© Journal of Higher Education Outreach and Engagement, Volume 29, Number 4, p. 47, (2025)
 eISSN 2164-8212

Rural Anchor Institutions: How Rural Public Colleges Support the Well-Being of Rural People and Communities

Steve Jenks, Cecilia M. Orphan, Alisa Hicklin Fryar, Vanessa A. Sansone, and Kevin McClure

Abstract

This study explored 118 Rural Public Colleges (RPCs) throughout the United States and the counties in which they are located. The findings show that RPCs act as anchor institutions by facilitating rural health infrastructure and workforce and economic development. Despite narratives of declining enrollments among RPCs, the study finds evidence of growing enrollments among many RPCs as well as diversifying student bodies, which points to the importance of these institutions to promoting rural postsecondary access. The study concludes with research, policy, and practice recommendations to strengthen the contributions RPCs make as anchor institutions to the people and communities they serve.

Keywords: anchor institutions, rural higher education, college access and success, rural public health

Prior to the COVID-19 pandemic, some rural public colleges (RPCs) faced challenges, including population losses and competition from other colleges contributing to enrollment declines (Grawe, 2018). As a result of state funding cuts, RPCs have less revenue per student than urban and suburban colleges (Koricich et al., 2020). Some state policymakers are also considering merging or closing RPCs, which would create rural job losses and curtail rural postsecondary access (Whitford, 2020). COVID-19 intensified these challenges as RPCs faced revenue losses from closed or underutilized residence halls and dining facilities, as well as increased costs to mitigate the spread of the virus (Mitchell, 2020). When faced with funding cuts and enrollment declines, RPCs are often unable to increase tuition because doing so can cause enrollment losses and erode their access missions (Doyle, 2020).

The second coronavirus relief bill passed by Congress in late December of 2020 allocated $23 billion to higher education, which was short of the amount requested by higher education organizations to prevent widespread budget cuts (Murakami, 2020). *The Chronicle of Higher Education* estimated that, as a sector, higher education shed at least 10% of its workforce between February and October 2020 (Bauman, 2020). As part of the CARES Act, the U.S. Department of Health and Human Services announced a targeted allocation of $10 billion to support rural hospitals. The announcement acknowledged that rural hospitals "are more financially exposed to significant declines in revenue or increases in expenses" and "operate on especially thin margins" compared to urban hospitals (U.S. Department of Health and Human Services, 2020). We argue that the same is true for RPCs. Like hospitals, RPCs are vital social institutions that directly contribute to rural educational attainment, cultures, and economies (Orphan & McClure, 2019). In this article we conceptualize RPCs as "anchor institutions" for rural communities, meaning they are invested in specific places and unlikely to move (as businesses might), and they are essential to the well-being of their regions (Orphan & McClure, 2019; Serang et al., 2013).

This study explored how 118 RPCs contributed to rural communities during the height of the COVID-19 pandemic. Although this

study does not focus on the pandemic per se, we chose to study RPCs during this time because doing so exposed how RPCs serve their communities, particularly in times of crisis. The selected colleges prioritize postsecondary access, particularly for populations that have had difficulty entering and finishing college. We were guided by these research questions: Which institutions are rural public colleges? And how do RPCs serve as anchor institutions for their communities? We first wanted to identify RPCs and then understand how they contribute to public health, workforce development, and postsecondary access, because rural communities often face acute disparities in these areas (North Carolina Rural Health Research Center, 2020; Provasnik et al., 2007).

This study found that RPCs act as anchor institutions by facilitating rural health infrastructure and economic development. Despite narratives of declining enrollments among RPCs, we found that enrollments were growing and becoming more diverse across the 118 colleges. We also created a novel approach to empirically identifying broad access institutions (BAIs) that serve rural communities. The article concludes with policy, practice, and research recommendations to advance and strengthen the significant contributions of RPCs.

Literature Review

To contextualize our study, we reviewed research about educational attainment, public health, and economic disparities among rural communities. We also reviewed research exploring how colleges and universities promote community development in light of these challenges.

Rural Educational Attainment and Opportunity

Rural communities have lower educational attainment levels compared to other locales, although high school graduation rates have improved (Gibbs, 1998; Provasnik et al., 2007). Research has found that rural students attend college at lower rates than their suburban and urban peers (Gibbs, 1998; Koricich et al., 2018; Yan, 2002). One study found that rural students were more likely to delay college attendance and not to be continuously enrolled (Byun et al., 2015). Rural college students are also more likely to be low-income and first-generation (Koricich et al., 2018; Sowl & Crain, 2021). Racial disparities additionally shape the experiences of rural students of color. For example, Sansone et al.'s (2020) examination of community racial composition and college-going rates in Texas found that the proportion of Latinx students among a community's college-going population was smaller than the proportion of Latinx residents in the community's overall population, with this disparity being greatest in rural areas.

Hughes et al. (2019) explored how rural students' college choice processes are influenced by the availability of postsecondary options and familial, school, and community influences. Research shows that rural students have a greater likelihood of attending community colleges (Byun et al., 2017; Irvin et al., 2017; Koricich et al., 2018) and that many rural students do not have the same proximity to a variety of postsecondary options as their urban and suburban peers.

Regions without BAIs are more likely to be rural (Hillman & Weichman, 2016; Rosenboom & Blagg, 2018). A previous study found that the majority of public, bachelor's-granting institutions in rural and town settings were baccalaureate institutions and regional public universities (Koricich et al., 2020). Also less represented in these rural communities are research-intensive universities, which, on average, have higher endowment assets, which correlate with student success. The relative lack of resources for RPCs shapes the academic and cocurricular opportunities for students (Koricich et al., 2020).

On balance, this research demonstrates that BAIs are important facilitators of rural postsecondary access, yet not all rural communities have BAIs. Some RPCs navigate constrained funding environments, which affects their ability to support rural students.

Rural Public Health

Rural communities experienced lower mental health, employment, earnings potential, job availability, and overall quality of life during the COVID-19 pandemic (Mueller et al., 2020). This situation is due, in part, to inadequate health care access. Rural populations also tend to be older, have a greater chronic disease burden, and express negative feelings toward preventive care—all factors compounding rural health disparities (Slater, 2023). Financial means to pay for services, proximity to services, confidence to communicate with health care providers,

and stigma are additional barriers to health care for rural residents. These challenges are particularly acute for the one in five rural Americans who are immigrants, Indigenous, or people of color—groups who routinely experience difficulties accessing appropriate health care due to systemic inequities (Junod et al., 2020).

Another ongoing challenge for rural health care is a shortage of health care workers, though community nonuse, such as being unable to find an appropriate care provider, may also be a factor (Slater, 2023). Rural people are also more likely to lack health insurance and broadband internet access, which constrains telehealth availability. Rural communities often lack access to dental, mental health, substance use disorder, postnatal, and home health care, which can be services offered by colleges and universities within the region. The role of public colleges in addressing rural public health challenges has been underexamined in the literature with the exception of Orphan and McClure (2019), who found that one Appalachian rural regional public university had adapted campus programming to address the health needs of its local community. This research demonstrates that rural communities faced health challenges prior to the pandemic that have become exacerbated.

Rural Community Development

Educational institutions promote community development in rural communities. At the postsecondary level, Miller and Tuttle (2007) found rural communities rely heavily on their local community colleges, which play multifaceted civic, social, and economic roles. Moreover, growing up near a college has led people in rural communities to have significantly different, and more positive, views of local education. Having an affordable, accessible college nearby may reduce or mitigate rural "brain drain" by providing reason for local residents to stay. Community-specific job training and continuing education can encourage students to remain in their hometowns after graduation. For example, institutions that serve rural communities might offer degree paths in agriculture or tourism if those are important industries in the region, and students can take that knowledge and skill back home when they graduate, which promotes workforce development (Koricich et al., 2022; Orphan & McClure, 2019).

Maxim and Muro (2020) found that Great Lakes regions with a regional public university experienced fewer job losses during the Great Recession than regions without one. These communities also recovered faster from the Great Recession and had higher per capita income. The most common majors students pursued at these institutions were in business, education, and public health—three areas that align with the workforce needs of rural communities. In a follow-up analysis, Maxim and Muro (2021) argued that regional public universities are anchor institutions that are especially important to economically distressed communities.

The Alliance for Research on Regional Colleges (ARRC) released a report identifying 1,087 rural-serving institutions (RSIs), or institutions that serve rural communities (Koricich et al., 2022). ARRC differentiated between rural-serving and rural-located institutions, stating that rural-located institutions are in places that state or federal classifications have designated as rural, whereas RSIs may be adjacent to rural counties, have varying population sizes in the home county, be adjacent to a metro area, and confer degrees within rural economic areas of need. RSIs account for 83% of postsecondary institutions located in low-employment counties, more than two thirds of postsecondary institutions located in persistent poverty counties, and 53% of postsecondary institutions located in persistent child-poverty counties.

As this literature review demonstrates, rural communities face unique disparities that anchor institutions, such as public colleges, could address. Although research demonstrates that rural institutions support workforce development and postsecondary access, we know less about how they enact a broader anchor institution mission to promote postsecondary access and public health in rural communities. The current study addresses these knowledge needs by exploring how RPCs serve as anchor institutions.

Theoretical Framework

We used the anchor institution framework to explore how postsecondary institutions support rural communities (Harris & Holley, 2016). Anchor institutions are "locally embedded institutions, typically non-governmental public sector, cultural or other civic organizations, that are of significant importance to the economy and the wider community" (Goddard et al., 2014,

p. 307). Anchor institutions include hospitals, community foundations, government agencies, and postsecondary institutions (Birch et al., 2013; AITF, 2009), all of which foster urban development and provide direct employment while increasing purchasing power and sustaining real estate stability (Harris & Holley, 2016).

At its core, an institution anchors its community through "mission, invested capital, and relationships to customers or employees . . . tied to a certain location" (Webber & Karlström, 2009). Some researchers specify that anchor institutions are urban, though the meaning of "city" has expanded to include suburbs, exurbs, periurbs, and "the urban space within which anchor institutions are expected to operate" (Birch et al., 2013, p. 9). Anchor institutions may also have short-term, project-oriented initiatives in addition to longer term shared decision making and goal setting with the community (Fulbright-Anderson et al., 2001). The economic benefits provided by anchor institutions are notably important to community-based organizations.

Medical centers acting as anchor institutions provide benefits through public health initiatives like clinics, an increase in grocery stores in communities, and increased graduation rates for K-12 students due to improved physical health (Slater, 2023). During the COVID-19 pandemic, medical anchor institutions—both university- and non-university-affiliated—created innovative health services to reach rural communities, such as mobile units for testing and vaccines, door-to-door screenings and education, smartphone access, and programming targeting people with substance use disorders.

Scholars have primarily used the anchor institution framework to examine organizations in urban settings; however, Fulbright-Anderson and colleagues (2001) acknowledged that there are different definitions of community, which may include rural regions. Additionally, recent research has examined how a regional public university acted as a rural anchor institution by investing in community capitals, demonstrating the utility of this framework for exploring how RPCs serve their local communities (Orphan & McClure, 2019).

We conceptualize rural anchor institutions as postsecondary institutions that align their institutional operations with the needs of their rural communities. In this way, rural anchor institutions are distinct from urban anchor institutions, as they would address the unique issues facing rural communities. Rural anchor institutions could provide direct employment opportunities for the region (Koricich et al., 2022) while contributing to the economic resilience of communities through promoting civic engagement, specialized trainings, strategic microloans, and cohort-based education for local entrepreneurs (Plaut et al., 2013). We also conceptualize rural anchor institutions as BAIs that intentionally foster postsecondary access to address the educational disparities facing rural communities (Crisp et al., 2021; Provasnik et al., 2007). Taylor and Luter (2013) highlighted how tutoring and service-learning opportunities connect college students with local communities to improve public education—rural anchor institutions might engage in activities like this as well. Rural anchor institutions may also attend to the public health issues facing their local communities. RPCs serving as anchor institutions could consciously and strategically apply long-term, place-based economic support in combination with human and intellectual resources to improve the surrounding community (Hodges & Dubb, 2012).

Methods

Our methods focused on first identifying RPCs and then exploring how they served their rural communities as anchor institutions. Our analysis began with all public, bachelor's-granting institutions in all 50 states with the Carnegie classifications of Baccalaureate (Diverse Fields and Arts & Sciences) Institutions, Master's Institutions, and Research/Doctoral Institutions. Because we were interested in examining institutions that enacted place-based missions as potential anchor institutions, we excluded institutions with a dominant online-only focus. Community colleges are also significant to rural communities and merit attention (Miller & Tuttle, 2007), but we focused on bachelor's-granting institutions. We answer our first research question (which institutions are RPCs) in the Methods section, and our second (how RPCs serve as anchor institutions) in the Findings section.

Which Institutions Are Rural Public Colleges?

We were interested in identifying RPCs that fostered postsecondary access. We used ex-

ploratory factor analysis (EFA) to investigate the extent to which specific variables would cluster together in ways that are easily recognizable as institutional accessibility. Some researchers tied broad accessibility to a single indicator, such as institutions that admit at least 80% of students (Crisp et al., 2021). Although an 80% admissions rate demonstrates an aspect of accessibility—namely, admissions—we were interested in developing a more comprehensive approach to identifying BAIs. To do so, we initially included what we expected to be direct measures of accessibility (like admissions rates) and antecedents of accessibility (like higher enrollments for Pell-eligible students). This analysis was designed to be somewhat agnostic in the early stages (including more variables than the literature would suggest) to provide a more open analysis of the ways in which institutions cluster in the EFA, and then the later stages involved combining what we learned from the EFA with the literature to identify a more comprehensive measure for identifying BAIs.

We included 18 variables in the first analysis, which we drew from prior research about accessibility and BAIs (Crisp et al., 2021): out-of-state cost, in-state cost, standardized test scores, research mission, average net price, average net price for the lowest income bracket, online program offerings, remedial education offerings, percentage admitted, percentage of students with Pell, percentage White students, percentage Asian students, percentage Black students, percentage Hispanic students, HBCU, percentage of students with loans, average amount of loans, and percentage of students from out of state. Factor analysis with varimax rotation yielded three factors with eigenvalues above 1.0. We ran the analysis again with three factors retained. The eigenvalues for the three retained factors were 3.69, 3.65, and 2.85. Some variables loaded on multiple factors, but the variables that loaded strongly on Factor 1 clearly revealed evidence of an access-focused clustering among institutions. Factor 2 was unique in its loading of HBCU status and percentage of students identifying as Black/African American. Factor 3 was unique in its loading of variables associated with wealthy institutions (high net price, high percentage White, high percentage out of state). We then took the variables that loaded on Factor 1 (lower in-state cost, lower out-of-state cost, lower net price, lower test scores, higher percentage admitted, online program offerings, remedial education offerings, a non-research-focused mission, higher percentage White, lower percentage Asian, higher percentage of students with loans, and lower percentage of international students) and compared these variables with the literature on BAIs and with our goal of identifying elements that are more closely connected to the decisions made by the administration of the institution, not just correlates of access.

Our analysis and evaluation resulted in our identifying six variables within three categories that we used to define BAIs: accessibility in admissions, cost, and inclusive academic offerings (see Table 1). For accessibility in admissions, variables included the admissions rate and the 25th percentile for math standardized test scores. For cost, the variables included in-state tuition and fees and the average price after financial aid. For inclusive academic program offerings, the variables included whether institutions had developmental education courses and at least

Table 1. Variables Used to Identify Broad Access Institutions

Variable component	Component loadings
Accessibility in admissions	• Admissions rate • 25th percentile for math standardized test scores
Cost for students	• In-state tuition and fees • Average price students pay after financial aid
Inclusive academic programs	• Presence of remedial course offerings to support underprepared students • Availability of fully online undergraduate degree programs
To determine rurality	• Urbanization

Note. Data obtained from NCES (2020).

one completely online undergraduate program, which demonstrates a commitment to educating students who are physically unable to come to campus. We combined these variables into a factor score, with institutions above the mean being included in the final group. Public institutions listed as having open admissions policies were automatically added to the group of BAIs, resulting in a group of 327 institutions.

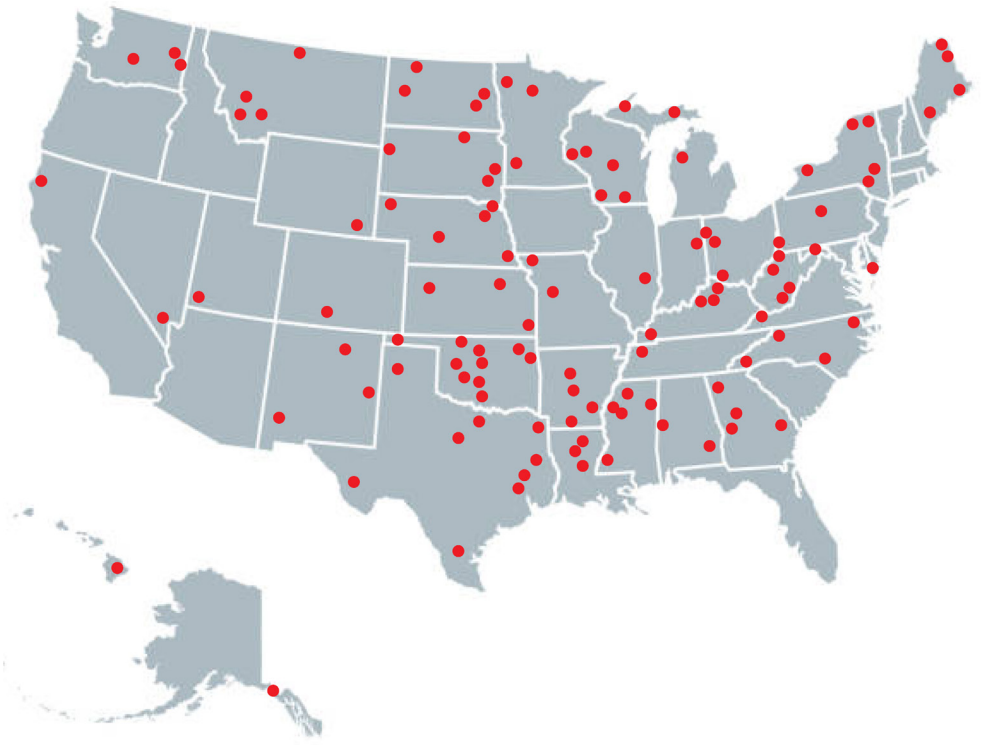
Next, we identified which of the 327 BAIs we identified were rural. We explored the multiple definitions from various government agencies, including county-level Census definitions, definitions from the U.S. Department of Agriculture's Economic Research Service (USDA-ERS), state-level definitions, and institution-level definitions from the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS; National Center for Education Statistics, n.d.). The IPEDS definition of urbanization (locale) includes four categories (city, suburb, town, rural) and three subgroups within each category, resulting in 12 groups. We compared these differing governmental definitions and found consistency between the IPEDS town and rural designations and the other county-based definitions of rural. Ultimately, we coded rural institutions by collapsing the IPEDS urbanization variable, with all town and rural designations coded as rural and all city and suburb designations coded as nonrural, which resulted in a group of 118 RPCs and 209 non-RPCs (see Appendix for the list of RPCs).

As Figure 1 shows, the final group of RPCs is geographically diverse, with 39 U.S. states represented. The group includes eight Historically Black Colleges and Universities (HBCUs), eight Hispanic-Serving Institutions, one Asian American and Native American Pacific Islander–Serving Institution, and six Native American–Serving Nontribal Institutions. The average headcount enrollment was 4,300, but there was a range. Some RPCs had headcount enrollments over 20,000, and others had fewer than 1,000. Most of the BAIs are undergraduate-focused colleges that primarily enroll in-state students.

Exploring How Rural Public Colleges Act as Anchor Institutions

To explore how and whether RPCs acted as anchor institutions for rural communities,

Figure 1. Distribution of Rural Public Colleges Across the United States



Note. Data obtained from NCES (2020).

we performed exploratory descriptive statistical analyses comparing the RPCs to the non-RPCs (results presented in the Findings section). Loeb et al. (2017) emphasized the importance of descriptive analyses in education to identify socially important phenomena that have not previously been recognized. They demonstrated that descriptive analysis can stand on its own as a research product and can inform policy and practice. Because no research had examined RPCs in this way at the time of our analysis, we used descriptive analysis to gain a better understanding of their contributions and characteristics.

Our first step was to examine the communities served by the 118 BAIs we identified to understand how they might be acting as rural anchor institutions. Using county-level data from the American Community Survey (United States Census Bureau, 2022) and the U.S. Department of Agriculture (2020), we examined employment, educational attainment, poverty, and disability rates. We also examined public health data from the University of Wisconsin Population Health Institute's County Health Rankings and Roadmaps, as well as the U.S. Department of Health and Human Services, to understand the public health context and recent coronavirus disease 2019 (COVID-19) metrics. We compared rural counties with at least one BAI to nonrural counties with the same. We used *t*-tests to determine whether differences between rural and nonrural counties were statistically significant. Tables 2 and 3 include the results from our *t*-tests and associated *p* values, showing a statistical significance at either the .05 or .01 level.

We then analyzed enrollment and programmatic data of BAIs in rural and nonrural counties. When appropriate, we compared RPCs to non-RPCs to understand how each sector acted as anchor institutions, and to determine whether there were differences in how each group of BAIs enacted an anchor institution mission depending on locale. Below is a list of sources we used for the variables we conceptualized as indicating an anchor institution mission through our analysis of prior literature and our theoretical framework.

- County-level data from the American Community Survey, including employment, low employment, educational attainment, poverty, and disability rates (U.S. Census Bureau, n.d.).
- Public health data from the University of Wisconsin Population Health Institute's County Health Rankings and Roadmaps (2022) to understand the public health context and recent COVID-19 metrics.
- Data from the U.S. Small Business Administration (n.d.) regarding institutions that host a small business or technology development center.

Table 2. Educational Attainment Comparison of Rural and Nonrural Counties With Broad Access Institutions

	No diploma	HS diploma	Some college	College degree
Rural mean	9.87%	30.14%	32.2%	27.8%
Nonrural mean	11.01%	25.49%	30.77%	32.73%
t-score	2.04	–6.86	–2.56	4.72
p-value	$p < .05$	$p < .01$	$p < .05$	$p < .01$

Table 3. Percentage Poverty Comparison of Rural and Nonrural Counties With Broad Access Institutions

Rural mean	14.43
Nonrural mean	18.14
t-score	–6.52
p-value	$p < .01$

- Data from the Institute of Museum and Library Services (2018) to determine which rural colleges hosted museums.
- IPEDS data on bachelor's, master's, doctoral, certificate, and associates degrees awarded; top 10 types of degrees awarded; enrollment (headcount and FTE); admissions rates; enrollment rates for adult students, students of color, and low-income students; online enrollments; tuition and fees; state appropriations; auxiliary revenue; per student revenue; net tuition revenue per student; number of employees employed by institutions (NCES, 2020).

This research utilized existing, publicly available databases, so no IRB approval was necessary.

Findings

Our analysis indicated that RPCs act as anchor institutions in support of their rural communities in a variety of ways, including increasing access to education, sustaining the local workforce, and fostering access to health care, which was especially important during the COVID-19 pandemic. Each finding and its related data are discussed in turn.

Fostering Rural Postsecondary Access

The first way in which the RPCs we examined served as anchor institutions was through fostering rural postsecondary access. Although students from many rural areas graduate from high school and enter college at similar rates to those of nonrural students, fewer rural students complete college. According to the Economic Research Service (Parker, 2016), low education counties are those in which 20% or more of residents do not have a high school diploma or equivalent. The difference in the number of rural versus nonrural low education counties that we examined was not statistically significant. Only 3% of the rural counties we examined were designated as low education, compared to 5% of nonrural counties. However, as Figure 2 shows, the rural counties had a lower percentage of residents with college degrees (including certificates). This difference in postsecondary attainment could be due to rural residents having fewer postsecondary options, as well as higher poverty, which makes it difficult to afford college. In the rural counties we analyzed, 18% of residents live at or below the poverty line, compared to 14% in the nonrural counties. This finding suggests that RPCs, as BAIs, may be serving larger shares of students with financial needs than BAIs in nonrural areas.

Our analysis found that between 2003 and 2018, aggregate enrollment at the 118 RPCs increased, both in terms of full-time enrollment (FTE) and headcount enrollments (Figure 3 shows average FTE per institution and average overall enrollment, which includes FTE and headcount). The latter measure is important because many RPCs serve students who attend part time, and headcount is a better indicator of the number of students they serve. Our findings show that RPCs have maintained a commitment to serving rural communities and, in some cases, expanded the number of students they serve over time.

We found that RPC students have become more racially diverse over time, which may reveal an institutional focus on serving residents in their rural communities, as well as reflecting the racial diversification of rural communities. As Figure 4 demonstrates, the majority of RPC students are White. However, the share of White students has declined. The percentage of Black students has remained relatively constant, but the share of Hispanic/Latinx students has increased. This latter finding is likely driven, in part, by the fact that the rural Latinx population grew by 50% between 2000 and 2010 (Ajilore & Willingham, 2020). RPCs are also an important access point for Indigenous and Native American students, a majority of whom live in rural communities (U.S. Department of Education, 2020).

RPCs also enroll above-average shares of adult students and students receiving Pell grants compared to all bachelor's degree granting public colleges (see Figure 5).

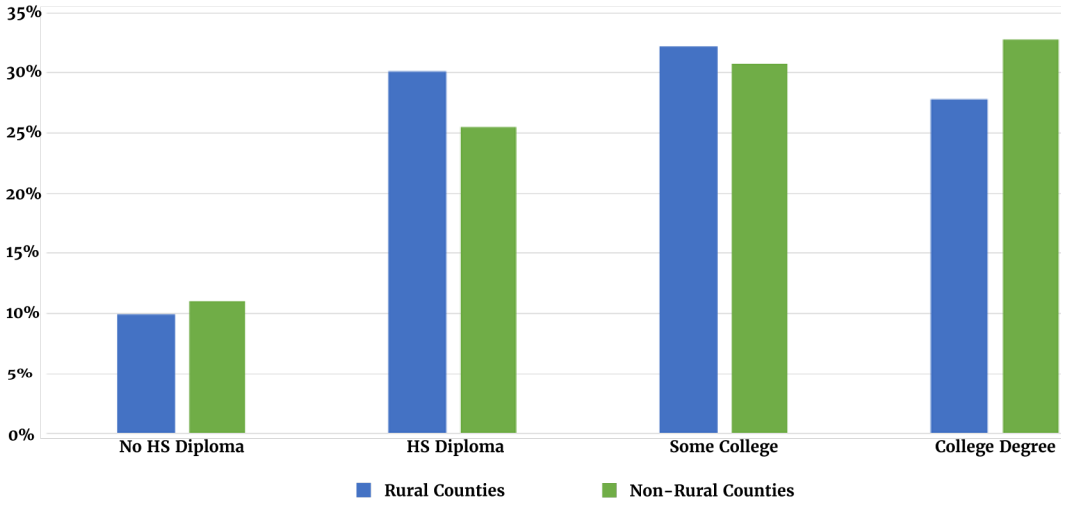
As many institutions reduced in-person instruction due to COVID-19, online education became critical to ensuring students could continue their educations. Even prior to the pandemic, delivering educational offerings online or in hybrid formats was a part of promoting access, particularly for colleges serving rural populations that may live far from campus (Orphan & McClure, 2019). Figure 6 shows that, since 2012, there has been an increase in the percentage of RPC undergraduates enrolled partially or entirely online.

Online enrollments for RPC graduate students increased at a much higher rate over the same time period, showing potential alignment between campus operations and regional employment needs. As Figure 7 shows, the share of graduate students enrolled entirely online increased from 35% to 50%. Unlike undergraduate students, there has been no corresponding increase in the share of graduate students enrolled in hybrid programs. Rather, this proportion has remained fairly static, with only a slight decline since 2012. Although the data do not allow for disaggregation of online students by home county, the growth in fully online programs expands the regional reach of RPCs and promotes rural postsecondary access.

Sustaining Local Economies and Fueling Community Development

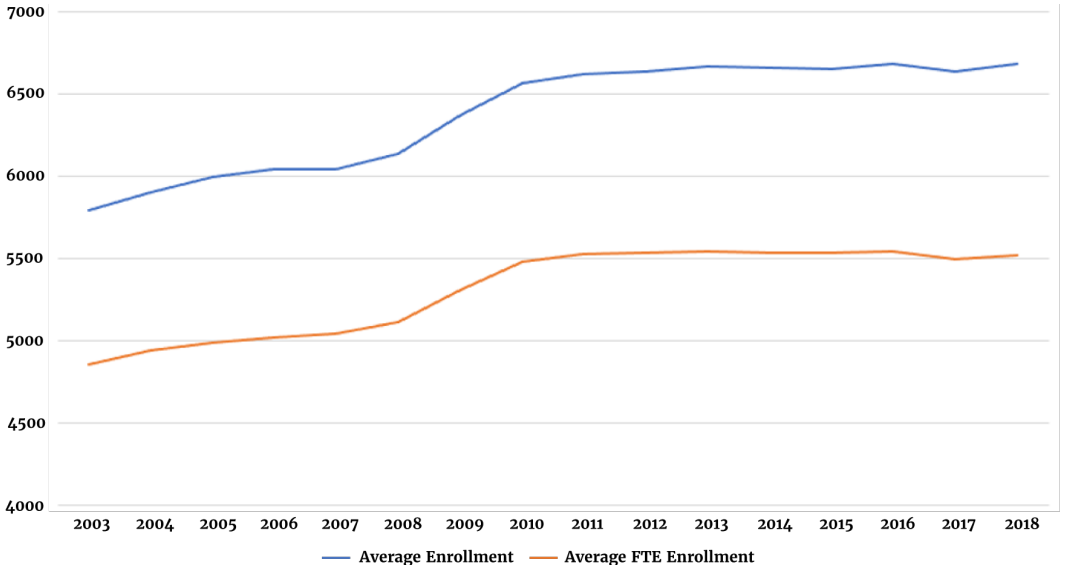
Second, we found that RPCs are aligning institutional operations with community and economic development efforts in their rural

Figure 2. Percentage of Residents with College Degrees by Rural and Nonrural Counties



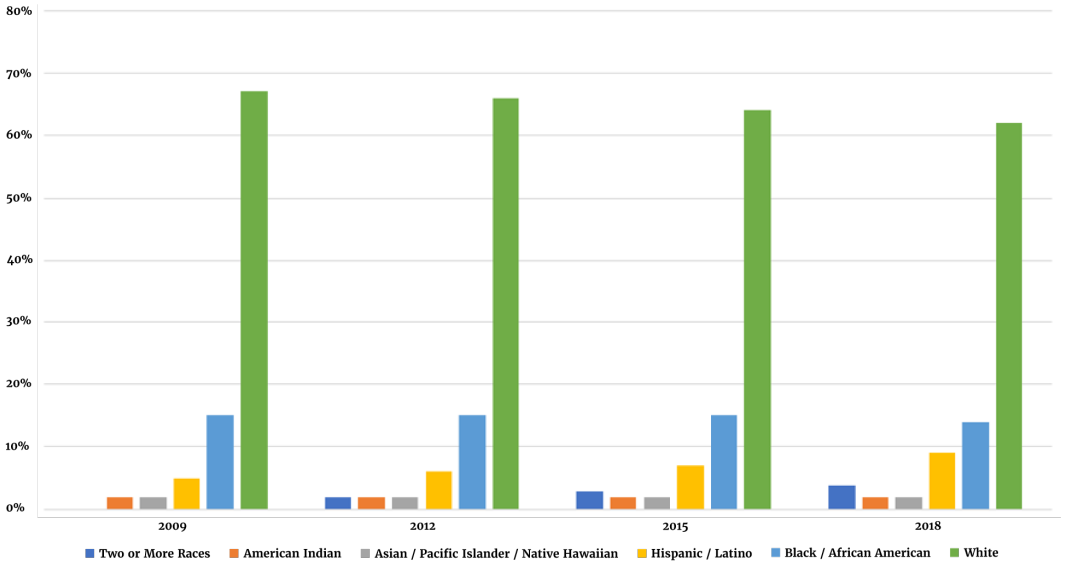
Note. Data obtained from the American Community Survey (U.S. Census Bureau, 2020).

Figure 3. Average Aggregate and Full-Time Student Enrollment Among Rural Public Colleges, 2003–2018



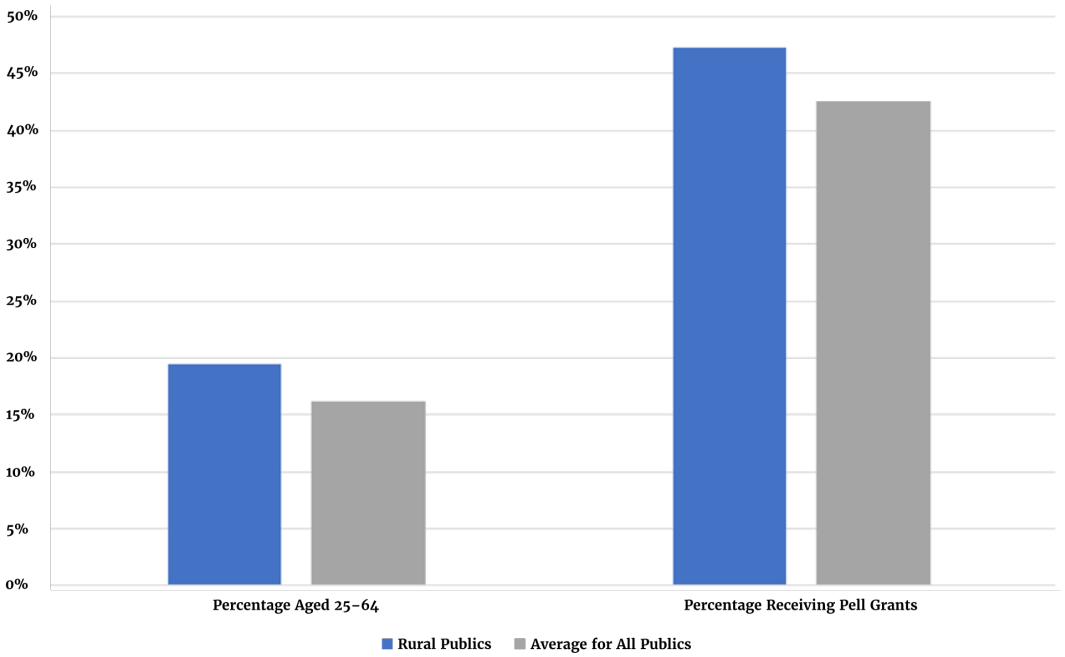
Note. Data obtained from IPEDS (NCES, 2020).

Figure 4. Undergraduate Student Enrollment at Rural Public Colleges by Race/Ethnicity



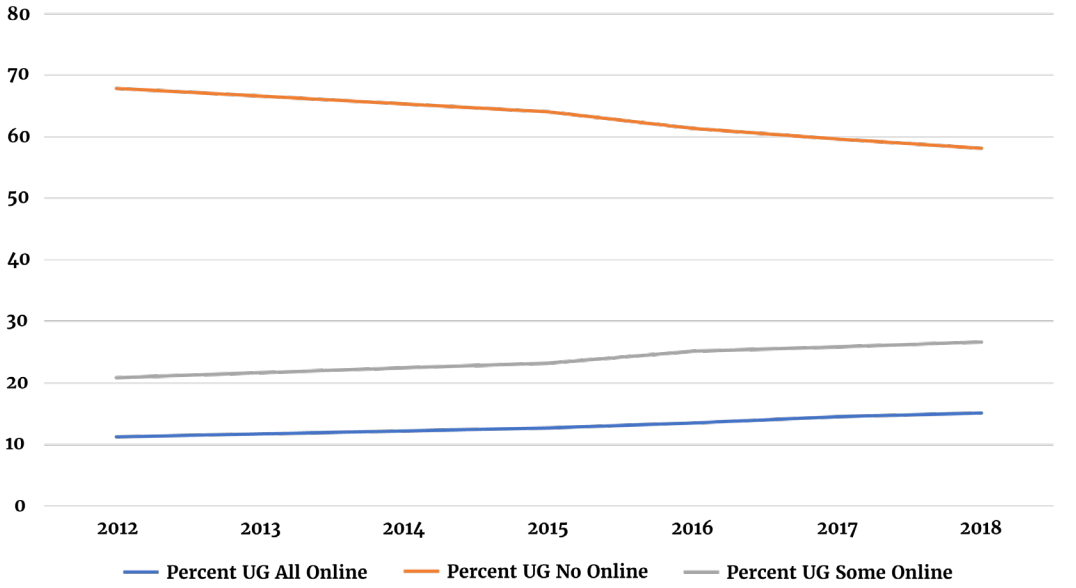
Note. Data obtained from IPEDS (NCES, 2020).

Figure 5. Average Enrollment at Rural Public Colleges and All Public Colleges by Age and Pell Grant Recipients



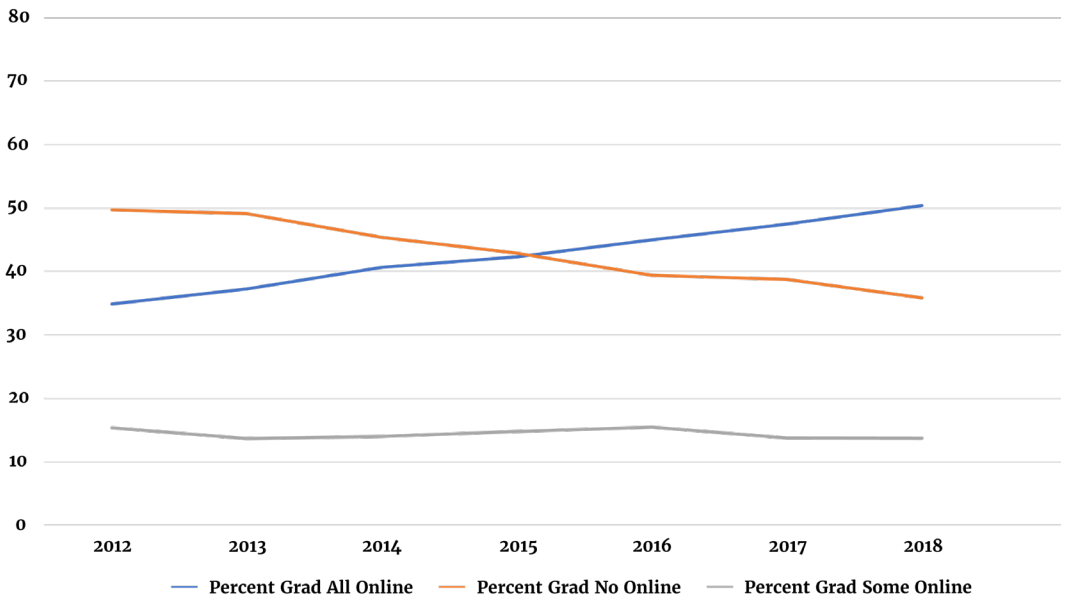
Note. Data obtained from IPEDS (NCES, 2020).

Figure 6. Percentage of Enrolled Undergraduate Students at Rural Public Colleges by Online Course Modality, 2012–2018



Note. Data obtained from IPEDS (NCES, 2020).

Figure 7. Percentage of Enrolled Graduate Students at Rural Public Colleges by Online Course Modality, 2012–2018



Note. Data obtained from IPEDS (NCES, 2020).

communities. RPCs are often large employers in counties with limited job opportunities. According to the American Community Survey (Sanders, 2025), low employment counties are those in which less than 65% of residents aged 25–64 are employed. Our analysis of employment rates of counties (U.S. Census Bureau, n.d.) found a statistically significant difference in the number of rural counties with an RPC designated as low employment versus nonrural counties with a BAI. Seventeen percent of counties with RPCs were low employment counties, compared to 7% of nonrural counties with a similar institution, suggesting that some RPCs serve counties with fewer employment opportunities or counties with more unemployed people.

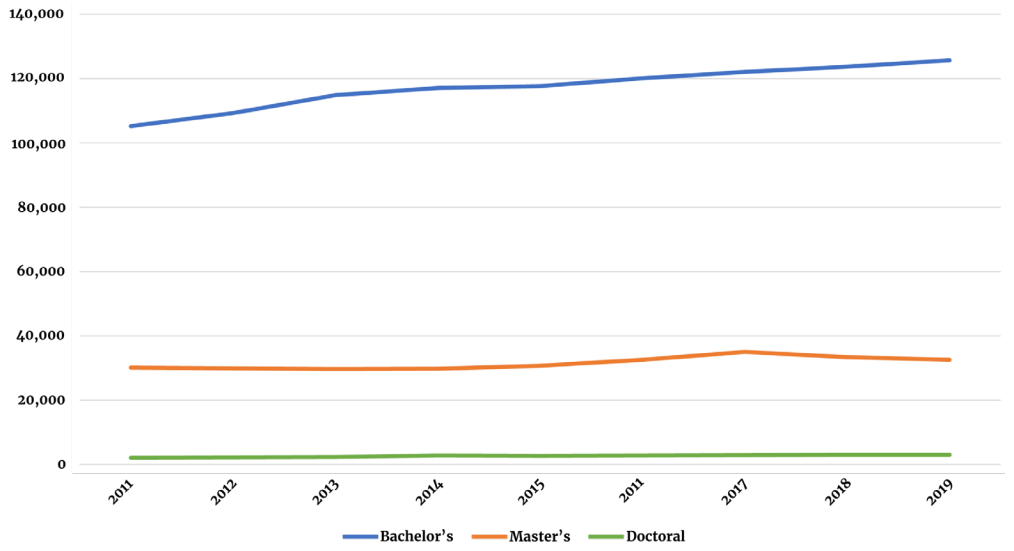
On average, RPCs employed over 500 people, not including third-party contractors (NCES, 2020). These institutions may create jobs that prevent their counties from being designated as low employment. Our analysis found that 19 out of the 115 counties served by RPCs were low employment counties; however, that number would jump to 51 if the jobs provided by RPCs were ended. To further explore the role of RPCs in local employment, we compared two counties that were not designated as low employment: Watauga County in North Carolina and Marquette County in Michigan (U.S. Census Bureau, n.d.). In Watauga County, almost 75% of adults are employed. Appalachian State University (ASU), an RPC, is one of the county's major employers, with 3,217 faculty and staff members (NCES, 2020). Using just direct employment of 3,217, ASU is responsible for 19% of the jobs in Watauga County. In a hypothetical scenario in which the jobs provided by ASU were lost, Watauga County's employment rate would drop to 61%, making it a low employment county. In Marquette County, 68% of adults are employed (U.S. Census Bureau, n.d.). Northern Michigan University (NMU) has 1,050 faculty and staff members, representing an estimated 5% of jobs in the county (NCES, 2020). Without the jobs provided by NMU, Marquette County would be designated as low employment.

Beyond direct employment, we found that 47% of the RPCs host a small business or technology development center. These centers are important because rural communities have higher per capita self-employed business rates than urban communities (Thiede et al., 2017).

Another way RPCs foster local economies is through workforce development. As shown in Figure 8 and Figure 9, RPCs are focused on undergraduate education, slowly increasing the number of bachelor's degrees awarded each year alongside marked growth in certificates and associate's degrees.

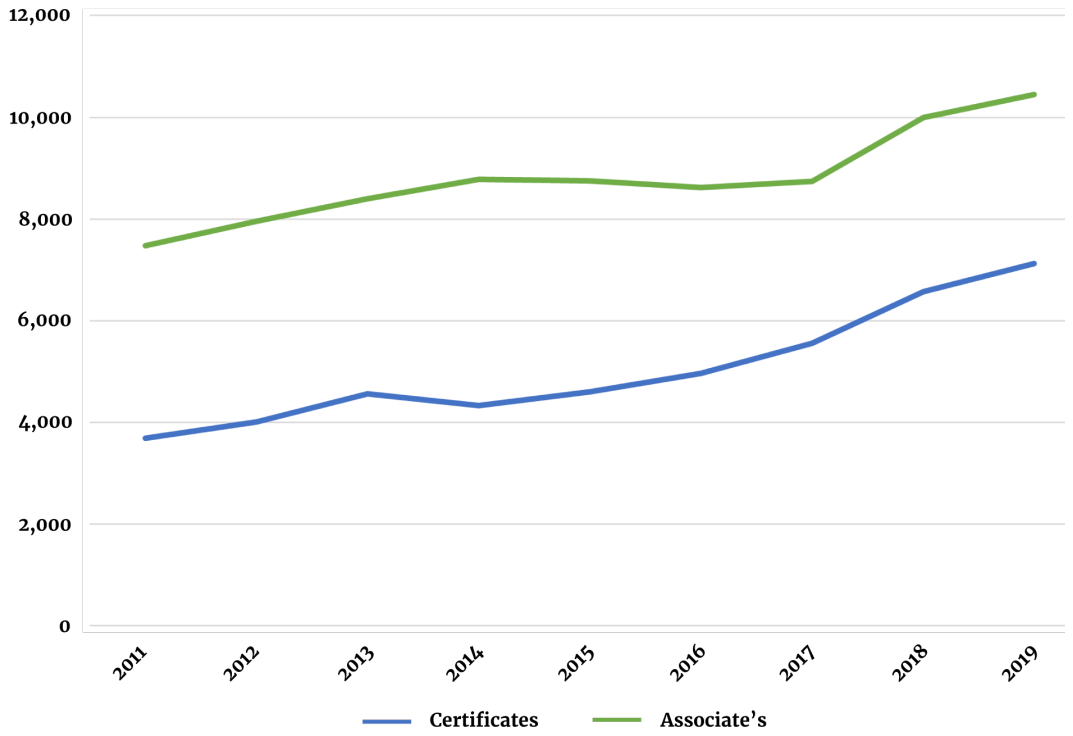
We further found that RPCs had aligned their degree and certificate offerings with high-demand industries in rural communities. The major industries in rural communities across the United States include hos-

Figure 8. Total Degrees Awarded by Rural Public Colleges, 2011–2019



Note. Data obtained from IPEDS (NCES, 2020).

Figure 9. Total Certificates and Associate's Degrees Awarded by Rural Public Colleges, 2011–2019



Note. Data obtained from IPEDS (NCES, 2020).

pitality and tourism, resource management and extraction, health professions, small business ownership, and education (USDA, 2020). Figure 10 shows that the top 10 degrees produced by RPCs align with these industries, with business, health professions, and education occupying the top three spots, demonstrating alignment between degree offerings and rural economic needs.

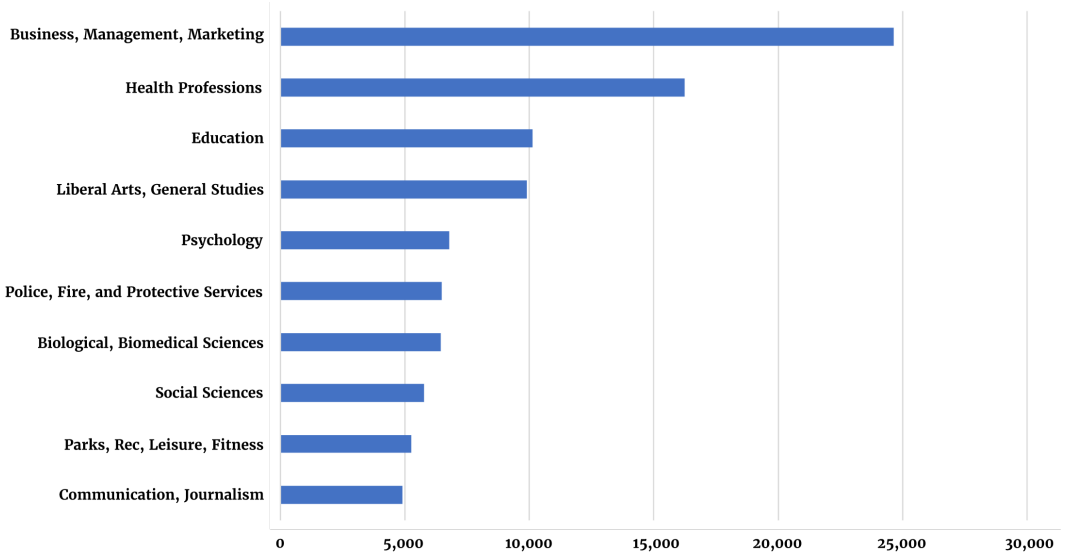
RPCs also produced 16,248 degrees in health professions and related programs, including 9,662 nursing degrees, 13,067 teaching certificates, and 6,573 degrees in homeland security, law enforcement, firefighting, and related protective services in 2019. Research has surfaced shortages of nurses, teachers, and police officers in some rural areas, emphasizing the importance of RPCs offering these degrees (Burrows et al., 2012; Latterman & Steffes, 2017; Weisner et al., 2020). Furthermore, many rural communities are rich in natural resources and have robust tourism and natural resource management sectors. A 2020 Brookings Institution report found that "of the 121 U.S. counties with more than a fifth of their workforce in hospitality, 89 are rural areas" (Loh et al., 2020). RPCs produced 5,261 degrees in parks, recreation, leisure, and fitness management in 2019. As was discussed, rural communities are also hubs of entrepreneurship and small business ownership, and RPCs graduated 24,635 business majors in 2019.

Beyond direct economic and workforce development, we found that RPCs support the cultural life of their regions. Using data from the Institute of Museum and Library Services (2018) we found that 64% of the RPCs host a museum. In some cases, rural communities are far from cities where museums and performances may be more readily available, and some of the RPCs hosted the only museum in their county. These findings demonstrate how RPCs foster economic and community development as anchor institutions.

Service to Rural Communities with Acute Public Health Challenges

Beyond training public health professionals, as shown in Table 4, RPCs serve counties with acute public health needs. The County Health Rankings and Roadmaps (University

Figure 10. Top Baccalaureate Degrees Awarded at Rural Public Colleges by Major/Industry, 2019



Note. Data obtained from IPEDS (NCES, 2020).

of Wisconsin Population Health Institute, 2022) provides annual, county-level rankings for health outcomes based on factors like length of life, quality of life, and quality of health care. Roughly one quarter of the rural counties in our analysis were ranked in the bottom quartile in their state for health outcomes. One measure included in the rankings is the percentage of people reporting poor or fair health, and 41% of the rural counties fell below the state average in this measure. Although many of the counties struggled with poor health outcomes, this was not universally true. A significant number of the rural counties (40%) were in the top quartile of health outcomes.

We additionally found that about one quarter of the rural counties had a population-to-physician ratio below their state's average. Some of these counties therefore may have physician or health professional shortages, creating barriers to adequate health care. This finding is corroborated by data from the U.S. Department of Health and Human Services showing that slightly less than one third of the rural counties examined have at some point been designated as medically underserved areas (MUAs), which are geographic areas with a shortage of primary care health services. The count of MUAs may be an underestimate because the analysis did not include multicounty service areas and census tracts, which are also eligible for the designation. Among the rural counties served by RPCs that we examined, 37% of counties were designated as having a mental health professional shortage. As was true with health outcomes rankings, some of the rural counties performed well with respect to the number of primary care physicians. For example, Ohio County, West Virginia, includes the city of Wheeling and recorded the lowest population-to-physician ratio in our sample at 627 people to one physician. By contrast, Marshall County, in the northwest corner of Minnesota, had a population-to-physician ratio of 9,356 to one (University of Wisconsin Public Health Institute, 2022).

These analyses are concerning, given data on COVID-19 in rural areas. According to the White House Coronavirus Task Force, a red zone is an area experiencing more than 100 new cases per 100,000 people in the last week (Whyte, 2020). All but five of the rural counties we analyzed—or 96%—were designated as COVID-19 red zones in November 2020. Data from the Centers for Disease Control and Prevention also showed that people in rural areas were dying at a rate nearly two and half times higher than those living in urban areas (Duca et al., 2020).

As noted previously, many RPCs educate nurses and people entering important health professions. We also found that five of the RPCs examined have a college of medicine, and another 12 have partnerships with

Table 4. Number and Percentage of Counties Where RPCs Are Located by Acute Public Health Needs

	Number of counties	Percentage of counties
Ranked in the bottom quartile for health outcomes	29	25%
Federally designated as medically underserved	35	30%
Federally designated as mental health professional shortage area	44	37%
COVID-19 red zone	113	96%
Population-to-physician ratio below state average	29	25%
Percentage of population reporting poor/fair health above state average	48	41%

Note. Data obtained from the University of Wisconsin Public Health Institute (2022).

colleges of medicine at other institutions. Nearly all of these programs have initiatives to increase the number of doctors in rural areas. These contributions are particularly salient, given data showing many states and hospitals are facing staff shortages (Khullar, 2020). Still other RPCs responded to COVID-19 by providing access to testing and helping disseminate public health information. As these findings show, RPCs serve rural communities with acute public health challenges.

Discussion

Previous literature describing anchor institutions has primarily examined institutions that support urban economies and communities (e.g., Goddard et al., 2014). Examples of anchor institutions included hospitals, universities, and local governments (AITF, 2009; Birch et al., 2013). As our findings demonstrated, RPCs can play a critical role in supporting rural communities, particularly during times of crisis. We showed that as anchor institutions, RPCs can serve communities facing disparities in public health, employment, and educational attainment.

One of our findings explored how RPCs can contribute to rural postsecondary access and equity. The majority of public, bachelor's granting institutions in rural areas are baccalaureate institutions like those we examined (Koricich et al., 2020). We also found that rural anchor institutions are located in counties with higher poverty rates and lower college completion rates. Given that proximity to college is an important factor in students pursuing postsecondary education (Hillman & Weichman, 2016; Rosenboom & Blagg, 2018), the presence of these institutions is important to ensuring educational opportunity and attainment. We also found that as a sector, RPCs have growing enrollments and increasingly serve student populations that have been marginalized in higher education. Aligned with previous findings related to college access and socioeconomic status and race (Byun et al., 2015; Sansone et al., 2020), we found that RPCs enroll higher numbers of adult students and Pell recipients. We also found that the student bodies of RPCs have become more racially diverse. In particular, we saw the Latinx student population increasing across many of these institutions. This increase makes sense, given that these populations are found in rural areas and have been increasing in number over the past few decades (Ajilore & Willingham, 2020; U.S. Department of Education, 2020). Despite prior research showing that lack of broadband internet would hinder rural communities from participating in online education (Rosenboom & Blagg, 2018), we found increasing enrollments in online programs at both the undergraduate and graduate level, which suggests that many RPCs do in fact offer some form of distance learning.

Another important finding indicated that RPCs are large employers in their communities, which aligns with previous anchor institution research showing that anchor institutions are often major employers (Harris & Holley, 2016; Koricich et al., 2022). We found a statistically significant difference in the number of rural counties with RPCs that were classified as low employment compared to nonrural counties. Additionally, we found that RPCs employ large numbers of

local residents, which may prevent a county from being labeled as low employment. On average, RPCs employed over 500 people and provided millions of dollars in regional income. Our examination of counties with a large percentage of the population employed by postsecondary institutions found that in the absence of these institutions, many rural counties would have a drastic increase in unemployment. This occurrence would be particularly detrimental to rural economies, considering that rural counties often already face high rates of unemployment or are economically distressed (Maxim & Muro, 2020; Mueller et al., 2020; U.S. Census Bureau, 2022).

Our findings also uncovered that other economic activities like entrepreneurship and small business are supported by RPCs through continuing education and outreach in programs that provide business incubation and reskilling. The RPCs we examined also educate students in fields that are beneficial to local economies, such as resource management, health professions, education, and hospitality and tourism. Our final finding demonstrates how RPCs provide education and training in medicine—sometimes with degrees specifically tailored to the needs of rural communities.

Implications and Recommendations

Our findings create implications for the role of RPCs as anchor institutions. As the nation strives to increase college attainment rates, it will be critical to support the BAIs with experience serving larger proportions of rural students, given the educational attainment disparities they face. Although we saw enrollment growth across the sector, some of the RPCs were experiencing enrollment declines. Part of the variations in enrollments we observed can be attributed to regional population trends, with some U.S. regions experiencing population fluctuations that can affect college enrollments (Grawe, 2018; USDA Economic Research Service, 2019; Gardner-Cook, 2025). Apart from regional demographics, students' college choices may also be influenced by the natural amenities of the surrounding area (Dotzel, 2017), as well as by large and successful collegiate athletics programs (Pope & Pope, 2009). Enrollment in higher education is usually countercyclical: During recessions, enrollment tends to increase; this phenomenon may have contributed to the enrollment increases that occurred between 2008 and 2010. Enrollment tends to decrease when the economy is stronger, as was the case in the second half of the 2010s (U.S. Census Bureau, 2022). In rural communities, college enrollment at RPCs provides local access to degrees in areas of need and economic strength.

Variations in enrollment across the RPCs studied create a need to recognize that enrollment growth is not a universal trend across these institutions, nor should it be a single marker of institutional value or health, given the variety of services RPCs provide their communities. Although RPCs provide many resources to the surrounding community, the number of these institutions compared to the overall rural land area in the United States is low. Those that do exist are constantly facing budget cuts and scrutiny from policymakers, potentially endangering the very important work these institutions perform to support their communities. As policymakers consider proposals to close RPCs in the face of enrollment declines, implications are created for rural collegiate access, given that most students attend college close to home (Hillman & Weichman, 2016).

As we have shown through the findings from our descriptive analyses, RPCs are also important anchors for rural economies. In fact, our results support that the unique missions of rural anchor institutions enable them to provide services that are difficult to replicate in other organizations. In addition to financial capital, rural anchor institutions provide cultural capital in the form of arts venues, museums, sporting arenas, meeting spaces, libraries, and other academic-adjacent resources (Orphan & McClure, 2019). Closing or merging RPCs due to enrollment declines could threaten rural economies as well as overall community well-being.

Beyond challenges around inadequate funding, our study creates implications for how funding is dispersed to postsecondary institutions during crises, like the COVID-19 pandemic. For example, in the early stimulus packages, funding was allocated to postsecondary institutions based on FTE (Anguiano, 2020). As our findings show, RPCs provide postsecondary access to many part-time students. Thus, using FTE undercounts the number of students that these institutions are serving. Policymaker choices about how to allocate stimulus funding during crises thus carries implications for RPCs whose student bodies have different enrollment behaviors than urban institutions or wealth-

ier institutions (Sansone, 2023).

To address these implications, we offer recommendations for research, policy, and practice. Our study examined students served by RPCs using descriptive quantitative methods; however, we were unable to examine the qualitative experiences of these students. We hope our study inspires future research exploring the experiences of rural students once they enroll at a rural anchor institution. Important qualitative studies have shed light on the experiences of rural students (e.g., Ardoin & McNamee, 2020), and we look forward to seeing future qualitative research in this area. We also invite scholars to use our BAI metrics to identify and study other types of BAIs, including those in nonrural areas.

We also encourage scholars to continue examining how RPCs support their broader communities. In this study, we considered economic, public health, and education supports, but those are only a few of the many benefits that rural anchor institutions might provide that improve community well-being (Orphan & McClure, 2019). Given the diversity of rural communities, we recommend exploring rural anchor institutions through specific economic industry lenses, which might uncover nuances in organization–community relations, depending on whether a rural community is, for example, predominantly supported through agriculture, tourism, mining, or fishing.

We hope future scholars will adapt and apply the anchor institution framework when examining other types of institutions that serve rural communities. We focused on public colleges in rural counties, but research should explore whether other organizations such as large corporations or tourism centers serve in similar ways. Examining how rural anchor institutions benefit communities of color, aging populations, and communities with large immigrant populations would also produce important findings. As this study demonstrated, anchor institutions are not limited to one type of organization, nor do they contribute to just one community—exploring the breadth of applications of the anchor institution framework is a worthwhile endeavor.

Regarding practice, our study suggests that rural anchor institutions provide access to higher education that is not found in rural locations lacking a BAI, but access to higher education is only the first step; institutions must support student success so that they graduate. One step in doing so would be to create culturally responsive programming that addresses the unique needs of rural students. NYKids (Leo & Wilcox, 2020), a research and publication team at the University at Albany, identified strategies to surface the assets found in rural communities that included modifying course offerings to reflect rural cultures and partnering with community members and organizations to support student mental health and remediate the effects of poverty. RPCs are well suited to adopt these practices, which in turn could enhance student success.

As we found, rural anchor institutions are at times the only provider of critical services in surrounding areas. If not already under way, such campuses should consider expanding the reach of programming to include the community as part of the target audience. The collaboration between higher education leadership and the local community leaders is essential to the longevity of both RPCs and their surrounding communities.

Public policy can also be better leveraged to support the work of rural anchor institutions. First, we recommend that emergency and other types of postsecondary funding be based on headcount rather than FTE. The federal government should also fund the Higher Education Act Part Q for Rural-Serving Postsecondary Institutions to provide incentives for campuses to serve rural communities. An important step in doing so is identifying and defining which rural colleges are rural-serving institutions. The Alliance for Research on Regional Colleges developed an approach and metric for identifying rural-serving institutions that may be useful to policymakers when tailoring public policy and funding to leverage these institutions in support of rural communities (Koricich et al., 2022).

To support RPCs in their efforts to improve rural public health, we also recommend that policymakers allocate funding to establish teaching health clinics, mobile clinics, and hospitals at RPCs and strengthen partnerships with area health care providers to train health care professionals. A number of states provide loan forgiveness for graduates of health science programs who work in rural communities—we believe the programs should be present throughout the United States.

Beyond increasing public funding, modifi-

cations can be made to existing state and federal policies and programs that would enhance the ability of RPCs to serve as anchor institutions. To cultivate regional economic development, the federal government could modify the Rural Business Development Grant programs to encourage RPCs to incubate small businesses. Increased funding for the Workforce Opportunity for Rural Communities (WORC) initiative and restoring funding for tribal workforce development would additionally spur greater economic development in rural communities. To address regional teacher shortages, the Teacher Education Assistance for College and Higher Education (TEACH) Grant Program can be adapted to explicitly incentivize teacher education graduates to work in rural schools.

The Bipartisan Infrastructure Bill included a Rural Playbook that would address a variety of challenges facing rural communities, including those around broadband access, transportation, climate change, and clean water (White House, 2022). Although it was encouraging to see rural communities emphasized in this federal legislation, there was little mention of how postsecondary institutions like RPCs might serve as anchor institutions for implementing these programs. We encourage the federal government to leverage the power and potential of RPCs in improving rural infrastructure moving forward.

Our findings show that RPCs, acting as rural anchor institutions, are vital social institutions that foster postsecondary access, economic development, and public health in the communities in which they are situated. With effective state and federal policies and strengthened commitment to institution–community relationships and programming, RPCs can continue to be pillars of flourishing rural communities.

About the Authors

Steve Jenks *is a researcher at MeasuringU, a user experience research firm in Denver, Colorado. His academic research centers on the needs of rural communities and socioeconomic and class issues in higher education. He holds a PhD in higher education with a concentration in research methods and statistics from the University of Denver.*

Cecilia M. Orphan *is an associate professor of higher education at the University of Denver and a founding codirector of the Alliance for Research on Regional Colleges. She researches how regional public universities promote equity and community well-being, and how policy discourses shape higher education's public purposes and equity pursuits. She holds a PhD in higher education from the University of Pennsylvania and a BA in political science from Portland State University, a regional public university in Oregon.*

Alisa Hicklin Fryar *is professor and chair at the University of Oklahoma and codirector of the Alliance for Research on Regional Colleges. Her research interests focus on public management and higher education governance and policy. She received her PhD in political science from University of Oklahoma.*

Vanessa A. Sansone *is an associate professor of higher education administration in the Department of Educational Leadership and Policy Studies at the University of Texas at San Antonio (UTSA). She also serves as a codirector with the Alliance for Research on Regional Colleges (ARRC). Her research interests focus on college affordability, Hispanic-Serving Institutions (HSIs), and governance structures. She received her EdD in higher education administration from UTSA.*

Kevin McClure *is professor and chair at the University of North Carolina at Wilmington and codirector of the Alliance for Research on Regional Colleges. His research focuses on college leadership, management, and workplace culture, especially at broad access institutions. He received his PhD from the University of Maryland.*

References

Ajilore, O., & Willingham, Z. (2020). *The path to rural resilience in America*. Center for American Progress. https://www.americanprogress.org/issues/economy/reports/2020/09/21/490411/path-rural-resilience-america/

Anchor Institution Task Force (AITF). (2009). *Anchor institutions as partners in building successful communities and local economies: A report*. U.S. Department of Housing and Urban Development.

Anguiano, V. (2020). *Fact sheet: Improving the formula for federal higher education coronavirus funding*. Center for American Progress. https://www.americanprogress.org/article/fact-sheet-improving-formula-federal-higher-education-coronavirus-funding/

Ardoin, S., & McNamee, T. (2020). Spatiality and social class: Suggestions for supporting rural students from poor and working class backgrounds. *New Directions for Student Services, 2020*(171–172), 37–46. https://doi.org/10.1002/ss.20363

Bauman, D. (2020, November 10). Colleges have shed a tenth of their employees since the pandemic began. *The Chronicle of Higher Education*. https://www.chronicle.com/article/colleges-have-shed-a-tenth-of-their-employees-since-the-pandemic-began

Birch, E., Perry, D. C., & Taylor, H. L., Jr. (2013). Universities as anchor institutions. *Journal of Higher Education Outreach and Engagement, 17*(3), 7–16. https://openjournals.libs.uga.edu/jheoe/article/view/1051

Burrows, E., Suh, R., & Hamann, D. (2012). *Healthcare workforce distribution and shortage issues in rural America* (National Rural Health Association Policy Brief). National Rural Health Association. https://www.ruralhealth.us/getmedia/66c7ee1a-eb1f-4831-8d04-856d970ad76d/HealthCareWorkforceDistributionandShortageJanuary2012.pdf

Byun, S.-Y., Irvin, M. J., & Meece, J. L. (2015). Rural–nonrural differences in college attendance patterns. *Peabody Journal of Education, 90*(2), 263–279. https://doi.org/10.1080/0161956X.2015.1022384

Byun, S.-Y., Meece, J. L., & Agger, C. (2017). Predictors of college attendance patterns of rural youth. *Research in Higher Education, 58*(8), 817–842. https://doi.org/10.1007/s11162-017-9449-z

Crisp, G., McClure, K. R., & Orphan, C. M. (2021). Introduction: Broadly accessible colleges and universities. In G. Crisp, K. McClure, & C. Orphan (Eds.), *Unlocking opportunity through broadly accessible institutions*. Routledge. https://doi.org/10.4324/9781003097686-2

Dotzel, K. R. (2017). Do natural amenities influence undergraduate student migration decisions? *The Annals of Regional Science, 59*, 677–705. https://doi.org/10.1007/s00168-016-0765-6

Doyle, W. R. (2020). *Throwing out the "recession playbook" for higher education: The need for joint federal–state policy in the wake of COVID-19*. Third Way. https://www.thirdway.org/report/throwing-out-the-recession-playbook-for-higher-education-the-need-for-joint-federal-state-policy-in-the-wake-of-covid-19

Duca, L. M., Coyle, J., McCabe, C., & McLean, C. A. (2020, November 20). COVID-19 stats: COVID-19 incidence, by urban-rural classification—United States, January 22–October 31, 2020. *Morbidity and Mortality Weekly Report, 69*(46), Article 1753. https://doi.org/10.15585/mmwr.mm6946a6

Fulbright-Anderson, K., Auspos, P., & Anderson, A. (2001). *Community involvement in partnerships with educational institutions, medical centers, and utility companies*. Aspen Institute. https://web.archive.org/web/20221103004205/https://www.aspeninstitute.org/publications/community-involvement-partnerships-educational-institutions-medical-centers-and-utility

Gardner-Cook, R. (2025, October 27). The real demographic crisis isn't national—it's regional. *Education Advisory Board*. https://eab.com/resources/blog/enrollment-blog/the-real-demographic-crisis-isnt-national-its-regional/.

Gibbs, R. (1998). College completion and return migration among rural youth. In R. Gibbs, P. Swaim, & R. Teixeira (Eds.), *Rural education and training in the new economy: The myth of the rural skills gap* (pp. 61–80). Iowa State University Press.

Goddard, J., Coombes, M., Kempton, L., & Vallance, P. (2014). Universities as anchor institutions in cities in a turbulent funding environment: Vulnerable institutions and vulnerable places in England. *Cambridge Journal of Regions, Economy and Society*, 7(2), 307–325. https://doi.org/10.1093/cjres/rsu004

Grawe, N. D. (2018). *Demographics and the demand for higher education*. Johns Hopkins University Press.

Harris, M., & Holley, K. (2016). Universities as anchor institutions: Economic and social potential for urban development. In M. B. Paulsen (Ed.), *Higher education: Handbook of theory and research* (Vol. 31, pp. 393–439). Springer. https://doi.org/10.1007/978-3-319-26829-3_8

Hillman, N., & Weichman, T. (2016). *Education deserts: The continued significance of "place" in the twenty-first century* (Viewpoints: Voices From the Field). American Council on Education. https://www.acenet.edu/Documents/Education-Deserts-The-Continued-Significance-of-Place-in-the-Twenty-First-Century.pdf

Hodges, R. A., & Dubb, S. (2012). *The road half traveled: University engagement at a crossroads*. Michigan State University Press.

Hughes, R., Kimball, E., & Koricich, A. (2019). The dual commodification of college-going: Individual and institutional influences on access and choice. In M. B. Paulsen & L. W. Perna (Eds.), *Higher Education: Handbook of Theory and Research* (Vol. 34, pp. 415–477). Springer.

Institute of Museum and Library Services. (2018). *Museum data files* [Data set]. https://www.imls.gov/research-evaluation/data/museum-data-files

Irvin, M., Byun, S.-Y., Smiley, W. S., & Hutchins, B. C. (2017). Relation of opportunity to learn advanced math to the educational attainment of rural youth. *American Journal of Education, 123*(3), 475–510. https://doi.org/10.1086/691231

Junod, A. N., Salerno, C., & Scally, C. P. (2020). Debunking three myths about rural America. *Urban Institute*. https://www.urban.org/urban-wire/debunking-three-myths-about-rural-america

Khullar, D. (2020, December 15). America is running out of nurses. *The New Yorker*. https://www.newyorker.com/science/medical-dispatch/america-is-running-out-of-nurses

Koricich, A., Chen, X., & Hughes, R. (2018). Understanding the effects of rurality and socioeconomic status on college attendance and institutional choice in the United States. *Review of Higher Education, 41*(2), 281–305. https://doi.org/10.1353/rhe.2018.0004

Koricich, A., Sansone, V. A., Fryar, A. H., Orphan, C. M., & McClure, K. R. (2022). *Introducing our nation's rural-serving postsecondary institutions: Moving toward greater visibility and appreciation*. Alliance for Research on Regional Colleges. https://www.regionalcolleges.org/project/ruralserving

Koricich, A., Tandberg, D., Bishop, B., & Weeden, D. (2020). Doing the same (or more) with less: The challenges regional public universities face in serving rural populations. *New Directions for Higher Education, 2020*(190), 59–70. https://doi.org/10.1002/he.20367

Latterman, K., & Steffes, S. (2017). Tackling teacher and principal shortages in rural areas. *LegisBrief, 25*(40). https://web.archive.org/web/20171027055848/https://www.ncsl.org/research/education/tackling-teacher-and-principal-shortages-in-rural-areas.aspx

Leo, A., & Wilcox, K. (2020, September 10). Spotlighting cultural responsiveness in rural positive outlier schools. *NYKids*. https://ny-kids.org/spotlighting-cultural-responsiveness-in-rural-positive-outlier-schools/

Loeb, S., Dynarski, S., McFarland, D., Morris, P., Reardon, S., & Reber, S. (2017). *Descriptive analysis in education: A guide for researchers* (NCEE 2017–4023). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. https://eric.ed.gov/?id=ED573325

Loh, T. H., Goger, A., & Liu, S. (2020). *"Back to work in the flames": The hospitality sector in a pandemic*. Brookings Institution. https://www.brookings.edu/blog/the-avenue/2020/08/20/back-to-work-in-the-flames-the-hospitality-sector-in-a-pandemic/

Maxim, R., & Muro, M. (2020). *Restoring regional public universities for recovery in the Great Lakes*. Lumina Foundation. https://luminafoundation.org/wp-content/uploads/2020/07/resoring-regional-public-universities.pdf

Maxim, R., & Muro, M. (2021). *Supporting distressed communities by strengthening regional public universities: A federal policy proposal*. Brookings Institute. https://www.brookings.edu/articles/supporting-distressed-communities-by-strengthening-regional-public-universities-a-federal-policy-proposal/

Miller, M. T., & Tuttle, C. C. (2007). Building communities: How rural community colleges develop their communities and the people who live in them. *Community College Journal of Research and Practice, 31*, 117–127. https://doi.org/10.1080/10668920500441689

Mitchell, T. (2020, December 2). [Letter to Congressional leaders]. American Council on Education. https://www.acenet.edu/Documents/Letter-Congressional-Leaders-COVID-Relief-120220.pdf

Mueller, T. J., McConnell, K., Burow, P. B., Pofahl, K., Merdjanoff, A. A., & Farrel, J. (2020). Impacts of the COVID-19 pandemic on rural America. *PNAS, 118*(1), Article e2019378118. https://doi.org/10.1073/pnas.2019378118

Murakami, K. (2020, December 21). Congressional deal would give higher ed $23B. *Inside Higher Ed*. https://www.insidehighered.com/news/2020/12/22/congressional-agreement-covid-19-would-give-higher-ed-23-billion

National Center for Education Statistics. (2020). *Integrated Postsecondary Education Data System* (IPEDS) [Data set]. U.S. Department of Education. https://nces.ed.gov/ipeds/

North Carolina Rural Health Research Center. (2020, May). *Most rural hospitals have little cash going into COVID* (Findings Brief, NC Rural Health Research Program). The University of North Carolina at Chapel Hill. https://www.shepscenter.unc.edu/product/most-rural-hospitals-have-little-cash-going-into-covid-19/

Orphan, C. M., & McClure, K. R. (2019). An anchor for the region: Examining a regional comprehensive university's efforts to serve its rural, Appalachian region. *Journal of Research in Rural Education, 35*(9), 1–19. https://doi.org/10.26209/jrre3509

Parker, T. (2016). *Low-education counties are mostly rural and concentrated in the South and Southwest*. U.S. Department of Agriculture: Economic Research Service. https://www.ers.usda.gov/data-products/charts-of-note/chart-detail?chartId=78796

Plaut, J., Cress, C., Ikeda, E., & McGinley, P. (2013). *Partnering in tough times: Service-learning for economic vitality*. California Campus Compact. https://leadcalifornia.org/partnering-in-tough-times-cacc/

Pope, D. G., & Pope, J. C. (2009). The impact of college sports success on the quantity and quality of student applications. *Southern Economic Journal, 75*(3), 750–780. https://doi.org/10.1002/j.2325-8012.2009.tb00930.x

Provasnik, S., KewalRamani, A., Coleman, M., Gilbertson, L., Herring, W., & Xie, Q. (2007). *Status of education in rural America* (NCES 2007-040). National Center for Education Statistics. https://nces.ed.gov/pubs2007/2007040.pdf

Rosenboom, V., & Blagg, K. (2018, February 3). *Disconnected from higher education: How geography and internet speed limit access to higher education*. Urban Institute. https://www.urban.org/research/publication/disconnected-higher-education

Sanders, A. (2025). *Atlas of rural and small-town America – Documentation*. U.S. Department of Agriculture: Economic Research Service. https://www.ers.usda.gov/data-products/atlas-of-rural-and-small-town-america/documentation#lowemp2015

Sansone, V. A. (2023). Federal-state partnerships: Why centering support for rural, regional, and minority-serving institutions can improve college affordability and student success in the U.S. In *Paving the path to debt-free college* (pp. 42–61). The Institute for College Access and Success. https://ticas.org/affordability-2/student-aid/federal-state-partnerships/paving-the-path-to-debt-free-college/

Sansone, V. A., Sparks, C. S., & Cano-McCutcheon, P. (2020). Metro and non-metro variation in postsecondary enrollment: The role of race, ethnicity, and residential location in Texas. *Journal of Critical Thought and Praxis, 9*(1). https://doi.org/10.31274/jctp.11013

Serang, F., Thompson, J. P., & Howard, T. (2013). *The anchor mission: Leveraging the power of anchor institutions to build community wealth*. The Democracy Collaborative. https://institute.coop/sites/default/files/resources/006%202013_Serang_The%20Anchor%20Mission%20Leveraging%20the%20Power%20of%20Anchor%20Institutions%20to%20Build%20Community%20Wealth.pdf

Slater, L. Z. (2023). *Health and older adults in rural America*. Hartford Institute for Geriatric Nursing. https://hign.org/news/hign-news/health-and-older-adults-rural-america

Sowl, S., & Crain, A. (2021). A systematic review of research on rural college access since 2000. *The Rural Educator, 42*(2), 16–34. https://doi.org/10.35608/ruraled.v42i2.1239

Taylor, H. L., Jr., & Luter, G. (2013). *Anchor institutions: An interpretive review essay*. Anchor Institutions Task Force at MARGA Incorporated. https://web.archive.org/web/20160325094216/https://www.margainc.com/files_images/general/Literature_Review_2013.pdf

Thiede, B., Greiman, L., Weiler, S., Beda, S. C., & Conroy, T. (2017, March 17). 6 charts that demonstrate the divide between rural and urban America. *News Hour*. https://www.pbs.org/newshour/nation/six-charts-illustrate-divide-rural-urban-america

University of Wisconsin Population Health Institute. (2022). *County Health Rankings & Roadmaps*. https://www.countyhealthrankings.org/sites/default/files/media/document/2022%20County%20Health%20Rankings%20Data%20-%20v1.xlsx

U.S. Census Bureau. (2021). Selected economic characteristics. *2021 American Community Survey 5 Year Estimates Data Profiles (DP03)*. U.S. Department of Commerce. Retrieved from https://data.census.gov/table/ACSDP5Y2021.DP03?t=Employment:Employment+and+Labor+Force+Status&g=050XX00US72035

U.S. Census Bureau. (2022). Selected economic characteristics. *2022 American Community Survey 5 Year Estimates Data Profiles (DP03)*. U.S. Department of Commerce. Retrieved from https://data.census.gov/table/ACSDP5Y2022.DP03?t=Employment:Employment+and+Labor+Force+Status&g=050XX00US72035.U.S. Department of Agriculture. (2020). Business and industry. https://www.ers.usda.gov/topics/rural-economy-population/business-industry/

U.S. Department of Agriculture Economic Research Service. (2018). *Shifting geography of population change*. https://web.archive.org/web/20250202022153/https://www.ers.usda.gov/topics/rural-economy-population/population-migration/shifting-geography-of-population-change

U.S. Department of Education. (2020). *Native American–Serving Nontribal Institutions Program*. https://www.ed.gov/grants-and-programs/grants-special-populations/grants-native-americans-alaskan-natives-and-pacific-islanders/native-american-serving-nontribal-institutions-program

U.S. Department of Health and Human Services. (2020, April 22). *HHS announces additional allocations of CARES Act provider relief fund* [Press release]. https://web.archive.org/web/20200422212019/https://www.hhs.gov/about/news/2020/04/22/hhs-announces-additional-allocations-of-cares-act-provider-relief-fund.html

U.S. Small Business Administration. (n.d.). *Small business development centers (SBDC)*. https://www.sba.gov/local-assistance/resource-partners/small-business-development-centers-sbdc#find-an-sbdc-in-your-area

Webber, H., & Karlström, M. (2009). *Why community investment is good for nonprofit anchor institutions*. Chapin Hall at the University of Chicago. https://web.archive.org/web/20120610031115/http://www.chapinhall.org/sites/default/files/Anchor_Paper_04_20_09_0.pdf

Weisner, L., Otto, H. D., & Adams, S. (2020). *Issues in policing rural areas: A review of the literature*. Illinois Criminal Justice Information Authority. https://icjia.illinois.gov/researchhub/articles/issues-in-policing-rural-areas-a-review-of-the-literature

White House. (2022). *Bipartisan infrastructure law rural playbook*. https://bidenwhitehouse.archives.gov/build/resources/rural/

Whitford, E. (2020, April 21). Can public college systems stave off closures? *Inside Higher Ed*. https://www.insidehighered.com/news/2020/04/22/financial-peril-prompting-

calls-close-some-public-college-campuses-systems-can-often

Whyte, L. E. (2020, July 16). *Exclusive: White House document shows 18 states in coronavirus 'red zone.'* The Center for Public Integrity. https://publicintegrity.org/health/coronavirus-and-inequality/exclusive-white-house-document-shows-18-states-in-coronavirus-red-zone-covid-19/

Yan, W. (2002). *Postsecondary enrollment and persistence of students from rural Pennsylvania*. Center for Rural Pennsylvania.

Appendix. List of Rural Public Colleges

Adams State University
Alcorn State University
Appalachian State University
Arkansas Tech University
Bemidji State University
Black Hills State University
Bluefield State College
Central State University
Central Washington University
Chadron State College
Concord University
Dakota State University
Delta State University
Dickinson State University
East Central University
Eastern Illinois University
Eastern Kentucky University
Eastern New Mexico University Main Campus
Eastern Oregon University
Eastern Washington University
Elizabeth City State University
Emporia State University
Fairmont State University
Ferris State University
Fort Hays State University
Fort Valley State University
Georgia Southern University
Georgia Southwestern State University
Glenville State College
Grambling State University
Henderson State University
Humboldt State University
Indiana University–East
Kentucky State University
Southern Utah University
Southwest Minnesota State University
Southwestern Oklahoma State University
Stephen F Austin State University
Sul Ross State University
SUNY College at Brockport
SUNY College at Plattsburgh
SUNY College of Agriculture and Technology at Cobleskill
SUNY College of Technology at Canton
SUNY Oneonta
Lake Superior State University
Langston University
Lock Haven University
Louisiana State University–Alexandria
Louisiana Tech University
Mayville State University
Minot State University
Mississippi University for Women
Mississippi Valley State University
Montana State University
Montana State University–Northern
Montana Technological University
Morehead State University
Murray State University
Nevada State College
New Mexico Highlands University
Northeastern State University
Northern Michigan University
Northern State University
Northwest Missouri State University
Northwestern Oklahoma State University
Northwestern State University of Louisiana
Oklahoma Panhandle State University
Oklahoma State University Main Campus
Peru State College
Pittsburg State University
Prairie View A & M University
Rogers State University
Sam Houston State University
Shawnee State University
Shepherd University
South Dakota State University
Southeastern Oklahoma State University
Southern Arkansas University Main Campus
University of West Georgia
University of Wisconsin–Platteville
University of Wisconsin–River Falls
University of Wisconsin–Stevens Point
University of Wisconsin–Stout
University of Wisconsin–Whitewater
University of Wyoming
Valley City State University
Wayne State College
West Liberty University

Tarleton State University
Texas A & M University–Commerce
Texas A & M University–Kingsville
Texas A & M University–Texarkana
The University of Montana–Western
The University of Tennessee–Martin
The University of Virginia's College at Wise
Troy University
University of Alaska Southeast
University of Arkansas at Monticello
University of Central Missouri
University of Hawaii at Hilo
University of Idaho
University of Maine at Augusta
University of Maine at Fort Kent
University of Maine at Machias
University of Maine at Presque Isle
University of Maryland Eastern Shore
University of Minnesota–Crookston
University of Mississippi
University of Nebraska at Kearney
University of North Carolina at Pembroke
University of North Georgia
University of Science and Arts of Oklahoma
University of South Dakota
University of West Alabama
West Texas A & M University
Western Carolina University
Western New Mexico University
Wright State University Lake Campus