Enrollment and Degree Completion
at Rural, Broadly Accessible Institutions in Appalachia and Beyond

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Abstract

This paper examines 10 years of full-time and Pell enrollment and six-year bachelor’s degree completion trends of institutions identified by the Appalachian Regional Commission as serving Appalachia and a sample of rural, broadly accessible institutions (BAIs) nationwide. It includes two primary comparisons: one of rural, BAIs in Appalachia to those located nationwide; and one of rural BAIs to other institutions in the Appalachian region. Findings reveal that Appalachian rural BAIs have higher proportions of full-time enrollments, higher proportions of Pell recipient enrollments, higher graduation rates, and higher Pell recipient graduation rates when compared to rural BAIs nationwide. Following a discussion of these trend analyses, we put forth implications for the field with regard to approaching future research in Appalachia and developing scholarship and policy on rural-serving institutions.
In recent years, researchers and policymakers have given more attention to the disparities that rural communities face, highlighted on the pages of bestsellers (e.g., Vance, 2016) and in the speeches of politicians (e.g., Lamont et al., 2017). In higher education, scholars have increasingly investigated the institutions serving rural communities, which has included efforts to define what it means to be a rural-serving institution (e.g., McClure et al., 2021). However, further scholarly conversations are needed about those institutions located in rural areas and how they compare to institutions located elsewhere, so as to advance understanding of institutions’ roles in addressing spatial disparities.

Other scholars have called for more research on the regions in which institutions are situated (e.g., Baum & Johnson, 2015). Indeed, some regions of the country face more pressing needs than others. When calculated from the poverty threshold set by the U.S. Census Bureau, Appalachia faces higher rates of poverty (15.2%) than the rest of the United States (13.4%), including rates as high as 24.5% in the Appalachian regions of some states (ARC, 2019). As Appalachia seeks to reinvent itself following the decline of industries that once sustained the region, most notably coal mining and manufacturing, the region also faces an uphill battle to deliver education, specifically higher education, to a population that has historically not had a need to rely on it given the prevalence of industries that did not require specialized training (Billings, 1988; Shaw et al., 2004).

The bachelor’s degree attainment in Appalachia stands at 76.8% of the national average (ARC, 2018). Only 22 of the 420 Appalachian counties had percentages of working-age adults who held at least a bachelor’s degree that matched or exceeded the national average, and all of those were either metro areas or were home to a four-year college or university (Pollard & Jacobsen, 2019). Meanwhile, the
percentage of adults with at least a bachelor’s degree was less than 10% in 29 counties. This pulls into sharper focus the need for both access to and graduation from college for individuals in the region, as well as opportunities for skilled employment within Appalachia.

This paper seeks to address the gaps listed above by examining enrollment and degree completion trends of public, broadly accessible, four-year postsecondary institutions – or what we refer to as rural BAIs. We explore concepts of space, regionality, rurality, and their influence on the higher education experiences for students enrolled at these institutions. In particular, our approach includes comparing rural BAIs in Appalachia to a sample of rural BAIs nationwide, as well as comparing these institutions to other four-year public institutions in the Appalachian region that vary by selectivity and rurality. As a result of these trend analyses, we offer areas of future research about Appalachian higher education and rural-serving institutions, as well as implications we see for policy that our own analysis raises.

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In recent years, scholars have increasingly called for more attention to regional comprehensive institutions and the roles they play in providing access to higher education through accessible admissions policies and affordable tuition (e.g., Orphan, 2018). These institutions often serve populations who would otherwise not access higher education and provide pivotal services for their local communities (McClure, 2018; Orphan & McClure, 2019), despite being chronically underfunded (McClure et al., 2021). In turn, some scholars have recognized these institutions as “the workhorses of a public higher-education system, awarding the bulk of bachelor’s degrees and providing educational opportunities in all corners of a state” (Gardner, 2017, para. 2).

Other scholars have acknowledged a need for more research on institutions and the regions in which the institutions reside (e.g., Baum & Johnson, 2015), with some calling for specific attention to Appalachian institutions themselves and their impact on the Appalachian region (Knight, 2021). Indeed, institutions are often shaped by local forces, as evidenced in their responses to the needs of local economies (Dorrer, 2015) and the ways they navigate various policies and policy directives from
Why Study Appalachian Higher Education

Since 2016, Appalachia and rural areas at-large have received increased attention, particularly because of their role in recent presidential elections (Monnat & Brown, 2017). Political discourse surrounding these areas has underscored the decline of regional industries, making it ever more pressing that we tend to rural communities and bolster their educational pathways moving forward. As mentioned, poverty trends tend to be higher in Appalachian communities (ARC, 2019). Furthermore, when it comes to bachelor’s degree attainment in working adults (ages 25-64), Appalachia lags behind the U.S. average by...
7%, largely driven by disparities in rural areas given that large metro areas in Appalachia outperform the U.S. average by 1.5% (Pollard & Jacobsen, 2019).

Moreover, research indicates that students have an increased likelihood of attending college if any member of the family has done so (Wilbur & Roscigno, 2016); however, this creates challenges in light of the fact that the percentage of adults with postsecondary credentials is lower for much of Appalachia (ARC, 2018; Chenoweth & Galliher, 2004; Knight, 2021; Shaw et al., 2004; Wright, 2012). The lower percentage of adults with postsecondary credentials raises serious concerns about the accessibility of cultural and social capital available for Appalachian students who may otherwise consider higher education. In addition, financial concerns underlie the entire college process from the initial search for the right institutional fit to graduation/graduate school.

The case of Appalachian Ohio provides a glimpse into how these concerns may be particularly prevalent for the Appalachian region, as high school seniors in the Appalachian regions of Ohio ranked inadequate financial resources as the biggest barrier to college, closely followed by a lack of information about financial aid and the desire for an income immediately following high school (VSLPA, 2008). In addition, the percentage of high school seniors indicating that they cannot afford college increased from 32% to 37% from 1992 to 2008 (VSLPA, 2008). Appalachian parents report similar financial reservations and stressors, and of those surveyed, approximately a third had not taken any steps to help finance their child’s education (VSLPA, 2008). The culmination of these challenges, as well as one of the author’s own identification with the region, sparked our focus on Appalachia.
There is no consensus on what counts as Appalachia, or where specifically the line gets drawn, and one is likely to get as many responses to that question as there are folks who are asked. Recognizing that Appalachia is a massive expanse of land that is highly diverse in terms of geography as well as demographics, the Appalachian Regional Commission (ARC) established the most common definition and the one that we use for this paper. According to the ARC, the boundaries of Appalachia, covering a total of 420 counties, include the entire state of West Virginia and portions of 12 other states: Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, and Virginia.
Methods

This paper explores rural BAIs in Appalachia, and does so by examining differences between those institutions located in Appalachia and those located elsewhere on multiple measures of student enrollment and graduation rates over time.

For the purposes of this paper, we utilized data from two organizations with similar acronyms but that should not be confused with one another. The Appalachian Regional Commission (ARC) – a product of the War on Poverty programs in the 1960s – is a federal-level commission that works with member states to focus on spurring economic growth in the Appalachian region. The Alliance for Research on Regional Colleges (ARRC) – the organization sponsoring this report – is a research collaborative and resource hub based at Appalachian State University, driven by a mission to increase appreciation for and understanding of regional colleges and their contributions to opportunity and community wellbeing.

For the first part of our data collection, we drew inspiration from prior scholars (McClure et al., 2021) to focus on rural BAIs – a subset of broadly accessible, regional colleges that often sustain local economies and fuel community development in rural areas. While McClure and colleagues (2021) utilized several criteria to narrow their focus, one key criteria worth mentioning was that they examined “undergraduate-focused colleges that admit over 80% of applicants and mostly enroll in-state students” (p. 5). In the end, McClure and colleagues (2021) narrowed their sample to 118 rural BAIs, which served as a starting point for our analysis.

We then sought out a comprehensive list of postsecondary institutions in Appalachia, turning to the ARC, which compiles a list of postsecondary institutions that serve Appalachia and thus provides a useful standard
metric for higher education scholars. After removing all for-profit and non-degree granting institutions, 293 degree granting institutions of substantial heterogeneity remained. We then narrowed this list down to 90 public four-year institutions that serve Appalachia. Of note, there were 15 institutions that were identified as both rural BAIs and as Appalachian institutions, which served as a third subset of our data.

Finally, we turned to IPEDS to collect data on the designated institutions. We collected ten years of data, 2010-2019, for all variables but the six-year bachelor’s degree graduation rates for Pell grant recipients, for which IPEDS only had data available beginning in 2016. Once collected, we averaged the yearly figures for all three groups of institutions – those defined by ARRC as rural BAIs (n=118), those institutions defined by the ARC as serving Appalachia (n=90), and those institutions that matched both parameters (n=15) – and plotted the averages so that any possible trends would emerge.

**Results**

We break our analyses and discussion into two sections. First, we explore how Appalachian rural BAIs compare to rural BAIs nationwide. Then, we turn to a deeper exploration of enrollment and degree completion trends at institutions within Appalachia.
Appalachian Rural BAIs and Rural BAIs Nationwide

In regard to full-time enrollments, the first graph shows that both lines appear to trend in much the same direction and at the same rate; however, full-time enrollment at Appalachian schools remains 5-7% higher than rural BAIs nationwide. One explanation for these differences may be the culture of Appalachia, wherein college/university is often thought of as a residential experience – and one that may be framed in a negative way as students may be seen as leaving their community behind to pursue college (Briggs, 2010; Hektner, 1995; Wallace & Diekroger, 2000). Additionally, the lack of internet access in Appalachia (Pollard & Jacobsen, 2019) may limit online enrollments, which often make up a sizable proportion of part-time students across the nation (Ginder et al., 2019).

Similarly, in the second graph, Pell grant enrollments are higher at rural BAIs in Appalachia than those nationwide, representing alignment with the lower income and higher poverty rates of the region (U.S. Census Bureau, 2017). In the third graph, Appalachian rural BAIs have a slight edge over rural BAIs nationwide in completion rates among Pell recipients. Although the difference in Pell recipient graduation rates is rather small, it is possible that this finding reflects the fact that the Pell grant goes farther for students in Appalachia, as the costs of these colleges in Appalachia are lower than many other regions of the U.S. (Huelsman, 2018). Indeed, there has been much
debate as to whether the Pell grant is enough to support students in more expensive parts of the U.S., such as New Jersey or Massachusetts, where the average cost of attendance at public four-year institutions is more than $25,000 a year (Huelsman, 2018). While this is only one hypothesis, regional differences in the graduation rates of Pell recipients may serve as further evidence of the Pell grant helping more in certain regions as compared to others.

In the fourth graph, it is evident that the overall six-year bachelor’s degree graduation rate is also higher at Appalachian rural BAIs compared to rural BAIs nationwide. This gap may be attributed to either of the previously mentioned results, given that full-time students have higher retention rates compared to those who attend part-time (Ginder et al., 2019), Appalachian students are more likely to attend full-time, and the Pell grant may go farther for students at Appalachian institutions. However, it is also possible that rural BAIs in Appalachia are serving students in ways that warrant further investigation. Indeed, it seems likely that the values traditionally valued in Appalachia like the importance of family, community, and egalitarianism may create a more supportive educational environment for students than those found in areas and institutions that prize individualism and competition (Howley et al., 1996). These are among the environmental contexts and pedagogical approaches that may be leading to the successes for students enrolled in Appalachian institutions that must be explored.
We then turned our trend analysis to Appalachia as a region, examining both those colleges recognized as rural BAIs and those not. Upon further inspection of those Appalachian institutions not classified as rural BAIs, we realized there is significant diversity in their degree of rurality; therefore, we decided to disaggregate those Appalachian institutions not categorized as BAIs (which we refer to as non-BAIs for short) into those identified by the ARC as rural/town status (rural non-BAIs) and those of city/suburb status (urban non-BAIs) and repeat the same comparisons to help further illuminate the nuanced expressions of defining institutions by their degree of rurality.
In regard to full-time and part-time enrollments, as seen in the first graph, it was obvious that urban non-BAIs enrolled much higher proportions of full-time students, compared to rural BAIs and non-BAIs. This trend is not necessarily surprising as rural students may be more likely to have to work while in school to support their families due to coming from less-privileged socioeconomic backgrounds (Byun et al., 2012). However, rural BAIs also had higher full-time enrollments than other institutions still located in rural/small town areas. As the original selection criteria for rural BAIs (see: McClure et al., 2021) did not include items pertaining to full-time or part-time status, this finding calls into question what items in the selection criteria may contribute to such a difference. One possible explanation could be that rural BAIs were partly identified by having “at least one undergraduate program [that] can be completed completely online” (McClure et al., 2021, p. 14). In other words, rural BAIs had more full-time enrollments due to these institutions having flexible enrollment options (that is, online enrollment) that other rurally-located institutions (rural non-BAIs) lacked.

Similarly, a noticeable gap emerged between those institutions located in city/suburban areas and those located in rural/small town areas (including rural BAIs), as rurally-located institutions consistently enrolled the highest proportions of Pell recipients. As expected, rural BAIs enrolled the highest proportion, given the inclusion of Pell recipients in the selection criteria for rural BAIs; however, the narrow gap between rural BAIs and non-BAIs indicates many similarities between these institutions. As will be discussed later, this finding could have significant impacts for policies that are seeking to identify and invest in those institutions enrolling underserved populations, as firm cut-offs for determining what institutions qualify as “broadly accessible” or “rural serving” could unintentionally overlook institutions doing important work.

When we turn to the six-year bachelor’s degree completion rates, both among Pell recipients and across all students, we see a different story, as rural BAIs continue to have rates well below that of other Appalachian institutions. Of particular interest is the performance of rural non-BAIs, as these institutions outperform both the rural BAI group and those institutions located in cities/suburbs in recent years. This group may be of particular interest in future research, as they serve a relatively similar amount of Pell recipients to rural BAIs but have much higher graduation rates. Given that other research has increasingly examined best practices for retaining Pell grant students (e.g., Kelchen, 2017; Rossman, 2017; Whistle & Hiler, 2018), there may be much to learn from this group of institutions when it comes to serving rural groups and less-privileged groups (including Pell grant recipients) at-large.
Based on the trends seen in this paper, a few important implications emerge. First, stark differences in student enrollment and degree completion remain between those institutions located in Appalachia and those institutions located elsewhere, even when utilizing the same selection criteria such as in the case of rural BAIs. These differences provide evidence for further research on how regions impact institutions therein, especially in those regions most in need. Future scholarship should consider how regional differences influence institutions’ abilities to serve rural students, especially in light of regional variations in college costs (e.g., Huelsman, 2018), the adoption of various types of performance-based funding mechanisms in certain regions of the United States (e.g., Ortagus et al., 2020), and stark differences in public funding across states (e.g., Pew Charitable Trusts, 2019; State Higher Education Executive Officers Association, 2021).
Second, differences remain between urban institutions in Appalachia and those in rural areas, even beyond those defined as rural BAIs. For instance, even after removing rural BAIs from consideration, rural non-BAIs demonstrated higher proportions of Pell recipients and part-time enrollees than urban non-BAIs. Perhaps these results are reflective of the employment opportunities and poverty levels in rural areas, which may suggest that students in rural Appalachia are more likely than their urban and national counterparts to attend part-time and possibly be nontraditional as well. Future scholarship should explore students’ age and employment status while in school, as well as their socioeconomic status for which Pell recipient status is an imperfect measure (Delisle, 2017).

Finally, we must be careful in our constructions of what constitutes a rural BAI – or even what constitutes a rural-serving institution more generally. There is emerging research in this area, including by the Alliance for Research on Regional Colleges and the Student Success through Applied Research Lab at the University of Wisconsin-Madison. However, as we consider how we might leverage this research to inform policy, it is vital that we critically reflect on what it means to serve rural populations, such that we do not rely on such binary definitions. For example, the selection criteria of rural BAIs included items such as whether online degree options were offered, which may exclude those less-resourced rural institutions that are doing significant work providing access to students who otherwise may not attend college. Future scholarship should further negotiate definitions of rural BAIs with considerations of rurally-located institutions, while policymakers must interrogate definitions of servingness if they are to continue advocating for performance-based approaches to funding.


References


