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Pathways to Opportunity: *Insights into Workforce Entry from a Rural Research Network*

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The National Center for Rural Education Research Networks (NCRERN) seeks to increase opportunity for rural students through the power of actionable data and evidence. NCRERN partners with networks of rural school districts to generate and evaluate strategies for improving student outcomes. For more background on NCRERN's work, see the [Introduction to NCRERN's New York and Ohio Research Network](#).

This report provides an overview of descriptive data analyses of students' career readiness in rural districts participating in NCRERN between the 2020-21 and 2021-22 school years. Analyses of workforce entry milestones, measured through a senior exit survey, draw on data from a subset of NCRERN districts that administered the survey. We primarily draw on data collected in 29 districts in New York and Ohio in the 2021-22 school year. The patterns presented here may not generalize to other rural districts. For information on students' progress towards college and military postsecondary pathways, please see the other reports in the "Pathways to Opportunity" series.

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Career readiness has been increasingly prioritized as an important outcome, with 35 states including a career readiness-related measure in their high school rating systems (Advance CTE, 2017). Rural students who enter the workforce directly after high school often have promising economic opportunities in their home communities, although these opportunities vary significantly by location. In all counties in New York and Ohio with at least one NCRERN district, for example, employment rates for adults with a high school degree increased between 2014 and 2019 by between 3 and 30 percentage points.¹ Changes in wages were more varied by location. Average wages for adults with a high school degree increased in 6 of 11 Ohio counties with at least one NCRERN district and decreased in the remaining 5; in New York, wages increased for those with a high school degree in 6 counties with at least one NCRERN district and decreased (3) or remained flat (6) in the others.² In short, entering the workforce directly after high school is often a viable option for students looking to pursue economic stability, as well as offering other meaningful potential benefits, such as a fulfilling career and connections to their community.

In 2020, about 40% of high school graduates pursued postsecondary pathways other than college, including entering the workforce, starting an apprenticeship, joining the military, or pursuing another option (National Center for Education Statistics, 2022). This share is slightly higher, about 45%, in rural areas (National Student Clearinghouse, 2024). In NCRERN's New York and Ohio Rural Research Network, about half of all high school graduates enter postsecondary pathways other than college immediately after high school.

On end-of-year surveys, almost a quarter of NCRERN graduating seniors state they will enter the workforce directly, and 8% plan to complete an apprenticeship or formal job training program.³ Students cite being motivated to enter the workforce directly after high school to save money (50%), for job stability (40%), or to pursue a long-term career goal (40%). Apprenticeship-bound students have different motivations than direct-to-workforce students; 60% are motivated by a personal passion or interest, and a larger share (60%) are motivated by pursuing a long-term career goal.

Key Takeaways

- A substantial share of students from NCRERN districts are interested in entering the workforce immediately after graduating high school (23%) or completing an apprenticeship or job training program (8%).
- Students are interested in a variety of career fields, with construction emerging as a particularly common industry of interest.
- Seventy percent of 12th grade students in NCRERN districts have a resume by the end of their senior year.
- Students often anticipate earning hourly wages below their state's living wage, and over a quarter expect to work more than full-time.
- Twenty percent of students planning to enter the workforce immediately after graduating expect to remain a position they've held during high school.
- Students generally anticipate completing apprenticeships or job training programs that are 1-2 years in duration.
- The most common anticipated sites for students to complete an apprenticeship or job training program are local community or technical colleges and private businesses (within a 30-minute drive).

Almost a quarter of rural 12th grade students expect to enter a career pathway after graduating high school

In this report, we examine patterns in rural students' readiness and potential outcomes in career pathways to highlight how rural high schools support students' transitions into apprenticeships and the workforce and the areas that warrant additional study and potential interventions to improve students' outcomes.⁴

This report is organized into two sections. In the first section, we focus on workforce readiness indicators, with a focus on key milestones during high school that are necessary for students to transition to the workforce after graduation. In the second section, we explore potential career outcomes, including how much students anticipated working post-graduation, wages, and workforce sectors and industries.

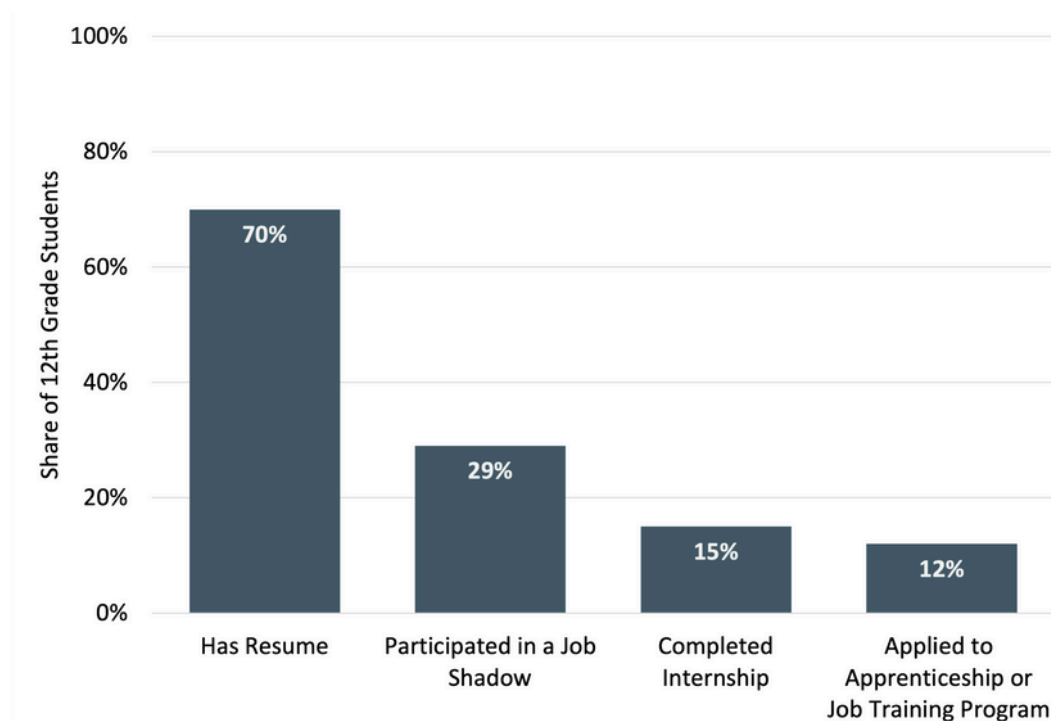
Part 1: Workforce Readiness Indicators

When considering students' entry into career pathways after high school, there are multiple potential indicators of a successful transition, including employment, wages, and long-term career trajectories. Our data rely primarily on students' self-reported behaviors and intentions regarding their entrance into career pathways towards the end of their 12th grade year of high school. We do not include information on career and technical education (CTE) courses or other more intensive interventions that build skills, provide opportunities for experiential career exploration, and may lead more directly to job placement after high school.⁵

Are students set up to enter the workforce directly after graduating?

We begin by examining students' intended entrance points into the workforce. All 12th grade students reported their completion of certain steps towards career entry, as shown in Figure 1. Looking across key workforce milestones, most students (70%) in NCRERN districts on the verge of graduation have a resume, which is likely necessary for students to apply to positions and successfully enter the workforce (see Figure 1). However, few students have participated in experiences such as internships or job shadows that allow students to explore their career interests and gain first-hand knowledge of the day-to-day of their desired positions. We also see that 12% of students have applied to either an apprenticeship or formal job training program, suggesting few are considering this as a gateway to their desired career. Accessing these types of opportunities may be more challenging for rural students, given the potential for geographic dispersion of employers in rural areas. However, given the importance of such opportunities to prepare students for the workforce, rural districts may benefit from reviewing their existing partnerships with local businesses and professionals. They may also find value in investigating innovative, technology-enabled channels to expand the availability of experiential learning opportunities, enabling students to explore careers of interest. Moreover, rural districts may be able to leverage their unique context and community size to connect with employers and align local work opportunities in a comprehensive way that may be more challenging for districts in larger, more populated areas.

Figure 1: Career Readiness Indicators among 12th Grade Students in NCRERN Districts



Students: 1229
Sample restricted to students who completed all items in the section

Part 2: Anticipated Workforce Outcomes

In this section, we discuss students' anticipated workforce outcomes as reported on an end-of-year survey in their senior year, a key limitation of which is that students may inaccurately forecast their labor market outcomes. As states continue to build longitudinal data systems, districts will be able to access more reliable information about how their students fare in career pathways, allowing for richer, more actionable insights into the ways in which students are currently being supported and the areas in which schools may need to strengthen their efforts to promote career readiness (Data Quality Campaign, 2022).

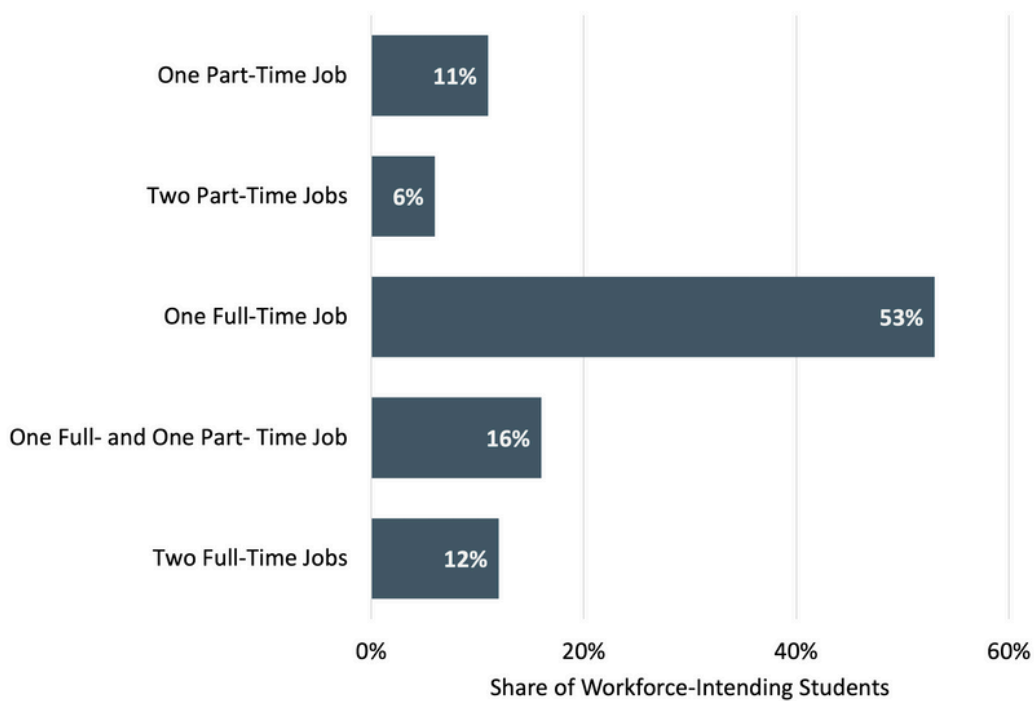
How do students plan to enter the workforce, and what employment outcomes do they anticipate?

Almost a quarter (23%) of 12th grade students in NCRERN districts plan to enter the workforce directly after high school. These students shared the steps they had taken to secure a post-high school graduation position. Of the students planning to enter the workforce, 19% have not applied to any jobs by the end of their senior year; this is similar to the share of students who intend to remain in a current job after graduating high school. Another 26% have only applied to one position, while the remaining 45% have applied to more than one position. Eighty percent of students intending to enter the workforce have a job offer or job lined up to begin within 6 months of graduating high school. These positions are largely local: 40% of students intending to enter the workforce directly report anticipating a commute of 15 minutes or less, and another 37% expect their commute to be 15-30 minutes from their home address.

1 in 5 of students planning on entering the workforce after graduation expect to remain in the same position they held in high school

Eighty-nine percent of students anticipate that their job will be paid hourly rather than offering a set salary, with the majority of those (53%) estimating they will make between \$11 and \$15 an hour. For context, hourly living wages in rural areas of NY and OH with NCRERN districts tend to range between \$14 and \$19, with exact estimates varying by region and proximity to urban centers.⁶ Potentially because of the difference between estimated living wages and anticipated wages, many students anticipate working more than full-time, as shown in Figure 2.

Figure 2: Anticipated Intensity of Post-Graduation Employment for Students in NCRERN Districts



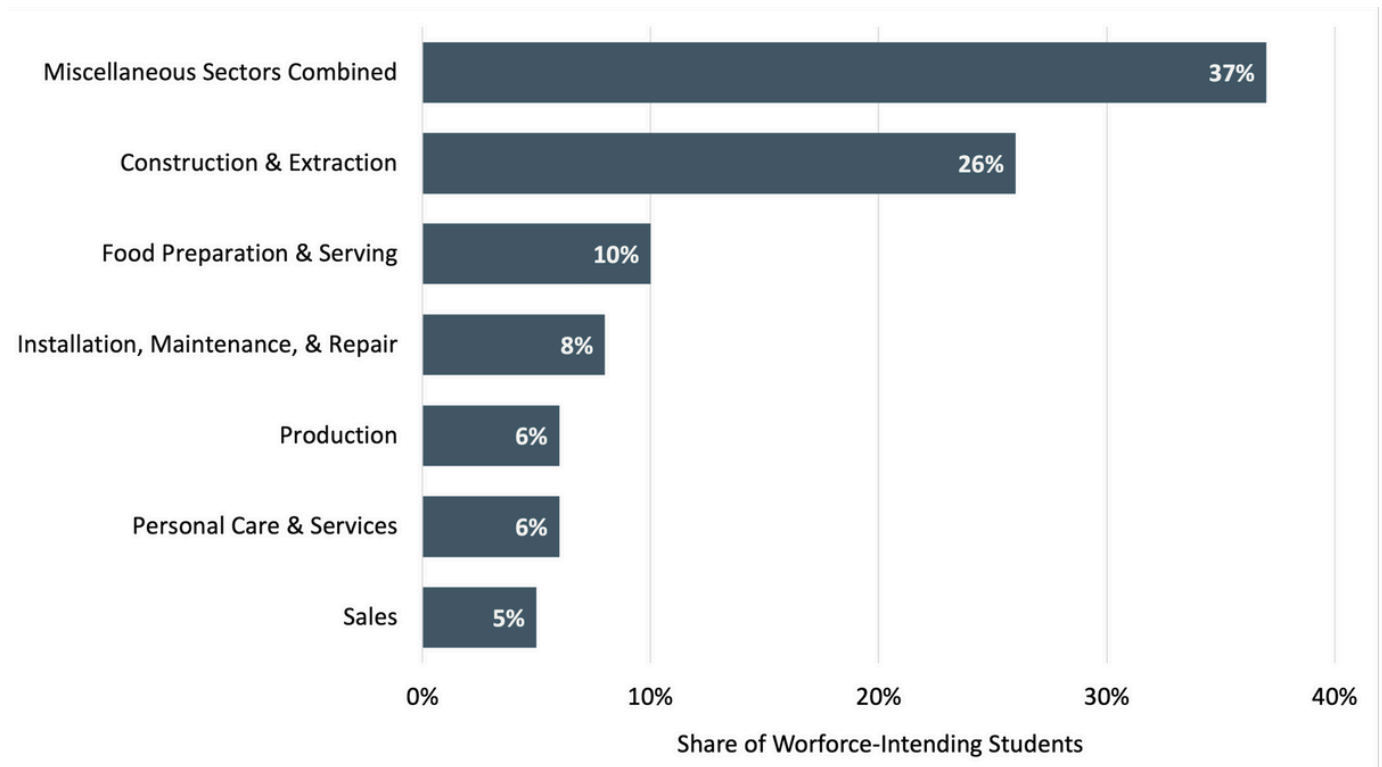
N Students: 247

As shown in Figure 2, 28% of students anticipate working more than full-time, with 12% of students expecting to work two full-time jobs, indicating that students believe they have few labor market opportunities that will provide a living wage. Students would likely benefit from additional support finding and preparing for positions and careers that can offer economic stability.

28% of rural 12th grade students expect to work more than full-time after graduating high school

We are interested not just in students' anticipated started wages and employment intensity but also in the likelihood of longer-term career and compensation growth. Figure 3 shows the industries students anticipate entering after graduating high school, which we can map to potential longer-term trajectories.

Figure 3: Anticipated Sectors of Post-Graduation Employment for Students in NCRERN Districts



N Students: 243

"Miscellaneous Sectors Combined" includes all industries with less than 5% of respondents, including "Retail" and "Animal Care".

As shown in Figure 3, students anticipate entering a wide variety of industries after graduating high school.⁷ Looking at the most common intended industries of employment helps us better understand students' potential longer-term outcomes in the workforce. For example, for occupations in the Construction sector that require a high school diploma or GED but limited training or experience thereafter (such as construction laborers, construction equipment operators, and roofers), the Department of Labor finds an average annual wage growth of roughly \$5-\$6 an hour, with fewer than one-third earning more than \$25 an hour after 10 years.^{8,9} For food service workers with only a high school diploma or GED (positions such as cooks, first-line supervisors, servers, and food service managers), average wage growth after 10 years is generally between \$5 and \$8 an hour, with fewer than 30% earning more than \$25 an hour.

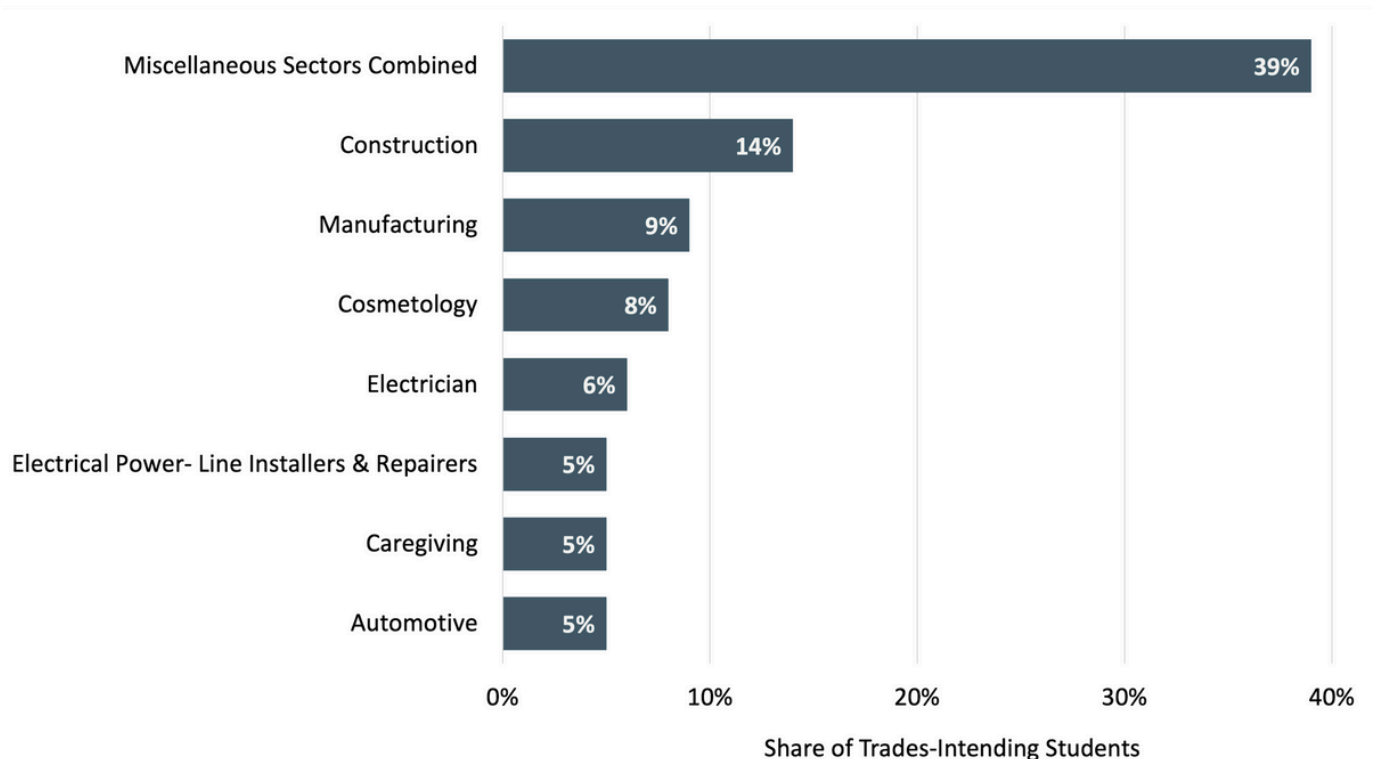
Taken together, these findings suggest that a key piece of strengthening students' career readiness lies in helping them identify and access workforce opportunities that offer living wages or robust longer-term growth opportunities to be able to support themselves and future potential dependents.

How are students planning to access apprenticeships or other formal job training opportunities?

While many students interested in career pathways plan to enter the workforce immediately after graduating, about 8% intend to first complete an apprenticeship or other formal job training program. Apprenticeship programs can lead to strong labor market outcomes for participants, including higher employment rates and higher wages, particularly for individuals entering the workforce for the first time (Walton et al., 2022; Torpey, 2019). Similarly, prior work has found that Job Corps, a career training program that includes financial and advising supports for trainees, leads to increases in both employment and earnings (Schochet et al., 2001; Schochet, 2020).¹⁰

Students in NCRERN districts planning to enter the workforce through an apprenticeship or job training program are generally interested in similar occupational fields as students planning on entering the workforce directly, as shown in Figure 4.

Figure 4: Intended Industry of Post-Graduation Apprenticeship or Formal Job Training Program among Students in NCRERN Districts



N Students: 77

“Miscellaneous Sectors Combined” includes all industries with less than 5% of respondents, including “Culinary Arts” and “Medical”. Students who reported not knowing excluded.

While prior work has found increased earnings for those who complete an apprenticeship in all fields, the exact returns vary by occupation, with apprenticeships in construction leading to the smallest increases in wages, and those in Computer/IT and Healthcare leading to the greatest increases (Walton et al., 2022; Torpey, 2019). It may be helpful for districts to review the type of information students receive about apprenticeship and job training opportunities, particularly around the types of careers and industries these pathways can lead to. This information can help students fully evaluate their career pathway options and potential long-term outcomes as they decide what industries to enter and how (e.g., directly, via an apprenticeship, or through additional education). In particular, rural districts could work with educational service agencies to explore workforce-based learning opportunities, Career and Technical Education (CTE) coursework, and other programs available to students that can help them successfully transition into the workforce. For NCRERN districts, the BOCES in New York and the Career Centers in Ohio are important launch pads for students to engage with CTE courses, including potentially earning a credential, and graduate high school well-prepared to enter the workforce and earn a sustaining wage.

After deciding whether an apprenticeship or job training program makes sense as an entry point into a given field, students are faced with decisions about where to complete such training. Students in NCRERN districts intend to complete their apprenticeships in a variety of settings, including private businesses (29%), at a community college or technical school (29%), organizations such as Job Corps (22%), or with a trained individual (18%). These responses suggest that some students interested in job training programs may still need to complete key college-going milestones, such as filing the FAFSA or applying to college, if they plan to complete their training through a community college or technical school. Districts should understand where students want to complete an apprenticeship or job training program to best support their preparation and successful entry into the pathway.

29% of students plan to complete their apprenticeship or job training program at a community or technical college

Students in NCRERN districts anticipate participating in relatively short training programs: 71% of students interested in an apprenticeship or job training program expect to complete their program in 1-2 years. This may have implications for the types of opportunities students are participating in. Registered Apprenticeships, which have higher completion rates and are associated with large gains in wages, must take at least 1 year to complete and, on average, take about 3 years (Walton et al., 2022). In contrast, Job Corps participants, on average, remain in the program for 8 months (Schochet et al., 2001; Schochet, 2020). Rural districts should work with their students to better understand what types of apprenticeships and job training programs students are going into, the time required to complete such programs, and the employment outcomes of individuals who have previously participated in those programs to help students select the opportunities that are most likely to support their long-term success.

Conclusion

Substantial shares of students in rural areas are choosing to join the workforce or apprentice programs immediately following high school graduation. In NCRERN districts, about a quarter of all high school seniors intend to enter career pathways upon graduation, and up to half of all graduates pursue non-college options.

We find that it is much more common for students to plan to enter the workforce directly than it is for students to plan to complete an apprenticeship or formal job training program. We also find that many students (20%) plan on staying in a position they held during high school after graduation. This, together with information on students' expected wages and sectors of employment, suggests that many, if not most, will be working in jobs that do not provide living wages or offer longer-term expected wage growth. Working with local businesses and other organizations to understand the opportunities available to graduates and industry demands could be a key step for rural districts to prepare students not just to enter the workforce but to enter careers that offer economic stability and security. Rural districts should collaborate with educational service agencies, such as the BOCES in New York and Career Centers in Ohio, to provide students with expanded access to CTE courses and career exploration opportunities.

Identifying apprenticeship and job training programs that have a successful record of training and placing individuals into well-paying careers could also be an important step in helping students access workforce entry points that lead to positive, long-term economic outcomes. States and the federal government are increasingly investing in apprenticeship programs in rural areas as a strategy for both economic development and for meeting community needs, such as access to quality healthcare (Harrington et al., 2022). These programs should partner with rural school districts to share information about these opportunities and help students access the programs aligned with their interests and career goals.

In all, we find that rural districts are supporting students to complete several key steps towards entering a career pathway after graduating high school, such as having a resume and securing a job. However, there is a clear need to continue supporting students in identifying and entering those opportunities that will allow them to pursue their interests, career goals, and find economic security.

Endnotes

¹ Data from the American Community Survey, using the 5-year estimates. Data accessed through IPUMS (Manson et al., 2024).

² Ibid.

³ From NCRERN's Senior Exit Survey, administered to 12th grade students in 29 rural districts in the fourth quarter of the 2021-22 school year with a roughly 68% response rate. Students were asked to indicate which pathways they intended to pursue after graduation (4-year college, 2-year community or technical college, entering the workforce, completing an apprenticeship or formal job training program, joining the military, or if they were unsure). Students could indicate multiple pathways. Results were similar in a 2020-21 pilot of the Senior Exit Survey, administered by 19 rural districts with a 55% response rate.

⁴ All results presented are from the 2021-22 Senior Exit Survey, completed by roughly 1,400 of 2,000 12th grade students across 29 rural districts in New York and Ohio. Patterns were similar in the 2020-21 Senior Exit Survey.

⁵ Our 2024 end of year survey included an item about CTE course completion, which showed 51% of students had taken at least one CTE course, but only 3% had taken 5 or more courses.

⁶ Living wages as reported by the MIT Living Wage Calculator for a single adult with no children.

⁷ The Exit Survey included a dropdown list of Standard Occupational Classification (SOC) system codes. Students could also write in their industry; these were recoded to fit into SOC codes.

⁸ If someone works 40 hours a week for a typical 52 work-week year, a \$25/hour wage would represent annual earnings of \$52,000, or just about the poverty threshold for a family of 8 in 2024, according to the Department of Health and Human Services. <https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines>. \$25 an hour is also the living wage for two working adults with two children in Ohio, or for two working adults with one child in New York, according to the MIT Living Wage Calculator (<https://livingwage.mit.edu>).

⁹ Typical preparation requirements, starting wages, and wage growth available here: <https://www.dol.gov/agencies/oasp/evaluation/resources/career-trajectories-and-occupational-transitions-dashboard>.

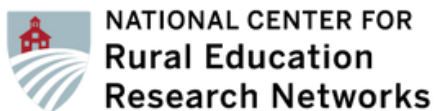
¹⁰ Job Corps is a free, federally funded program that provides enrollees with career and technical training as well as opportunities to earn high school or college credits. Participants also receive room and board, health care, a living allowance, and support for career switchers. More information is available here: <https://www.dol.gov/agencies/eta/jobcorps>

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