve as an economic focal point for a broader rural community.

A Definition of Youth Apprenticeship

Youth apprenticeships provide work-based learning opportunities for students and young people ages 16 to 24 in high school and postsecondary education. Apprenticeships combine academic and technical instruction with paid work experience across many sectors, such as information technology, health care, and energy. In a registered apprenticeship program, apprentices can gain a federal certificate of completion, a professional network, and valuable skills that can help them find high-paying jobs.

A youth apprenticeship program has five key components:

- **A paid job.** Apprenticeships are paid jobs. Employers provide competitive and progressive wages to apprentices during their training, while apprentices contribute to the employer’s production as they learn skills that yield proficiency in an occupation.
- **On-the-job learning.** Apprentices gain practical, hands-on experience in collaboration with a mentor. On-the-job training through youth apprenticeship programs must last at least 12 months and is further defined through regulation by the US Department of Labor (DOL) in collaboration with business and industry.
- **Classroom learning.** A youth apprenticeship program offers theoretical instruction or “classroom instruction” involving how to perform an occupation more broadly. This may be provided by an educator provider or by the company via a high school, college, or online provider.
- **Mentoring.** Apprentices are provided guidance and advice on the job by an experienced professional to teach them the occupation, the company’s business practices, company culture, employment skills, and other knowledge required to become proficient in the occupation.
- **National credential.** The Certificate of Completion of an apprenticeship program is awarded to people who complete registered apprenticeships, either by DOL or a state apprenticeship agency. It indicates proficiency in the occupation and is nationally recognized and portable.

Benefits of Rural Apprenticeship Programs

Apprenticeship programs offer important benefits for rural young people and the areas they call home. These benefits highlight the vital role that apprenticeship can play in the economic life of a small community.

- **Expanded opportunity.** Given that many rural communities lack diverse economies or major educational institutions, young people can struggle to find clear paths toward their futures. Rural apprenticeship offers young people a “third way” with their careers—rather than choose between leaving their homes for better opportunities or filtering into a low-wage, low-skill job in their community, apprentices can pursue the skills required for top jobs without having to migrate.
- **Reduced brain drain.** Rural communities are shrinking, with data showing out-migration increasing over time and little in-migration to replace it.³ This problem is ever more acute among skilled and educated members of the workforce, with the percentage difference in college attainment between urban and rural communities nearly tripling since 1970 (Waldorf 2007). Research has shown that rural young people with skills and education leave their communities primarily for better wage prospects (Heineman and Hadler 2015; Vazzana and Rudi-Poloshka 2019). If continued unchecked, this “brain drain” could hollow out rural communities, depriving them of key members of the workforce who leave to seek greater opportunities. This could create a downward spiral, with the weakened workforce resulting in reduced business activity and even fewer new positions. By creating a clear pathway to develop the skills needed for high-wage jobs, rural apprenticeships can help stymie this phenomenon.
- **Enriched communities.** Though rural communities are smaller and feature businesses with fewer employees, this allows rural apprenticeship programs to have an outsized impact. By simultaneously providing rural young people with high-quality careers and local companies with a highly skilled workforce, apprenticeship can act as a sustainable engine of economic development.

Obstacles Facing Rural Apprenticeship

Unfortunately, apprenticeship programs in rural communities face significant obstacles, despite their benefits. Each of our case study sites prominently features at least one of these challenges, with all challenges present to some degree.

- **Travel distance.** A rural apprenticeship program may require apprentices to travel considerable distances, typically without reliable public transit options, between their homes, job sites, and training sites (such as technical high schools or community colleges). Travel can serve as a major obstacle for apprentice participation, as this distance can translate into scheduling challenges and the high cost of owning a reliable vehicle (insurance, fuel, repair, etc.). This obstacle is even greater with youth apprentices, many of whom may not yet own their own vehicles. Programs can choose to offset some of these costs through shuttles, carpools, and travel vouchers, but this strains the already limited resources of smaller sponsors.
- **Small businesses and limited resources.** Many employers in rural apprenticeship programs are smaller businesses. When our team surveyed employers to determine which programs to profile, we encountered only one that employed more than 20 full-time personnel but many that employed fewer than 5. This small scale can result in a lower capacity to handle the administrative burdens of apprenticeship, reduced overhead to cover expenses related to training, and low demand for new hires. A 2017 report from Jobs for the Future in collaboration with the National Association of Workforce Boards notes the severity of this problem: the low number of both prospective apprentices and available positions in the workforce can prevent rural apprenticeship programs from reaching necessary scale. One workforce board claimed that “individual employers do not have enough of a demand to fill a single cohort for instruction at a college” (Bergman and Kobes, 13). Ivy Love with New America echoes this concern, noting that employers in rural communities might lack the funding to support the related instruction for apprentices.⁴
- **Lack of infrastructure.** Rural communities typically lag behind their urban counterparts in the quality of their built environment, so apprentices in rural programs rely on lower-quality infrastructure. While water, sewage, and electricity are commonplace in most rural communities today, data infrastructure remains a critical gap. A 2018 Federal Communications Commission report indicates that nearly 39 percent of rural households lack high-speed internet. As many apprenticeship programs move some or all of their related technical instruction online—a move that the COVID-19 pandemic has accelerated—lack of internet access becomes an even larger stumbling block for new programs in rural communities. This is doubly true of apprenticeable trades (such as those in cybersecurity, insurance, or web development) that can be worked remotely and which many tout as an option for diversifying recruiting efforts into rural communities. However, an apprenticeship that allows apprentices to work from home can hardly be called inclusive if it is not available to people living in woods,

hollers, and reservations that lack quality data infrastructure on which the job and training depend.

- **Disparities in health and safety.** Those living in rural communities can face additional challenges related to their well-being, with rural areas lagging their nonrural counterparts in key health indicators.⁵ These include a higher incidence of heart disease, increased drug use, poor mortality rates, and less access to hospitals and care resources (Garcia et al. 2017; Meit et al. 2014). In addition to health disparities, rural communities often experience higher rates of other social ills, including certain drug-related crimes and gun violence (Bottiani et al. 2021). Though the connection with apprenticeship is less direct than for other challenges, health and safety disparities can serve to disrupt apprentice completion by placing additional obstacles in the career path of aspiring young people.

Case Studies

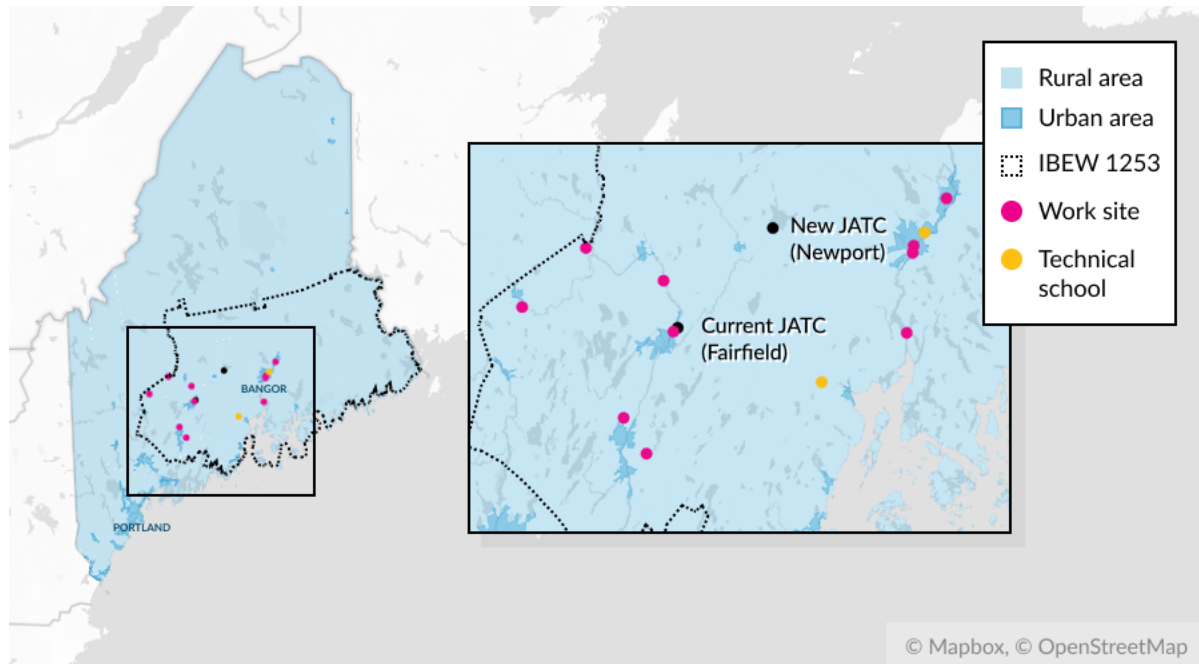
For this report, we surveyed members of the Urban Institute’s network of partners, multiple state apprenticeship agency directors, and more than 10 programs. Ultimately, we identified 4 programs, one each in Maine, Arizona, Missouri, and Mississippi. To qualify for in-depth study, an apprenticeship program had to conform to our definitions of rural apprenticeship and youth apprenticeship and had to clearly illustrate common challenges for rural programs and strategies for overcoming them. We chose 4 sites that highlight rural communities’ extraordinary diversity, including geographic, racial and ethnic, and occupational diversity. Each of these youth apprenticeship programs has left a significant impact on its community.

International Brotherhood of Electrical Workers Local 1253, Maine

The International Brotherhood of Electrical Workers (IBEW) is a national organization that provides union representation and apprenticeship training, among other services, to approximately 775,000 workers (and retirees) in many fields, including construction, utilities, telecommunications, broadcasting, and manufacturing.⁶ The IBEW’s 800 local affiliates, in cooperation with the Electrical Training Alliance, train thousands of apprentices annually in multiple electrical fields, with opportunities ranging from two-year apprenticeships as tree trimmers to more than five years as electricians.⁷

Of these 800 local unions nationwide, two represent union electrical workers in Maine, including IBEW 1253 located in Fairfield, with its training center in Newport (and a new training facility for the apprentices), and Local 567 in Lewiston (figure 1). The Local 1253 has jurisdiction in “Central, Eastern, Mid-coast, and Downeast Maine,” representing some of the most rural parts of the state and more than 250 apprentices and journeyworker electricians.⁸ The local union, chartered in 1946, remains active today by representing workers and creating business relationships in partnership with the state and local contractors for electrical projects while training current and future workers through apprenticeships. It operates one of 114 registered apprenticeship programs in Maine and generates the largest apprenticeship occupation; training for electricians accounts for 24 percent of all apprenticeships offered in the state (Maine Department of Labor 2020).

FIGURE 1
Maine Rural Youth Apprenticeship Case Study Site



Source: US Census Bureau, American Community Survey, 2019.

Notes: IBEW 1253 = International Brotherhood of Electrical Workers Local 1253; JATC = Joint Apprenticeship Training Committee training site.

Today, IBEW 1253 offers the Inside Wireman (electrician) apprenticeship, a four-year apprenticeship program as developed by the Electrical Training Alliance with instruction delivered by journeyworker electricians and master electrician trainers in Newport. To complete the inside electrical

program, apprentices must complete 8,000 hours of on-the-job training in addition to demonstrating approximately 90 tasks and competencies on the job.

For young people, the opportunity to apprentice with the Local 1253 can be an attractive option for career development. Apprentices gain skills in a recognized trade in which they can eventually earn a middle-class wage while staying near family, friends, and neighbors. Moreover, there are various work settings for an electrician in Maine, such as hospitals, schools, paper mills, and universities and with many of the new solar projects supporting the state's transition to clean energy.⁹ IBEW national (along with its contractors) hires and trains apprentices between ages 18 and 24. Still, there are no opportunities for those under 18 in a formal apprenticeship. According to leaders at Local 1253, prospective apprentices may sign up with the union as early as age 17, but IBEW policy is that they cannot begin work with the union until age 18.¹⁰

CHALLENGES THE REGION FACES

An IBEW 1253 apprentice must prepare for a career as an electrician in the most rural state in the country. Maine has exactly 3 urban areas—Portland, Bangor and Lewiston—and only 24 smaller urban clusters, with approximately 61 percent of the state's residents living in rural areas.¹¹ Newport, where the IBEW training is located, is a small town of approximately 3,200 residents but draws apprentices and journeymen from both rural and more populous towns, including the micropolitan capital of Maine, Augusta (18,500 residents), and Bangor (32,000 residents).

This largely rural landscape creates several difficulties for managing the Inside Wireman apprenticeship, but the most significant by far is traveling distance. IBEW 1253's territory runs through approximately half of Maine, which makes driving to job sites tedious and time-consuming (and occasionally treacherous) for many apprentices. The lack of public transportation options only worsens this problem.

A big thing is, if you've been driving 5 miles a day, your vehicle might just be the kind of vehicle that you drive 5 miles a day. So, if you start driving 60 miles each way to a job site...that sometimes can be a big concern...especially if you're an 18-year-old that just graduated high school.

—George Howe, training director, IBEW 1253

The territory can shape how apprentices travel, work, and learn on an everyday basis. Depending on where apprentices live, a reliable vehicle to make it to work and school is an imperative. As George Howe, training director for IBEW 1253, told us, “There are definitely examples that I can think of where it [distance and travel] becomes an issue... [One of the younger apprentices travels to a job] 70 miles away from him, and he could make a lot of money because they’re doing overtime and all kinds of things, but he knows that his car might not make it.”

Distance can also create challenges for recruiting, which is vital to how Local 1253 keeps up with the fast pace of commercial construction work.¹² The IBEW succeeds in recruiting through various methods. Howe notes that “[career and technical education] vocational programs at high schools are a big part of our recruitment ...we reach out to fairs, any job fairs...as well as Job Corps...[and] Jobs for Maine graduates.” Local 1253 has its most successful recruiting efforts from vocational programs near and around urban Bangor. Serving the state’s more rural areas, where many students in the union’s jurisdiction live, has been more challenging. Howe notes, “We do have a lot of issues just because of the area that we do cover...given that travel obviously and time is a huge factor for everybody.” He further noted that recruiting apprentices from rural areas is challenging because of the distance between an apprentice’s home, classroom, and work, “it definitely does make it harder the further we go away from the central area of our location...we can’t guarantee just how close they’ll be to a job.”

During the work week, apprentices have already completed eight hours of work per day (at times in remote locations) and then travel long distances to the Joint Apprenticeship Training Committee training site (or JATC) in Newport for evening courses. Apprentices must then focus in the classroom well into the night. “So, they’ll have the stressor of the long travel to the job sites, but then they’ve got to get to Newport,” says IBEW 1253 business manager Chuck Fraser. Travel, learning, working, and family obligations can all be points of strain on the apprentices and can induce anxiety to complete an academically rigorous apprenticeship. Thus, many drop out or do not complete the program.

During the COVID-19 pandemic, the JATC went virtual, causing additional issues with internet bandwidth for rural apprentices. As Howe indicates, “If you live in certain parts of Maine, you don’t have any of the big-name [internet] providers. It might not be very reliable, and it might not be very fast.”

STRATEGIES FOR SUCCESS

IBEW 1253 finds success in part through its use of multiple funding streams to offset costs and overcome barriers created by the rural environment. As with all apprenticeship opportunities through the Electrical Training Alliance, the program is dually funded between signatory contractors from the National Electrical Contractors Association and IBEW journeymen, who contribute to the training

fund via a contract. This mechanism is made possible through an exception created in the Taft-Hartley Act of 1947, which banned financial transactions between labor and employer organizations, except for apprenticeship trust funds.¹³

Though the training trust fund is the primary funding contributor to the Inside Wireman apprenticeship program, IBEW 1253 relies on other funding streams—streams that more well-funded (urban) chapters may not need—to support books, travel, and other miscellaneous items. One supplemental fund of note is the Competitive Skills Scholarship Program, funded by the Maine Department of Labor. According to its website, the program “is a plan that allows nondegreed adults who wish to obtain higher education diplomas in disciplines...in high-demand jobs... Funds, up to \$8,000, may be used for things such as child care and transportation that may not be covered under traditional scholarships.”¹⁴ Howe indicated, “As [the scholarship program] came in, it would help for any book costs. It would also help with travel to classes, as well as some tools, a computer if they needed it.” Funds such as these appear to make a dent in the financial burden of both rural apprentices and the Inside Wireman program.

When rural students encountered challenges to online learning during the pandemic, the apprenticeship program found creative strategies for students to use, such as doing course work at a local restaurant with Wi-Fi or coming into the JATC to access the internet connection. As virtual training becomes more common, the IBEW might provide apprentices with a reliable internet connection or hotspot to boost their persistence and program completion rates.

The IBEW also succeeds by staying abreast of industry trends. In 2019, Maine expanded its “net energy billing” policy, leading to \$100 million dollars in investment and incentives for new solar energy development.¹⁵ Net energy billing has created a boom in the number of jobs related to setting up solar fields and connecting solar energy to the existing grid. Fraser notes the abundance of solar installation “all over the state of Maine.” To keep up with the pace, the IBEW training program has added courses in alternative energy supply to support the apprentices’ learning on the ground.

These strategies help ensure young people in even the most rural parts of the state can begin a career with good pay and benefits, supporting future growth for both apprenticeship in the bucolic Maine landscape and IBEW apprentices. “My first-year apprentices fresh out of high school make \$17 an hour, with health care,” Howe said. “And they start earning a 401k after 1,000 hours of the work. Our journeyworker pay right now is \$32 an hour with \$6.80 into an annuity fund.” Apprentices, though starting at a lower wage, receive six incremental pay increases during the apprenticeship, ultimately reach \$66,560 annually (working 40 hours per week) as a journeyworker electrician, and have the

opportunity to receive overtime pay. This wage is double the per capita income of \$32,637 of other workers in the state.¹⁶

Tohono O’odham Community College Development LLC, Arizona

The Tohono O’odham Community College (TOCC) is an accredited two-year tribal college serving the Tohono O’odham Nation, a federally recognized tribe in Arizona. Inspired by the American Indian Movement of the 1960s and the reforms of the 1970s (including the Indian Self-Determination and Education Assistance Act), the tribe built a career center in 1981 to provide members with apprenticeship training. Beginning in 1995, the tribe partnered with Pima Community College to expand the career center into an accredited community college in its own right. As a pilot, instructors from Pima’s School of Nursing began teaching classes for a nursing apprenticeship program that would lead to an associate of arts degree and licensure for various nursing pathways (Campbell 2007). Following a 1996 resolution by the Tohono O’odham Legislative Council and building from the pilot program and career center, TOCC enrolled its first students in 2000 and earned accreditation in 2003.

In 2011, the DOL lodged a standards violation against the college’s apprenticeship program. At the time, the college employed apprentices directly and served as the program’s sponsor. In addition to receiving wages for hours worked, apprentices received pay (albeit at a lower rate) for attending their related technical instruction as well as for various community service projects. Though this arrangement helped create incentives to keep apprentices engaged with their coursework, it conflicted with DOL regulations on pay and wage scaling. This incident led to a significant restructuring of the program and the creation of TOCC Development LLC, an independent licensed contracting firm that became the official program sponsor. To lead this new company, and with it the apprenticeship program, TOCC hired Robert Wambolt as director. Despite claiming to be semiretired and coming to the Tohono O’odham Nation as an outsider, Wambolt has led the program ever since.

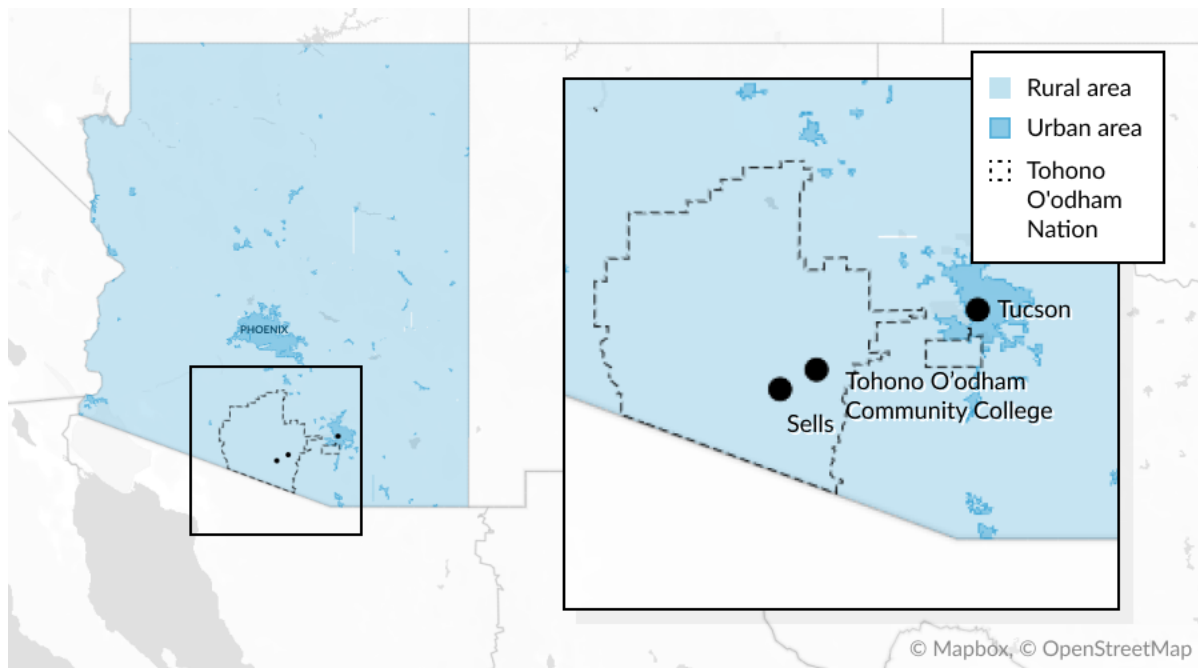
Today, the apprenticeship program focuses exclusively on the building trades, with the nursing apprenticeship pipeline having ended alongside the pilot. Using the National Center for Construction Education and Research (NCEER) curriculum, the program’s 60 enrolled apprentices pursue eight different occupational specialties in a four-year program.

CHALLENGES THE REGION FACES

The Tohono O’odham Nation occupies nearly 3 million acres along Arizona’s southern border, making it the third-largest reservation in the United States. Though today nearly two-thirds of all Tohono

O'odham live outside the reservation, the area remains home for more than 10 thousand people, most of whom live in the community of Sells. The reservation is massive relative to the population, with only 2.3 people per square mile (figure 2).¹⁷

FIGURE 2
Arizona Rural Youth Apprenticeship Case Study Site



Source: US Census Bureau, American Community Survey, 2019.

This geography makes distance the biggest issue facing TOCC apprentices. The reservation is spread wide and thin and few own working cars. “Most people do not have cars,” Wambolt says. “There’s maybe one or two out of 60 apprentices that have a car. And that’s only temporary because it’s a reservation car.” While the tribe operates shuttles between key locations and the college, fully serving all apprentices’ transportation needs verges on impossible. Many rely on a combination of walking, hitchhiking, and carpooling to reach the school and various job sites. As with any apprenticeship program targeting young people, TOCC finds it challenging to ensure all apprentices show up reliably and on time. Without reliable transport to and from class or work, this becomes even harder. Apprentices at TOCC spend huge parts of their day simply traveling. Urban conducted nearly all interviews with individuals during their lengthy daily commutes; the ubiquitous wind over the Sonoran Desert and the crunch of passing tires on dust-strewn roads permeate our recordings.

As with many other American Indian reservations, modern borders of the reservation represent a fraction of its historic size (Stout and Dworkin 2014).¹⁸ Despite the Tohono O’odham Nation existing well before either the United States or Mexico, the modern border cuts through the heart of traditional Tohono O’odham lands, leaving many O’odham in the Mexican state of Sonora without US citizenship. Historically, O’odham from Mexico have been permitted legal passage through five designated entry points. However, in recent decades this semiporous border has become a major target of transnational drug traffickers, forcing entry points to close and creating a host of problems that rain down on the O’odham community. Rates of both violent and property crimes in the community far exceed national and state averages, with local police estimating most crimes are connected with the drug trade. Policing creates a massive economic toll on the tribe, drawing funds away from much-needed services, such as housing, transportation, and health. When residents look to avoid entanglements with drug crime, entanglements find them: break-ins are commonplace, as are detainments and searches by the US Border Patrol (Revels and Cummings 2014).

Spillover from the crime, violence, and substance abuse centered around the border can impact apprentices’ progression. Some enter the program with a history of incarceration, which can affect their ability to work with outside contractors. Others become incarcerated temporarily during participation, significantly slowing their progression through their apprenticeship. Michael Moreno, the program’s lead carpentry instructor and himself a program graduate, noted that alcohol abuse was not uncommon among apprentices and could sometimes prevent apprentices from showing up to work competent.

A lot of our apprentices have been incarcerated for times during their apprentice program. Some of them multiple times. You’re supposed to finish a four-year program in four years and it takes them sometimes eight, sometimes more just because they’re in and out of jail.
—Robert Wambolt, director, TOCC Development LLC

In addition to the challenges imposed by the US-Mexico border, the Tohono O’odham Nation experiences harsh economic realities. Nearly 45 percent of those living on the reservation experience poverty.¹⁹ Both median per capita and household incomes, at \$12,517 and \$30,304, are less than half the national averages of \$34,103 and \$62,843, respectively.²⁰ The Tohono O’odham Ki:Ki Association—a tribal housing authority that functions similar to public housing authorities—constructed nearly one-third of the estimated 3,610 homes on the reservation.²¹ Quality internet remains scarce: only 20

percent of residents have broadband options such as cable, fiber optic, or DSL, with more than 47 percent lacking any internet access at all.²² According to residents, even electricity is not guaranteed in all homes. With little economic activity and few private businesses, most employed people on the reservation work in government, health care, and other services that sustain the community members.

STRATEGIES FOR SUCCESS

The TOCC program perseveres against the substantial challenges of its environment with remarkable tenacity and uses various tools to ensure success for its apprentices. The most important of these tools is a legal one: tribes are afforded the right to regulate employment practices within their territory. The Tohono O'odham Nation, like many other tribes, executes this authority through a Tribal Employment Rights Office (TERO) that works to ensure preferential hiring for enrolled members for any business activity within the bounds of the reservation. This means that when an outside firm conducts work in the reservation, among other stipulations, they must coordinate with TERO. TERO may then require the firm to hire enrolled O'odham apprentices for the contract, subject to various conditions.²³

TOCC works closely with TERO to find opportunities for apprentices to work on projects throughout the community. In addition to giving apprentices valuable work hours, this strategy can expand their opportunities and education. By working with outside contractors, apprentices are exposed to new skills and techniques. Perhaps more importantly, working with contractors through TERO expands an apprentice's network of professional contacts, thus expanding their options for future jobs. This system is not perfect, however. Wambolt notes that firms can be resistant to working with apprentices and local O'odham, preferring to use their own personnel exclusively, which leads some to carefully manage contracts to duck preferential hiring rules.

TOCC's unusual program structure, whereby apprentices are employed by a private firm acting under the authority of the college, allows significant flexibility. By operating as its own in-house contractor, TOCC can manage a large cohort of apprentices while still providing sufficient hours of work, so that apprentices do not find themselves out of work when outside contractors are scarce. The tribe, college, and development firm work closely in a mutually supportive relationship to ensure that money is available for material improvements to both the college grounds and the reservation as a whole. The college has awarded many construction projects to TOCC Development LLC over the past years, including a fitness center, an auditorium, and a dining area. Other tribal entities, such as the Ki:Ki Association, will work with TOCC Development LLC as a preferred contractor. The independent nature of TOCC Development LLC also enables them to bid on projects outside of the community, potentially expanding their partnership portfolio in years to come.

Strong organizational relationships help ensure that the program can find placements for all its apprentices, but it is the strong interpersonal relationships that ensure day-to-day success. Apprentices and instructors alike practice mutual aid and form a strong network of support. Moreno, using a car owned by the tribe, wakes before dawn to pick up all his students. When we spoke with Moreno, he made clear that successful apprentices feel a sense of responsibility to their community. When Moreno neared completion of his own apprenticeship, an outside contractor offered him a good-paying job that would take him to northern Arizona, far from the reservation. Though Moreno planned to take the job, Wambolt identified him as a natural leader and role model to fellow students and asked him to stay and become the program's carpentry teacher. "My grandpa told me a long time ago," Moreno said, reflecting on his decision and the advice he received from others in the community, "he said, 'I fought that fight for as long as I could, but it's time the next generation steps up.'"

Last, a simple but critical component of the TOCC program relates to cost. Enrolled Indians of any tribe can access any TOCC coursework free of charge. Because nearly all residents are O'odham, this frees students and employers alike of the financial obligations of related technical instruction (RTI).

BENEFITS FOR THE COMMUNITY

With low completion rates and, often, delayed apprentice progression, TOCC's performance may appear poor on paper. However, the program has tremendous impact on the community. This impact starts with the massive change TOCC brings to individual apprentices. Because opportunity on the reservation can be scarcer than elsewhere in the country, apprentices find themselves catapulted into the community's upper earners in the context of the low prevailing wage and high unemployment. Even working part time while earning an apprentice salary, students at TOCC can easily find themselves one of the main breadwinners for a household. Those apprentices who find placement in district maintenance departments have stable jobs offering wages that far exceed averages within the reservation. For those who want to search for opportunities outside their community, an apprenticeship provides a clear pathway to build both skills and connections to employers who can jump-start their move.

Apprentices who drop out before completing the program are not abandoned, and neither is their progression status. Because apprentices often drop out toward the end of their program after honing their skills, dropouts are likely to have completed or nearly completed their RTI, with only on-the-job training hours remaining. TOCC has begun actively reaching out to prior students working outside the reservation and to district maintenance offices to track hours completed with new employers. Wambolt

recognizes the value program completion can play later in an apprentice's career and hopes to ensure that the program's diaspora community members will not lose their educational progress.

Apprenticeship also improves the community as a whole. The Tohono O'odham Nation strives toward independence and self-sufficiency, consistent with its long history as a sovereign people. Through the college and its apprenticeship offerings, the nation can ensure the continued construction and upkeep of its facilities without relying on outside builders or services. Apprentices build homes with the Ki:Ki Association to house families and elders, language centers to pass on oral O'odham traditions, wellness centers to nourish and strengthen the bodies of the community, and much more. Building, retaining, and passing on knowledge within the community is central to the Tohono O'odham Nation's identity—the nation's apprentices embody this concept, and their works serve as a physical reminder wherever you turn. TOCC's motto is *Ñia, Oya G T-Taccui Am Hab E-ju, or See, our dream fulfilled*. Through apprenticeship, the Tohono O'odham Nation works each day to realize its dream.

Four Rivers Career Center, Missouri

In one short year, Four Rivers Career Center (FRCC) in Washington, Missouri, has established itself as an apprenticeship powerhouse. The program partners high school students with local employers and provides the technical instruction apprentices need to succeed on the job. Since its registration in June 2020 with its first employer partners—GH Tools (now Tooling Tech Group) and Homeyer Precision Manufacturing—Four Rivers has grown to support 44 apprentices across 29 employers and 9 occupations. For its successful first year, the program received praise from the Governor, Lieutenant Governor, and state senators and representatives who highlighted FRCC's partnership with the Urban Institute and IWSI America in developing and registering the program. Students are selected based on merit for their apprenticeship in their junior year when they take career and technical education classes at FRCC, focusing on their occupation of choice. Students who excel in both their apprenticeship and school work are eligible to begin working full time for their employers during their senior year (box 1).

FRCC apprentices hail from in and around Washington, Missouri, as well as the broader county (and even outside the county). While Washington itself is urban, surrounding Franklin County has among the most rural populations in the state. The third-largest county in Missouri, Franklin covers a large swath of rural and exurban area, including those who work within their communities and commuters into St. Louis. While Franklin County has a total population of more than 100,000 people, the population density is only 110 people per square mile. Aside from centers such as Washington and Union, population is sparse.

BOX 1

Apprentice Spotlight: Seth Ruether

Seth Ruether, an 18-year-old welding apprentice, has already seen the benefits of studying at Four Rivers Career Center. He began his apprenticeship at a local shop, Sahm Welding and Fabrication, in his senior year of high school. Every morning, he commutes from his family farm, where he learned welding basics and his tenacious work ethic, to the shop. Ruether began considering apprenticeship programs as a sophomore. He already knew that he wanted to work with his hands and spend less time in the classroom. Because Ruether succeeded in his classes and accelerated his course load, Four Rivers's program has allowed him to spend almost the entire week at the shop. At work, Ruether contributes just like any employee, working on jobs that match his growing skill set. With the help of Four Rivers's welding classes, Ruether completed his apprenticeship in May 2021 and is looking for new ways to expand his skills after his apprenticeship, using lasers, robotics, and other high-tech tools.

The apprenticeship program definitely let me get that hands-on job outlook that I was looking for... I got to make money. I got to learn the way I wanted to.

—Seth Ruether, welding apprentice, Four Rivers Career Center

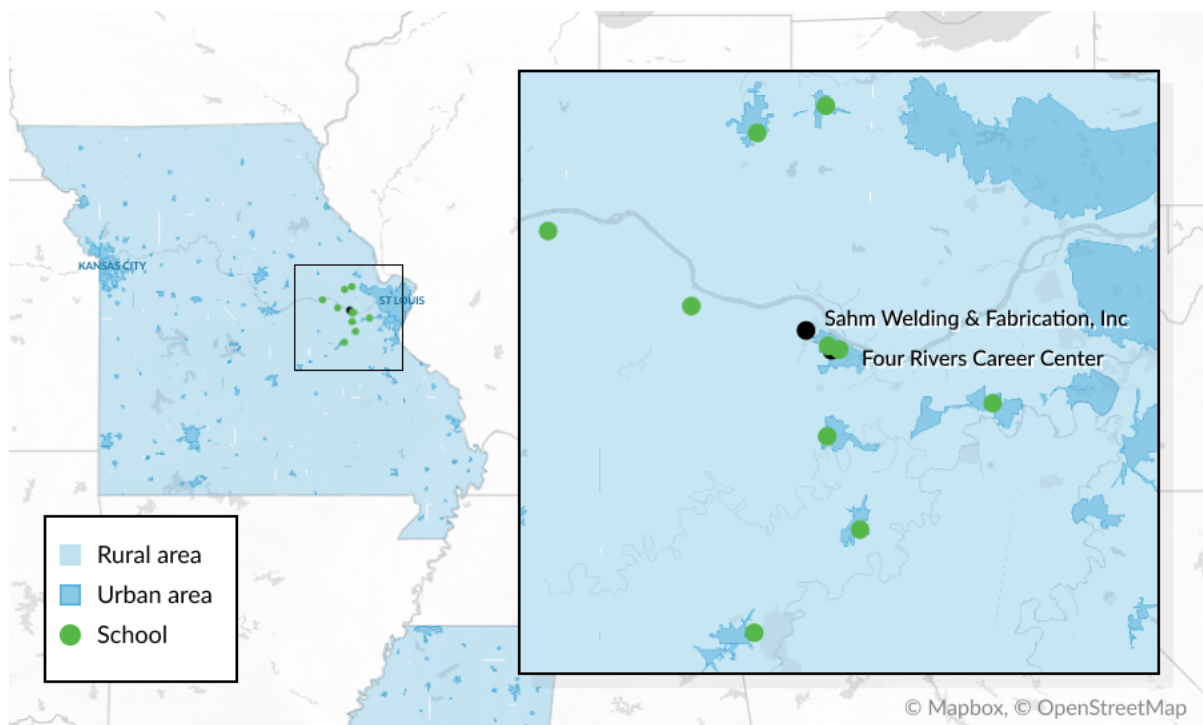
Despite geographic challenges associated with its sparse population, Franklin County is stable economically. The median household income is above the national average at \$57,214 annually and unemployment is roughly 4 percent.²⁴ Most of the county works in manufacturing, medical and social services, and retail services.²⁵ Commuting time, too, is reasonable, with an average commute of 28.5 minutes.²⁶ However, the region faces real challenges. Nearly 20 percent of Franklin County did not have access to broadband internet as of 2019 going into the COVID-19 pandemic. This poses particular challenges as remote learning and remote work become more common. And over the next 10 years, the area is projected to underperform the national average in job growth. For young people, education is in even shorter supply. The county has one community and technical college, and only 20 percent of the population has a bachelor's degree or higher.²⁷

CHALLENGES THE REGION FACES

FRCC's largest obstacles are directly related to its rural surroundings and a local economy with logistical challenges, limited opportunities, and lack of diversity in job sectors.

As the third-largest county in Missouri, with swaths of rural land and even wilderness, Franklin County can require students to spend significant time commuting between home and school (figure 3). After adding a work site and FRCC's campus, students from outside of Washington may end up driving significantly longer to fit each piece of their program. For students without access to a car, arriving to the work site may not be possible, as school buses do not serve apprenticeship sites. For example, a student from the nearby New Haven–Berger School district would have to commute 15 minutes from his or her home to the school, then an additional 20 minutes to FRCC, and then additional time to their job site every day. New Haven–Berger is one of the school districts nearest to FRCC, meaning this problem is much more severe for many students. Even more critically, apprentices living in rural areas of the county may lack access to internet to complete their RTI or homework. As a result, many students have struggled with remote work aspects of the program—particularly during the COVID-19 pandemic when the district made many classes remote through a hybrid model. Rural programs such as FRCC need novel solutions to address this challenge for students.

FIGURE 3
Missouri Rural Youth Apprenticeship Case Study Site



Source: US Census Bureau, American Community Survey, 2019.

Beyond the logistical challenges that face rural apprentices and programs, an apprentice's mindset is a key challenge, as noted by Cynthia Walker, the previous program coordinator. While unemployment

in Franklin County is low, so is job growth. Students are aware that they can get higher salaries and more opportunities outside of their community. Apprentice Seth Ruether described working in St. Louis or traveling for jobs as a key step if he wanted to make a higher salary as a welder.

Sometimes I think where they think they can be and what they can do, is their own barrier. Just helping them see past what they've always known and helping them see... you can do this.
—Cynthia Walker, apprenticeship coordinator, Four Rivers Career Center

Low job growth and lack of diversity in job sectors are particularly challenging for young women. Research shows that gender diversity is best achieved in apprenticeship when programs include occupations that traditionally employ women at higher rates (Kuehn 2017). But Franklin County's largest industry is manufacturing, in which women make up only 29 percent of workers nationally.²⁸ In FRCC's program, only 2 of the 44 apprentices registered in school year 2020–21 are women. Without a breadth of industry options for FRCC to build apprenticeships, improving gender diversity may remain challenging for the program.

STRATEGIES FOR SUCCESS

Despite its obstacles, FRCC built a program that worked for the Franklin County community. Three key lessons can be gleaned for future rural programs to implement. First, FRCC hired a designated apprenticeship coordinator and subject matter expert in career and technical education. Staffing one coordinator to take the reins on apprenticeship and focus solely on start-up allowed the program to grow faster and better connect with the community. The apprenticeship coordinator's role covered all aspects of the program from contracts to compliance to quality assessments. "You cannot put this on a program coordinator or on a teacher or on someone else within the school district or a high school, or really even another entity," Walker explained. "It has to be a person that completely does apprenticeship, if you want to do it correctly."

The apprentices themselves highlighted that FRCC's investment in a dedicated coordinator helped the program succeed. Ruether explained the crucial nature of coordination. "It really helped going to one person, that was ... in control of it. So, you had a head leader," Ruether explained. This ability to build a program with a specialized coordinator with experience set FRCC's program up for a strong start.

Second, the program actively engaged the Franklin County community through strategic outreach with parents, students, employers, and city officials. When the program first started, administrators launched informal meetings with parents and students to explain the benefits of apprenticeship. FRCC could also leverage existing relationships built with employers through other career and technical education courses to find apprenticeship placements. Adam Sahm, who manages the shop where Ruether works, explained that his company's relationship with FRCC predated the apprenticeship program. Both newly built and existing connections allowed FRCC to expand rapidly. Walker even mentioned that she had been invited to her apprentices' graduation ceremony. The deep ties she and FRCC built with the community allowed for smooth recruitment of employers and apprentices and trust from parents and high schools.

Within the apprenticeship, engagement was also key, with apprentices and administrators alike speaking about the importance of personal relationships with on-the-job mentors. Ruether explained that at his work site, he prefers to try projects without assistance first, but a foreman is always available to troubleshoot mistakes and teach new skills. "He's really taught me the small things that matter. Not leaving a little gap in between your welds on the spindle. The tie on your corners, sand it straight, don't have a crook in it. Because when it gets powder-coated, you can see every little imperfection. And he just really told me the fine-tune things, the small things that people look at," Ruether explained. This focused mentoring combined with the baseline skills Ruether learned at FRCC allowed him to progress through the apprenticeship competencies in less than a year. Other apprentices shared similar positive experiences with their mentors. Walker described one apprentice's mentor who "is actually going to allow the student to come and live in his home because his family is going back to their country of origin once he graduates from high school." This dedication to student success is emblematic of FRCC's close ties to the community and their apprentices.

Finally, FRCC came equipped with state and nonprofit resources to counter some of the specific challenges Franklin County faces as a rural community in the wake of the COVID-19 pandemic. School districts throughout Missouri worked to provide students with Wi-Fi hotspots serving areas with poor connectivity. In nearby Osage Beach, the school district used specially equipped school buses parked in the school parking lot after classes, which served as hotspots for students to do their homework. The school even won a grant to provide laptops to students who needed them. Similar grants exist throughout the Ozarks, focused on partnering with schools and students. With these resources, FRCC could accelerate growth even in the wake of COVID-19. "Because of COVID, I really think it opened up the opportunity for us to grow quicker," Walker explained.

Even before the COVID-19 pandemic, FRCC had resources beyond the standard apprenticeship model. As part of the Public School District of Washington, FRCC is supported by local tax dollars, meaning their employers pay for no technical instruction or education of their apprentices. While employers may be willing to finance the RTI after seeing the value added by a competent apprentice, FRCC's pitch to employers was undoubtedly sweetened by public funding. FRCC also received DOL funding supports to offset the cost of starting a program and training apprentices. Without funding to weather the COVID-19 pandemic and publicly supported educational resources for apprentices, FRCC may not have been able to build its program as quickly.

With a dedicated apprenticeship coordinator, connections to the local community, and the resources to overcome challenges common to rural programs, particularly amid the pandemic, FRCC has solidified as a standout program among rural apprenticeships. Over the next 10 years, the community around Washington is expected to see job growth 5 percent less than the national average (White, Russell, and Ritter 2020). With a challenging job market, many students will choose to leave for larger cities like St. Louis. But Four Rivers allows students to get their education and find a quality, well-paying job close to their community of origin or gain specialized skills to use elsewhere.

Double GG Farms, Mississippi

Jamae and Raeshun Gaddis own and operate a 20-acre horse farm, Double GG Farms, tucked away in the small, unincorporated community of Moseville in southeastern Mississippi. The couple, who currently own and train six horses with names such as Meaux Jeux and Murcielago, estimate they are one of the only (and possibly *the* only) dedicated businesses that buy, sell, and train horses in the state. Double GG Farms is an even greater rarity as a Black-owned business, which account for only 2.1 percent of businesses nationwide.²⁹

The Gaddises entered the world of apprenticeship only recently and have managed their program for less than a year. The farm currently trains two apprentices, both younger than 18, to become certified horse trainers. Rather than the farm actively seeking out and recruiting these apprentices, the apprentices came to them. The two young men, both interested in horses and familiar with the Gaddises through the community network and the farm's social media presence on Instagram and Facebook, reached out to the Gaddises, which sparked a mentoring relationship with the couple.

The Gaddises had no previous experience with apprenticeship and only learned about the opportunities registered apprenticeship could provide thanks to Raeshun's online research. The couple contacted Mississippi's state apprenticeship director, Brenda Myers, for help starting a program. They

completed registration and began with their first two apprentices in January 2021 after receiving registration assistance through a DOL grant program.

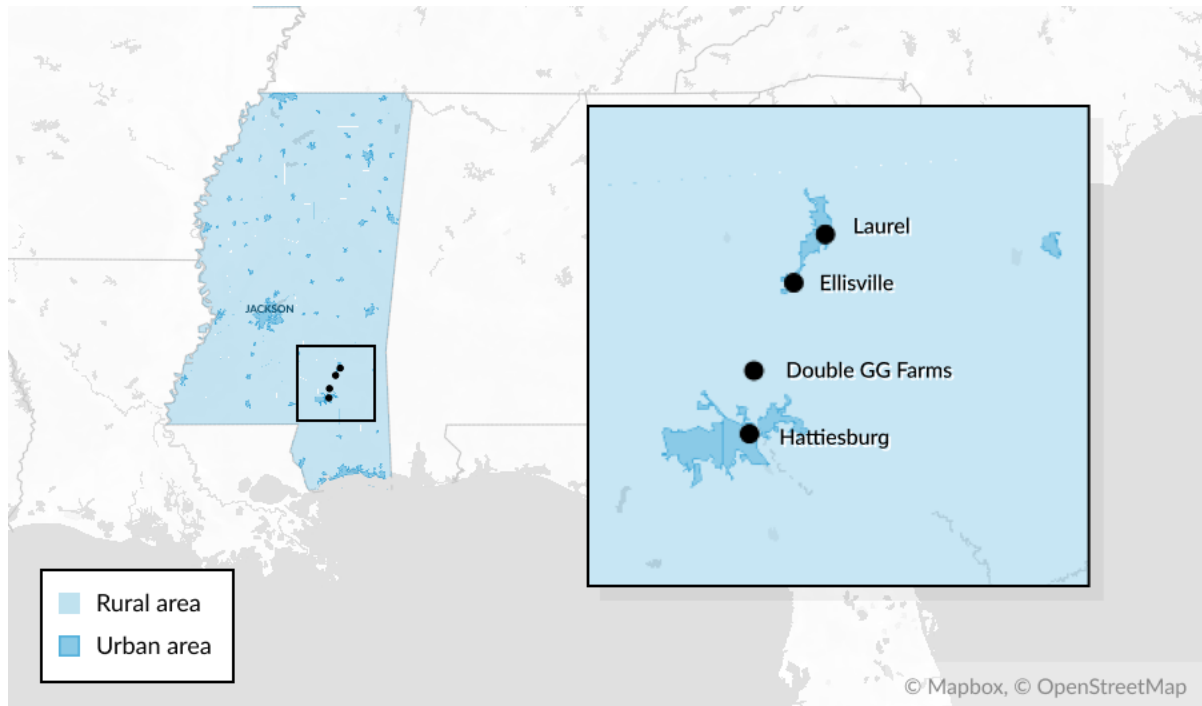
The horse training apprenticeship at Double GG Farms is a time-based program for one year, with an on-the-job training component for 2,000 hours and 144 hours of related instruction. For the first six months, apprentices earn \$7.25 per hour and for the remaining six months they make \$8.00 per hour, adding up to \$15,250 for the year. The Gaddises closely mentor both apprentices.

On-the-job training consists of training animals, interacting with animals to make them comfortable around humans, studying breed characteristics, caring for animals, cleaning facilities, monitoring animal health, and administering basic health care or medical treatments. Along with advancing toward their high school diploma, apprentices build on their experiential training by taking online classes such as Introduction to Horses, Equine Welfare and Management, Introduction to Basic Care and Management of Horses, and Equine Nutrition through Coursera's MOOC platform.³⁰

CHALLENGES THE REGION FACES

The Gaddises' farm lies in a rural patch of Jones County in southern Mississippi between the larger urban centers of Hattiesburg and Laurel (figure 4). The region lags the nation on key economic indicators such as poverty rate (23.8 percent versus 10.5 percent) and per capita income (\$23,163 versus \$34,103). With a population 29.7 percent Black, Jones County is also more racially diverse than most of America.³¹ Mirroring trends in much of the southern United States, many of the county's largest employers are in manufacturing and poultry processing, making Double GG Farms a small employer occupying a niche sector.³²

FIGURE 4
Mississippi Rural Youth Apprenticeship Case Study Site



Source: US Census Bureau, American Community Survey, 2019.

Though Double GG Farms sits on a remote patch of farmland in Moselle, both of the Gaddises' apprentices live in the nearby city of Ellisville. Ellisville is an easy 15-minute trip north up Highway 11, but even short distances create barriers to youth apprenticeship. Family members often drive the apprentices, who do not yet own vehicles, to the farm, leaving the young men reliant on others' availability. Considering that the Gaddises hope to expand the apprenticeship program, adding a preapprenticeship program serving even younger students (who would not yet have their driver's licenses), this basic problem of distance stands to grow.

Broadband is unavailable in much of the region, with 43.6 percent of Jones County residents lacking access.³³ The Gaddises lack reliable internet access at the farm and rely instead on a broadband mobile hotspot through their telephone provider. Though they report the setup works well, its cost prevents such an option from being available to everyone. Given that the apprenticeship program relies on coursework available through MOOCs, young people living outside of urbanized areas such as Ellisville, which has reliable internet access, may struggle to participate.

With only four employees—the Gaddises and their two apprentices—the farm faces some obstacles owing to its size. These problems only increase when Raeshun, who works on offshore oil rigs, is at sea

for work. During these times, Jamae juggles managing the finances, working on the farm, supervising and mentoring the apprentices, and homeschooling her children. Though her family provides a support network, plans to expand the farm and its business operations threaten to increase stress further.

STRATEGIES FOR SUCCESS

Both apprentices joined the program with some background experience with horses and were eager to learn formally. In turn, the Gaddises were glad to begin their program with apprentices who had some prior knowledge to build upon. Jamae taught the apprentices not only to jump on a horse and ride it, but also recognize when a horse is hurt or does not want to ride, as well as to care for a horse and maintain its health. The apprentices were not yet aware of the depth of the care that horses require.

According to Jamae, the benefits of working with youth apprentices (versus older workers) include openness to learn, not shying away from messy tasks (such as grooming the horses or cleaning the stables), and looking forward to being in the program. She also teaches them about financial aspects of managing a farm: what to spend resources on, budgets, setting up a business account, managing their credit, and most importantly, maintaining documentation. Because of her experience managing her own small business, Jamae is able to customize the apprenticeship program and mentor the apprentices according to their needs, including teaching them how to set up their own business in the future.

My goal for them is to leave here and want to own their own farm! But if they just want to take care of their own horse, I'm good with that. Or teach someone else what they learned here, I'm good with that! I just want [them to continue to use] the success and knowledge.
—Jamae Gaddis, owner, Double GG Farms

The apprenticeship program would likely not be possible without the option of free, remote RTI. With the apprentices already dependent on others for transportation and the farm's resources stretched thin, the apprentices being able to complete instruction from their home in Ellisville removes layers of potential complications.

Additionally, Jamae highlighted the importance of personal and professional networks in the community. Along with support from Jamae's family network, the Gaddises' prominence in the community serves as the family's primary means of attracting apprentices, removing the need to spend

resources on recruitment. Jamae also engages with a professional network of other small business leaders in Mississippi. This includes others who have started successful farming apprenticeships, such as Moore Farms, allowing both farms to learn and grow from each other's experiences.

BENEFITS FOR THE COMMUNITY

With less than a year on its feet and only two apprentices, it is still too early to judge the success of the apprenticeship program at Double GG Farms. For her part, Jamae Gaddis is thrilled by the success she's seen so far. She measures the program's success by the whole-person growth of her apprentices, and in conversations with her it is clear how proud she is of their growth.

The program has also ignited new dreams and plans for the Gaddises, who want to start a week-long summer camp for young kids. The couple hopes the camp will provide children an opportunity to shadow them and the apprentices to learn the daily routine of raising horses and maintaining a horse farm. The Gaddises plan to recruit other apprentices through marketing rather than rely on word of mouth, so they can select motivated young people who would dedicate time and effort to the program and begin a career. Small businesses such as the Gaddises' can have an impact on rural brain drain, not only by keeping young people in their rural communities, but also by deepening their ties with the land.

How Rural Youth Apprenticeships Can Endure

About 20 percent of Americans—60 million people—live in rural areas, representing a sizeable swath of businesses and workers seeking economic opportunity, good jobs, and sustainable communities.³⁴ But rural communities face unique issues that their urban counterparts may not, including lack of access to transportation, infrastructure, broadband, health care, education, and employment. Almost one-third of rural counties have poverty rates of 20 percent or higher, versus 15.6 percent in urban counties.³⁵ Generational poverty, lack of economic access, and racial inequities all are serious problems for rural areas, but they are often overlooked by policymakers compared with urban problems. To deal with the problems related to building and sustaining rural youth apprenticeships—and to take full advantage of the opportunities—we recommend four ideas to federal, state, and local policymakers and practitioners.

Establishing Apprenticeship Coordinators

An apprenticeship program coordinator was crucial to the program's and apprentices' success in each rural youth apprenticeship program we reviewed. The coordination role was essential for program

launch, continuity of operations, expansion, and as a point of contact in the community. For example, Cynthia Walker, the apprenticeship coordinator at FRCC, acted as liaison between schools, businesses, and the apprentices, and provided businesses with registration assistance, talent recruitment, funding, and access to appropriate classroom instruction. She was an “interpreter on apprenticeships” because the concept was new to her community, and few knew how to speak about it. Walker even helped educators “present to the board...and talk to a superintendent.” At the IBEW Local 1253 in Maine, George Howe, the apprenticeship training director, is the lynchpin for electrical apprenticeships in his community, stating that he does “the recruitment, the registration, the curriculum, scheduling, job placement. Pretty much everything start to finish for the apprentices that are in the program.” TOCC also recognizes the critical role of a coordinator and is currently seeking candidates for a full-time coordinator role. According to Robert Wambolt, “We’ll be able to do a lot more [with a coordinator] because I’m doing all the office work now and I’m also doing all the fieldwork...Everybody will have office hours where somebody will be in the office when community members or students want to go to the office and talk about the apprentice program.”

An apprenticeship coordinator can have an outsized impact on a program’s ability to navigate funding streams, resolve both minor and major issues for apprentices, support companies with resources, and work across the various entities that allow youth apprenticeships to operate successfully. With apprenticeships being so new and novel in many rural communities, having a community connector to do “everything apprenticeship” is not a quick, short-term investment but one that can glue all important, disparate pieces and actors together and support program sustainability.

Advancing Group Sponsor Apprenticeships

A group sponsorship, or apprenticeship consortium, is a collaborative partnership in the administration and execution of registered apprenticeship programs by which the members benefit through shared resources. Group sponsorships are rooted in the idea that companies that work together can create better program outcomes than any single company could on its own. These models are typically led by partner organizations, which may include employers, colleges, industry associations, nonprofit organizations, labor unions, or other jointly operated organizations (Arabandi, Boren, and Campbell 2021).

We found the group-sponsor model at IBEW Local 1253, FRCC, and TOCC. Many more employers may adopt or use an apprenticeship program when the costs and responsibilities are shared. For IBEW 1253, many local and signatory contractors can participate in the apprenticeship program because of a

cost-sharing model. The labor-management training fund, common among union-based programs, allows costs to be shared between contractors and journeyworkers, each contributing a portion of their profits and salaries to the fund. Alternatively organized, FRCC is an example of an effective apprenticeship intermediary whereby a single entity manages the apprenticeships and the program courses are a shared commodity among local employers. And TOCC operates within the TERO system that negotiates with various outside contractors for work within the reservation. This system creates opportunities (albeit not perfectly) to pool resources for the apprenticeship program, similar to an employer consortium model. In each of these three case studies, the group model also streamlines registration, as each additional employer does not need to register separately. Because each program features dozens of employers, this saves a tremendous amount of time and paperwork.

Group sponsorships in rural areas may allow employers to work together, combine resources, and support apprentices among small employers, schools, and organizations. The results of this study combined with the related Urban Institute briefs “Iowa High School Apprenticeships: Creating Pathways to Promising Careers” (Marotta, Boren, and San Miguel 2000) and “Building Sustainable Apprenticeships: The Case of Apprenticeship 2000” (Arabandi, Boren, and Campbell 2021) further confirm the efficacy of small organizations working together under a group structure. The result is a more unified purpose in developing and retaining local talent and the creation of economies of scale in building youth apprenticeship programs in geographies lacking both built and organizational infrastructure.

Addressing the Digital Divide

Lacking a broadband connection or a “signal” every day poses a major challenge for youth apprentices, especially when their instruction is online or virtual. Nearly 23 percent of Americans in rural areas do not have access to broadband, a standard requirement for online learning, compared with 1.5 percent of urbanites (FCC 2020). Lack of broadband or reliable hotspots makes delivery of youth apprenticeship programs all the more uncertain if apprentices cannot access coursework or the necessary tools to learn and collaborate.

For youth apprenticeship work to evolve in rural areas, short-term solutions are necessary to enable programs to cope with the lack of broadband deployment. For programs such as IBEW Local 1253’s Inside Wireman apprenticeship, access points are found at the JATC or a nearby restaurant. This may work for some young apprentices, but it is not necessarily an inclusive approach. The case becomes even more extreme if we imagine a TOCC apprentice, living 30 miles or more from the college, with

high-speed internet service not yet available even in the nearest town. So what solution should policymakers pursue? The answer here is not yet clear, but the Wi-Fi buses deployed in Missouri proved promising for many students during the pandemic.³⁶ Such innovative stopgap solutions could expand apprenticeship opportunities in more remote areas.

While the ideal solution would be to deploy broadband to every apprentice's home, this is neither possible nor cost efficient. Perhaps for policymakers to reach remote areas, a digital access fund may be offered to rural programs lacking secure and speedy internet. Alternatively, when apprenticeship grants are issued, ensuring that programs have a spending plan for public Wi-Fi or a mobile hotspot for apprentices could prove a more lasting solution. Finally, breaking down silos of government, DOL and the Federal Communications Commission could host future stakeholder conversations that review ways to expand both access to broadband and youth apprenticeship.

Solving Transportation in the Rural Landscape

Among the factors that make youth apprenticeship unique is the school and work combination that allows apprentices to learn the *theory* related to the occupation while they learn the *practical* lessons on the job from a mentor. But reliable transportation is a burden primarily shouldered by the apprentice attempting to meet the challenge. Moreover, public transportation is scarce and unlikely to serve apprentices during the hours required to travel between the workplace, school, and home.³⁷ This was vividly described in the Tohono O'odham Nation, where only 3 percent of the apprentice cohort had access to vehicles. Thus far, the tribal apprenticeship program has depended on carpooling for apprentices. Shuttles are a source of transportation for some college students but were not as effective for apprentices because they start work early. Though transportation challenges were the top issue in each community, no program leaders had discovered a perfect solution. Most young apprentices were left to find support from family or friends who could provide a dependable car or ride. For rural areas, transportation could be a limiting factor for many youth apprentices seeking their first jobs if additional supports remain unavailable.

North Carolina's Eastern Triad Workforce Initiative has created a promising transportation model for apprenticeship programs that continue to scale. It established a transportation fund for the apprentices organized by the Community Foundation for Greater Greensboro. Funds could be "spent on gas cards, Uber or Lyft cards, bus passes, and, in some cases, car repairs."³⁸ As rural programs partner with other employers to implement scalable programming, dependable access to transportation can help apprentices succeed.

Conclusion

Many rural areas across the US are witnessing an aging population and population loss, as those with college degrees flee their hometowns for cities' economic engines. The pool of prime-age workers decreased 11 percent in rural areas while increasing in urban and suburban areas, leading to further economic deterioration for struggling small towns and decaying main streets (Parker et al. 2018).

Youth apprenticeship is a model that can reach young people before they take on high student debt at US colleges and universities. Apprenticeships teach skills that their communities will value directly and indirectly in retaining talented young people. As we have seen in the four examples above, apprenticeship offers rural communities and young people the chance to learn a promising career in their hometowns. When policymakers look to bolster rural communities with the workforce tools the economy needs to succeed, they can find hope in the youth apprentices and leaders we interviewed and a means to unlock a more prosperous future for rural America (box 2).

BOX 2

Youth Apprenticeship Intermediary Project: Case Studies

The Urban Institute's Youth Apprenticeship Intermediary project is funded by the US Department of Labor to expand youth apprenticeships, raise awareness of their potential to connect young people to promising career paths, and help employers meet their talent needs. The Urban team will capture promising practices in yearly case studies that highlight prominent youth apprenticeship models, programs, and initiatives. This report is part of this larger series and illustrates what it takes to maintain a high-quality apprenticeship program over time.

Source: "The Youth Apprenticeship Intermediary Project," Urban Institute, accessed July 20, 2021, <https://www.urban.org/youth-apprenticeship-intermediary-project>.

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- ⁷ The IBEW’s apprenticeship program is operated jointly in a partnership with the National Electrical Contractors Association (NECA), forming the Electrical Training Alliance, which has trained apprentices and journeyworker electricians at hundreds of joint apprenticeship training sites over 70 years. The partnership between the IBEW and NECA works collaboratively, with the IBEW organizing and representing workers under a collective bargaining agreement and NECA providing the “job sites” for more than 70,000 electrical contracting firms. To formalize the apprenticeship arrangement, the Electrical Training Alliance formed national guideline apprenticeship standards by which all local training organizations structure their apprenticeship programs.
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- ¹⁰ Some allowances under the Hazardous Orders set out by the Wage and Hour Division of the US Department of Labor would allow registered apprentices to start earlier than age 18, but there has been little movement to reduce the age requirement.
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