



# Statistical Portrait of Rural Education in America

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A M E R I C A N   E N T E R P R I S E   I N S T I T U T E

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What does “rural” mean? And how does rural life differ from life in cities, suburbs, or even small towns? Those can be difficult questions to answer. Rural-ness isn’t an aspect that many people find easy to describe, even if they know it when they see it. At a minimum, rural areas are defined by a low population density and an economy grounded—at least to some extent—in living off the land, through industries such as farming, mining, or timber.

Beyond these basic soft borders, the American idea of rural-ness takes different forms in different contexts. For instance, for those hailing from the West, “rural” might reasonably evoke a picture of sparse desert expanses or mountain frontiers. In contrast, residents of the Midwest would sooner envision rural areas as more distinctly agrarian, with expansive farmland filling open spaces. Still different, for those in the Northeast, “rural” may conjure bucolic rolling hills marked by occasional hamlets. In the South, “rural” may bring to mind the Mississippi delta or Appalachian hill country. Of course, pictures of what “rural” is vary with context, but in each context they stand in stark contrast to urban areas. Whatever a rural area is, it is not a city.

When it comes to rural education, a similar question arises: What does rural education look like? And how does it differ from education in more urbanized areas? The antiquated notion of the one-room schoolhouse is a bygone fixture of an earlier era, but it was a recognizable form—whereas any current notions of rural schools and rural education are fairly amorphous. Some of the same factors that apply to rural areas generally also mark differences for rural schools. Because they're located in sparsely populated areas, rural schools tend to be smaller than their more urban counterparts, and thus struggle to offer as many specialized programs and services. Also, as rural graduates exit high school, their options may have looser links to the urban-centered economies than their urban peers have. Beyond these scant basics, there are few specific differentiators for rural schools; their primary distinction is their general contrast from

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urban schools, which have garnered a disproportionate amount of attention from policymakers, education researchers, and popular media.

This chapter is an effort to sharpen the image of rural education. It draws on a variety of nationally representative data sources to paint a statistical portrait of America's rural schools. On the one hand, this portrait examines common factors that differentiate rural schools from their more urban counterparts. At the same time, it keeps an eye on where and how rural schools are heterogeneous, displaying more than one tendency. Overall, this portrait displays that rural schools enjoy some promising advantages, face particular challenges, and vary considerably from one region to another.

This statistical portrait is presented in four sections. Because it naturally relies on statistics, the first section describes how schools are objectively categorized as rural, urban, and in between. The second section overviews early childhood educational offerings in rural areas, including participation in daycare, preschool, pre-kindergarten, and Head Start. It also looks at the proportion of rural students staying at home, attending center-based care, and variations in family structure. The third section examines rural schools, primarily focusing on public schools. It looks at how many students and schools are located in rural areas, the demographics of those students, and the programmatic offerings of their elementary and secondary schools. The final section examines the outputs and outcomes of students in rural schools. Outputs encompass the *results* of schooling, such as test scores and graduation rates, and the gaps in these outputs. Outcomes deal with the *steps* rural students take after school, including college-going and workforce entry.

Some elements of this portrait will not surprise you. Before school, young children of rural families are more likely to have stay-at-home parents. Rural students attend smaller schools

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with limited extracurricular programs. Rural schools also have relatively few poor and minority students, and their students have above-average test scores and graduation rates. Other elements of this portrait, however, might surprise you. While young rural children have more stay-at-home parents, by the time they are 3 and 4, their early childcare experiences are similar to their urban peers. Rural schools vary substantially across regions, with poor and minority students in the Northeast and Midwest constituting a fraction of the population in the South and West. And while rural students have strong school outcomes on average, they face some limited opportunities after high school. Before touring the varied landscape of rural education, however, we need a definition of what we mean by rural.

#### Defining Rural Areas for Statistical Purposes

The vagaries around the rural concept must yield to an objective form in order to have consistent measurement. Since this chapter draws primarily on data from the National Center for Education Statistics (NCES), their definition of rural is consistent and convenient.<sup>1</sup> Since 2006, NCES has used the same “urban-centric” locale definitions used by the US Census Bureau. Fittingly, under this urban-centric definition, rural areas include all those located outside of places the Census calls “urban.”

The urban umbrella term includes three locales: cities, suburbs, and towns. Each of these is broken into three subtypes: large, midsize, and small. City locales include territories within an urbanized area (which the US Census Bureau defines as an area of 50,000 or more people<sup>2</sup>) and inside a principal city (the largest city in an urbanized area<sup>3</sup>), and the city locale is further divided into large, midsize and small sublevels according to their total populations—more than 250,000; between 100,000 and 250,000; and less than 100,000, respectively. Suburban locales are territories within urbanized areas but outside of principal cities, and are broken into sublevels

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by the same population levels as cities. Towns are areas located outside urbanized areas, but inside urban clusters (which the US Census Bureau defines as areas with between 2,500 and 50,000 people), and are subcategorized by their distance from an urbanized area.

Anything outside of these three urban locales is considered rural. Rural areas are categorized as either “fringe,” “distant,” or “remote” according to their distances from urbanized areas or clusters. Rural fringe areas are nearest to urban locales—less than or equal to 5 miles from urbanized area, or less than or equal to 2.5 miles from an urban cluster. Distant rural areas are more than 5, but less than 25 miles from an urbanized area, or 2.5 to 10 miles from an urban cluster. Remote rural areas are the furthest from urbanized areas, by more than 25 miles, or further than 10 miles from an urban cluster.

While there are important differences between the rural subcategories, the essence of rural-ness in this classification is the distinction from urban places—or in Census parlance, urbanized areas and clusters—and those essential distinctions tend to only grow with distance. For this reason, this chapter uses the entire rural locale instead of rural sublevels. One wrinkle in NCES’s classification system is that while every *school* can be specifically accounted for as belonging to one locale, school *districts* can include schools from different locale classifications. For example, a district classified as “suburban” might include a number of individual schools that are classified as “rural.” Despite the partial mismatch between the locale of some schools and the districts they belong to, there are valuable reasons to compare school districts by their predominant locale. For instance, districts, rather than schools, are the ones that often deal with issues like transportation or providing opportunities for advanced course taking, which pose unique challenges in rural areas. In order to compare districts by locale, the chapter uses NCES

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district categorizations which assign a locale based on the predominant locale the district's schools.

Of course, this classification system groups together a large number of schools into each locale category that are far from homogeneous. To illustrate differences between locales and across rural areas, select data points are broken out by locale to first illustrate rural differences, and then across regions to display the variation between one rural area and another. Any classification system is bound to group schools that are heterogeneous, and examining differences across regions is an effort to keep that rural diversity from being glossed over.

### Rural Children's Experiences before Entering School

Reams of research have detailed how important family structure and early childhood experiences are to students' readiness for school, and to their future educational outcomes. As such, it makes sense to begin with a portrait of rural education by looking at each of these factors for rural students.

#### Rural Family Structure

According to 2012 data from the NCES Early Childhood Program Participation (ECPP) survey<sup>4</sup>, 79 percent of rural families had two parents at home, slightly more than suburban families (74 percent) and markedly more than families living in towns or cities (70 and 63 percent, respectively). The rural South breaks from the other regions with significantly fewer two-parent households than rural families in other regions (73 percent versus between 81 and 85 percent).

The ECPP data also provide some indications that young children in rural areas receive additional early educational supports at home. For instance, at 22 percent, the proportion of rural 0–3 year olds who were read to by a family member 3 or fewer times a week was lower than

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their peers in other locales. Half of these young rural children were read to an average of once a day, which was well above those in cities or towns. In sum, young children in rural environments have a number of home-based advantages heading into school, compared to those in other locales.

### Rural Early Childcare Arrangements

Given the dispersed population, it can seem logical that rural students' childcare experiences prior to entering kindergarten would differ from those in more population-dense, urban areas. However, rural patterns of childcare arrangements are quite similar to those in more urban locales. According to the ECPP, about 46 percent of rural children aged 0 to 3 stay at home with their parents without weekly alternative childcare arrangements. Roughly 25 percent had weekly center-based care arrangements, including daycares or preschools. About the same percentage have weekly care arrangements with relatives, and 16 percent have weekly arrangements with caregivers not related to them, such as a babysitter or nanny. (Some children have more than one type of arrangement, so these figures do not sum to 100 percent.) Perhaps surprisingly, children aged 0 to 3 in urban and suburban environments have a nearly identical breakdown. Children in towns have a slightly higher percentage that stay home (51 percent) and a slightly lower percentage (18 percent) have weekly center-based care arrangements.

For children aged 0 to 5, the kinds of center-based care families used did not differ substantially between rural and more urban environments. The main difference in center-based care was the percentage in Head Start, a federal program for promoting low-income students' school-readiness. 20 percent of rural 0 to 5-year-olds attended Head Start at some point, which was well below the percentage in cities (30 percent) but above the percentage in both suburbs and towns.

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A somewhat different pattern emerges for older children who are not yet attending kindergarten. Roughly a quarter of rural 4- and 5-year-olds stay at home, which is more the percentages in cities, suburbs, and towns. In 2012, about 65 percent of rural 4- and 5-year-olds had weekly center-based care arrangements, which was similar to their urban peers, but lower than the percentage in either suburbs or towns.

Despite these minor differences, and the childcare challenges that might be assumed in rural areas with little population density, overall the pattern of early childcare arrangements in rural areas are quite similar to those in more urban locales. The distinctions between rural and more urban students once they enter school do not appear to stem from the kinds of childcare arrangements available to rural families.

#### Students at Kindergarten Entry

Children's readiness for school first comes into focus when they become students, and for most that happens as they enter kindergarten. Differences in students' academic readiness are important at this point because, unfortunately, gaps that appear early on are often durable.

At entry, the math and reading skills of kindergartners in rural areas, as measured by the Early Childhood Longitudinal Study of 2011 (ECLS-K),<sup>5</sup> were not measurably different from those in suburban kindergartens. Both rural and suburban kindergartners scored above their peers in town kindergartens. Those differences were not statistically significant, but are worth noting as they widen in later years to become larger and significant. Suburban and rural scores were also higher than those of kindergartners in cities. These differences, however, were large *and* significant—between 11 and 18 percent of a standard deviation in reading and math. These differences presage the gaps between locales that are evident in higher grades.

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Across regions, rural kindergartners' math scores suggested variation that, while seldom statistically significant, also mirror patterns that become larger and significant in later grades. Math scores of rural kindergartners in the South were lower than their peers in the Midwest and Northeast. Kindergartners in the West had relatively low scores in math, but they only differed measurably from kindergartners in the Northeast.

Most of these differences are relatively small, and more meaningful for kindergartners in cities than those in other locales. However, they are important to gauge for rural children because these differences “at the starting gate” of schooling tend to grow in upper grades.

### Rural School Students and Operations

There are many facets to include in a description of rural schools, and no particular order to place them in. This chapter first looks at who attends rural schools—that is, their demographics—and then what rural schools look like in terms of size, operations, and program offerings.

#### Rural Student Race and Ethnicity

Rural schools educate a much higher percentage of white students—and lower percentages of minority students—than schools in towns, suburbs, or cities. In 2014–15, 72 percent of students attending rural schools were non-Hispanic white, far above town and suburban schools (64 and 51 percent, respectively), and double the percentage for urban schools (29 percent).<sup>6</sup> Hispanic students were the second largest ethnic group across all locales, making up 13 percent of rural students. Just 19 percent of town school's populations were Hispanic, accounting for almost all of the difference in non-white students between town and rural schools. Hispanic students made up twice the percentage in suburban than in rural schools, and urban schools had nearly three times the percentage of Hispanic students than rural schools (25

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and 36 percent, respectively, versus 13 percent for rural schools). Rural and town schools had 9 and 10 percent black students, respectively, while suburban and urban schools had larger shares (14 and 24 percent, respectively). Rural and town schools also had markedly lower percentages of Asian students, at 1 percent each, than urban and suburban schools (about 6 percent). Roughly 5 percent of students across all locales were from other racial categories.

Rural schools had the highest percentages of white and the lowest percentages of minority students across *locales*, but these demographics differ dramatically for rural areas across *regions*. Nationally, 28 percent of rural students were non-white, but the Northeast and Midwest had far smaller proportions of minority students, at just 12 percent. In comparison, schools in the rural South had three times that proportion, at 36 percent, and in the West, the multiple approached four, at 45 percent. Black students constituted the highest proportion of non-white rural students in the South, at 16 percent, far above the overall rural average of 9 percent. More pointedly, the next highest regional rural black percentage was just 3 percent. Hispanic percentages also varied substantially, making up about 30 percent of rural students in the West, which is double the percentage in the South (14 percent), and six times the proportion in the rural Northeast or Midwest (about 5 percent).

In relative terms, rural schools are disproportionately white compared to more urban schools, both overall and within regions. However, in an absolute sense, rural schools are far more diverse in some regions than others.

#### School Socioeconomic Status

Students in rural districts also display substantial differences in socioeconomic status both compared to those in more urban districts, and to other rural districts across regions. The Stanford Education Data Archive (SEDA),<sup>7</sup> which includes publicly available data on all districts

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in the country, demonstrates variation in multiple aspects of socioeconomic status, which is strongly related to school resources and outcomes. Using a standardized cumulative measure of socioeconomic status (with a mean of zero and a standard deviation [SD] of one), students in urban districts were far poorer than other locales (33 percent of a SD below average), while those in town districts were moderately poorer (20 percent of a SD below average). Perhaps unsurprisingly, suburban districts stand in stark contrast to urban schools, with a much higher socioeconomic status (over half of a SD *above* average). Perhaps more surprising, rural districts were just above average overall, but well above both urban and town districts (by less than a tenth of a SD).

However, regional differences in rural district socioeconomic status were also stark. In the Northeast, the urban-rural divide is the largest, with urban districts two-thirds of a SD below average and rural districts a full half of a SD above—in total, well over a SD apart. The Midwest shows a similar pattern, but has an urban-rural gap almost half the size (two-thirds of a SD). In contrast, urban-rural gaps in the South and West are considerably narrower.

Poverty rates—the proportion of the population that is below the federal poverty line<sup>8</sup>—reflect similar patterns. On average, urban districts have a poverty rate of 20 percent, and urban districts in all four regions are within three points of that average. Among rural districts, the average is 15 percent, but this varies considerably more across regions. For example, rural districts in the Northeast have a 10 percent poverty rate, which is lower than any other locale, including suburbs. In the South, the rural poverty rate is just slightly above that of urban districts (21 versus 20 percent), but twice the rural poverty rate in the Northeast. Poverty rates in the Midwest and West lie at 13 and 17 percent, respectively.

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Free lunch data<sup>9</sup>—the most common metric for poverty directly tied to schools—also mirrors these patterns. Similar to the socioeconomic status data above, within regions, the Northeast and Midwest showed the widest urban-rural divides for free and reduced meal rates, while gaps in the South and West were narrower. Looking *across* regions at rural schools, the differences are even more apparent. Less than one-third of rural students in the Northeast receive free lunch, compared to more than half of rural students in the South.

Across each of these socioeconomic measures, it is clear that rural schools and districts are advantaged relative to their town, and especially their urban, counterparts. Again, despite that relative advantage, rural schools are far from uniform socioeconomically, with the West, and particularly the South, faring worse than the Midwest and Northeast.

#### Students with Disabilities and English Language Learners

Two other student characteristics are particularly important in K–12 schooling: students with disabilities and students who are English language learners (ELLs). Across the nation, according to data on all public schools from the 2013–14 Civil Rights Data Collection,<sup>10</sup> about 12 percent of students are designated with a disability under the Individuals with Disabilities Education Act (IDEA). That percentage does not vary across locales. However, there are slight regional differences in the percentages of special education students. The Northeast and Midwest have slightly above average percentages of special education students, while the West and South have slightly lower percentages. That same pattern of regional variation applies to rural schools, but appears to be an attribute of regions, not of rural schools.

Almost 10 percent of students across the nation are English language learners, according to CRDC data. Rural schools report lower ELL percentages than other locales, at 4 percent, and those percentages rise in towns, suburbs, and urban areas (7, 10, and 15 percent, respectively).

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There is also regional variation in the overall percentage of ELL students across all locales, with markedly higher percentages in the West (17 percent), below average percentages in the Northeast and Midwest (6 percent each), and the South near the national average (9 percent).

Rural schools have the lowest percentages of ELL students across all regions, but the differences between regions are dramatic. Only 1 percent of rural students in the Northeast are ELL students, doubling to only 2 percent in the rural Midwest. That percentage more than doubles again to 5 percent of students in the rural South, and again to 12 percent in the rural West. Again, rural schools stand apart from their more urban counterparts, but maintain significant diversity, with above average rates of ELL students in the West, and half the average rate or lower in other regions.

#### Rural Family Involvement in Schools

Beyond demographics, rural students' families show differences from families in other locales in terms of their involvement in school and communal events, despite their relative lack of population density. In other words, rural families seem more involved at school and church than families in other locales, despite the longer average travel times involved in rural areas. According to 2012 data from the Parent and Family Involvement (PFI) Survey,<sup>11</sup> rural families report higher rates of parent involvement at school for most events asked about—including PTA meetings, parent-teacher conferences, fundraisers, school-based committees, or class or school events—than families in other locales. These measures of parental engagement at school suggest that, despite the presumably greater travel distances from schools that rural families face, their engagement does not suffer.

Other reported activities from the PFI data back this notion. On the one hand, rural families reported percentages of their K–12 students that visited libraries, bookstores, museums,

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concerts, and other place-based activities were smaller than those residing in cities or suburbs across the board, and smaller than most reports from families in towns. These reports are consistent with the notion that population density works against place-based activities for rural families. However, the case is not the same for school-based activities listed above, nor is it the case for attending churches or religious institutions or athletic and sporting events. These signals are certainly distinct from demographics, but layer on top of differences in rural family structure and frequency of reading to young children to suggest that rural families may provide some advantages in terms of involvement and social-capital building compared to those in more urban locales.

#### School Size and Offerings

In 2014–15—the most recent data available from NCES’ Common Core of Data,<sup>12</sup>—more than 9.2 million students attended rural elementary and secondary schools across the United States. They constituted 18 percent of the nation’s students—far above the 11 percent in town schools, but far less than those attending city or suburban schools (30 and 40 percent, respectively). Not surprising given dispersed rural populations, rural schools are smaller than their more urban counterparts, making the proportion of rural schools, 28 percent, much higher than the proportion of students. On average, rural schools serve 344 students, which is smaller compared to those in towns, suburbs, or cities (432, 647, and 581 students, respectively).

Rural school districts are also smaller, containing relatively fewer schools and thus making up a larger share of districts. Over half of the nation’s districts are predominantly rural, while urban districts—which educate a far larger number of students—make up only six percent. Predominately suburban and town districts make up 23 and 18 percent, respectively.

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The smaller size of both rural schools and districts deprive them of some of the economies of scale that their suburban and urban counterparts enjoy. For instance, rural schools have fewer students per teacher, at roughly 14 and a half, than schools in cities, suburbs, or towns—which have just over 16 or 17 students per teacher. However, rural student-to-teacher ratios vary across regions. While rural schools in the Midwest and South are close to the average of 14 and a half, those in the Northeast have lower ratios at about 12 and a half students per teacher. In the West, rural schools have higher ratios at 17 students per teacher. These differences are hard to map because they are composed at once of both rural effects (relatively low student-to-teacher ratios compared to other locales) and regional differences (lower ratios in the Northeast and higher in the West). The important points to remember are that, at the same time, rural areas can differ systematically from more urban ones, and they can still vary substantially across regions.

Small class sizes can be beneficial, of course, but the pattern of resources suggests rural schools are facing constraints that lead to higher costs, rather than making intentional decisions. For instance, the number of pupils per administrative staff (including administrators and administrative support staff) in rural districts, at under 200, was far below that in town, suburban, and urban districts (which approached 300, 350, and 375 pupils per administrator, respectively).

Furthermore, rural schools have fewer specialized staff to serve particular student needs. According to the 2015–16 National Teacher and Principal Survey,<sup>13</sup> the percentage of rural schools employing specialists and instructional coaches (55 percent) was smaller than town schools (60 percent), and substantially smaller than suburban and urban schools (71 and 73 percent, respectively).<sup>14</sup>

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Specialized services are also less available in rural schools. About 55 percent of rural schools offered instruction beyond the normal school day for students who need academic assistance, compared to 68 percent in urban schools. Also, 37 percent of rural schools offered instruction for students seeking academic enrichment or advancement compared to 54 percent of city schools. Only 21 percent of rural and town schools offer daycare for students who need it, while more than twice that percentage of city and suburban schools do so.

Not only are staff and services less specialized, but fewer rural schools offer specializations. About 92 percent of rural schools are considered “regular schools,” compared to 81 percent of urban schools and about 88 percent of suburban and town schools. About 8 percent of city schools and 3 percent of suburban schools offer special emphasis programs—such as special education or career and technical schools—compared to around 1 percent of town and rural schools.

This lack of specialization available in rural schools can also be seen in student coursetaking. For instance, 2009 rural high school graduates earned an average of 2.85 credits in advanced courses, while their peers in urban schools earned 4.2, and those in suburban schools earned 4.6. Rural schools have particular difficulty offering Advanced Placement (AP) courses, and have lagged far behind other locales for years. In 2012, less than two-thirds of rural schools offered AP courses, compared to 77, 82, and 91 percent of town, urban, and suburban schools, respectively.<sup>15</sup> AP course credit-earning reflects these differences, where city and suburban students earned 74 and 94 percent more credits than rural students on average. These same differences exist for foreign language credits (26 and 29 percent higher in city and suburban than rural schools), for honors courses (23 and 53 percent higher), and for calculus (30 and 37

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percent). These extra resources give urban and suburban students a leg up in their efforts to get to college.

To compensate for the lack of onsite opportunities, rural schools often look to alternative offerings for their students. For instance in 2015–16, 33 percent of rural schools offered courses entirely online—a higher proportion than town, city, and suburban schools (22, 17, and 16 percent, respectively).<sup>16</sup> Based on data from the High School Longitudinal Study,<sup>17</sup> among 2009 ninth-graders who were enrolled in college in 2013, more than a third of students in city and suburban schools received college credit in high school, compared to only 26 percent of students in rural schools. However, a higher percentage of college students from rural high schools received college credit from dual-enrollment courses—28 percent, compared to 20 percent or less of students from city and suburban schools. As a result, the percentage of rural students who took no courses for college credit was not significantly different across city, suburban, and rural school graduates.

### School Outcomes for Rural Students

There are two ways to examine student outcomes across locales: by looking at individual students and by looking at school average scores. The best natural source for student data in reading and mathematics is the National Assessment of Educational Progress (NAEP).<sup>18</sup> NAEP provides data on students in 4<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup> grades across the country, and gives representative measures for locales overall, and in some cases, by region. The other measurement of student outcomes, state assessment scores, are collected in the *EDFacts*<sup>19</sup> data available from the NCES and give school-level scores for every school in the nation. This section looks at both sets of data to examine student outcomes in rural schools.

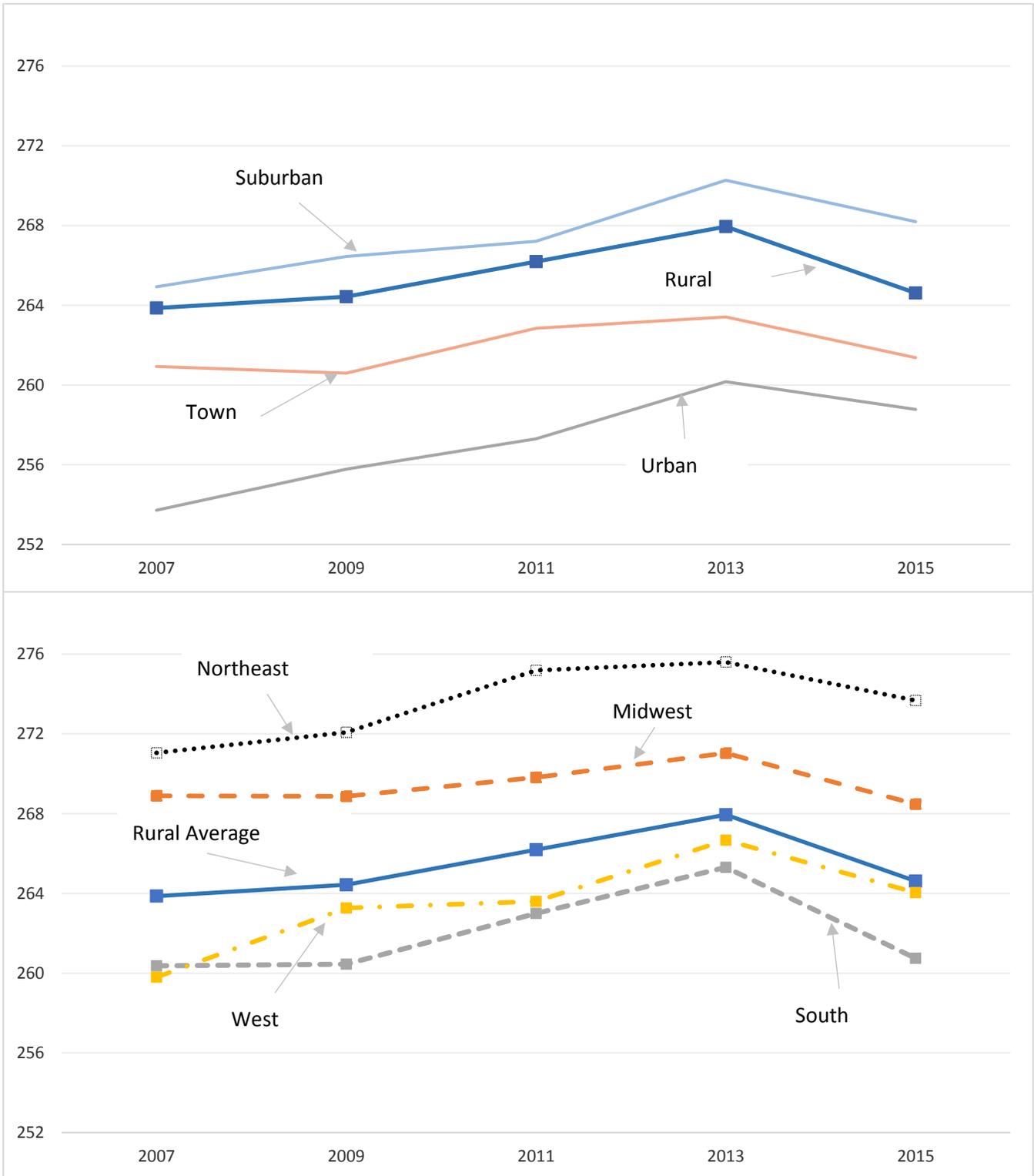
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## Rural Student Achievement

For both reading and math scores across the 4<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup> grades, rural students scored above urban students but below suburban students across the board. These differences were relatively small—roughly 4 points on NAEP, or about a tenth of a standard deviation above and below rural students.

However, these differences are not evident across all regions, primarily because rural students score quite differently from one region to the next. Across regions, look at the 8<sup>th</sup> grade reading scores presented in the graph below illustrates this point. From 2007 to 2015, suburban students scored higher than (or not measurably different from) rural students, with students from towns scoring somewhat lower, and students from urban locales spring lowest of all. Across these years, rural students in the Northeast scored well above the national average for suburban students, and rural student scores in the Midwest were higher than, or no different from, the suburban average. On the other hand, in the West and South, rural students had much lower scores. While none of these differences are statistically significant, the pattern is clear: there is more regional variation *within* the rural student scores than there is *across* locales nationally. The range between locales in 2015 was about 9 points, while rural student scores across regions differed by roughly 13 points.

**Figure 5.1 & 5.2: NAEP 8<sup>th</sup> grade reading scores by locale and rural scores by region, 2007 to 2015**



This variation in rural student scores means that the rural-urban divide isn't a constant; it's only evident in particular regions. For instance, the rural advantage over urban students in

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reading and math across all three grades—which overall is between 5 and 6 points on NAEP—is primarily driven by the gap in the Northeast (which for all three grades are three times this average), and by the Midwest (where gaps are roughly double this average). In contrast, there is no rural-urban divide in the South, where scores are within 1 or 2 points, and the divide in the West is about equal to the average or 5 or 6 points. Suburban schools show a different pattern, where the predominant differences with rural students are found in the South, with smaller or no differences in the Northeast and Midwest. In the West, rural students' scores are either equivalent to or higher than suburban students' scores.

These scores are consistent with the smaller gaps that are evident above in the section on school readiness at kindergarten entry. They also reflect variation seen in other demographic characteristics, where rural schools display a consistent advantage relative to urban schools, but that within rural schools, important difference in absolute scores reveal how different rural schools are across the country.

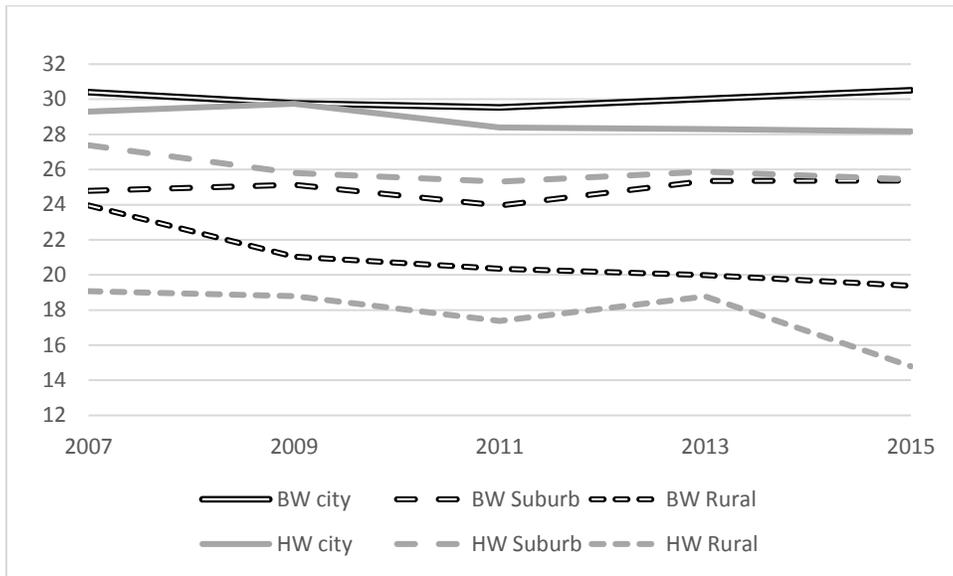
#### Rural student achievement gaps

Of course, overall scores are not the only concern when it comes to student outcomes. Achievement gaps, or differences in scores between student groups, provide a view into how equitable outcomes are, and these too differ across locales. The graph below illustrates black-white (black double lines) and Hispanic-white (gray lines) grade 4 reading gaps across city, suburban, and rural schools over time. Both gaps are highest in cities, where average test scores differ by roughly thirty points, or 83 percent of a standard deviation. In rural schools, the black-white score gaps are substantially smaller, between 19 and 24 points—two thirds the size of urban gaps. The difference is even greater for the Hispanic-white gap, which in rural schools in 2015 approached half the gap in urban schools. Suburban and town (not shown) gaps were in

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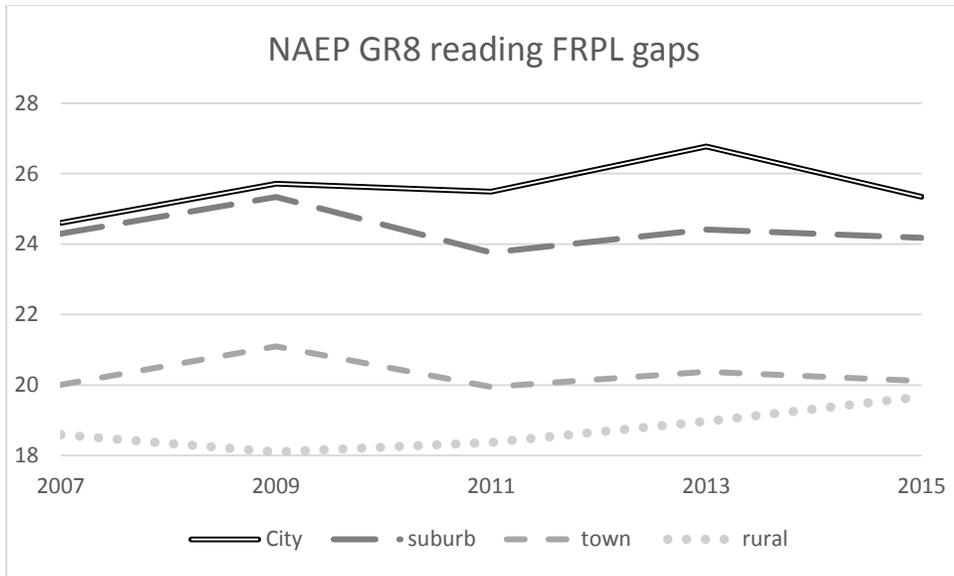
between. While none of these differences are statistically significant, they are consistent across reading and math scores, across grades 4, 8, and 12, and across all years from 2007 to 2015.

**Figure 5.3: NAEP 4<sup>th</sup> grade black-white and Hispanic-white reading gaps by locale, 2007 to 2015<sup>20</sup>**



Test score gaps by poverty, as measured by free and reduced priced lunch, show similar patterns to those by race. The chart below maps these gaps in grade 8 NAEP reading scores. Free and reduced priced lunch gaps were largest in urban and suburban schools across all years, at roughly 25 points, or two thirds of a standard deviation. Town and rural poverty score gaps were smaller across all years, at about 20 points on the NAEP scale, just over half of a standard deviation.

**Figure 5.4: NAEP 8<sup>th</sup> grade Free and reduced price lunch reading gaps by locale, 2007 to 2015**



Overall, these student outcomes show that rural students perform relatively well in school, especially compared to urban and town students. These advantages are not directly attributable to the schools being rural, however, as rural schools have fewer poor and minority students, who on average tend to perform more poorly on assessments than higher-income and white students. However, there may be more to rural schools than just the sum of their demographic differences, as the gaps by race and poverty are systematically smaller in rural schools than in more urban areas.

#### Rural graduation rates

While suburban students and schools tend to edge out their rural counterparts in terms of academic scores, rural graduates have the highest overall graduation rates of all locales. According to 2014–15 *EDFacts*<sup>21</sup> graduation rate data, urban schools had the lowest rate at 79.5 percent. In addition, urban schools also showed the greatest variation in graduation rates, with the difference between the 25<sup>th</sup> and 75<sup>th</sup> percentiles (also known as the interquartile range) of urban-school graduation rates 18 percentile points apart. Town and suburban schools had higher graduation rates at 86 and 87 percent, respectively, and comparably smaller interquartile range of

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between 10 and 12 points. Rural schools boast the highest graduation rate a nearly 89 percent, and had the smallest interquartile range, at less than 10 percentage points.

Rural graduation rates showed less variation across regions than other characteristics in this chapter. In each region except the West, rural schools had the highest graduation rate across locales, and in the West only suburban rates were higher. In the Northeast and Midwest, rural graduation rates were 91 percent, 15 full percentage points above their urban rates. Rural graduation rates were near the rural average in the South, at 88 percent, and lower in the West at 84 percent. In both the West and the South, the rural-urban graduation rate divide was far smaller than in the Northeast and Midwest, between 3 and 6 percentage points.

#### Rural opportunities after school

While graduation rates in rural schools are relatively encouraging, college-going rates for these graduates are less so. According to High School Longitudinal Study<sup>22</sup> data from 2013, 71 percent of rural students went to some form of college, which was less than the 76 percent of urban and 79 percent of suburban students who did so. Again, there was regional variation here, with rural students in the West and South going to college at lower rates (69 percent) than rural students from the Northeast and Midwest (75 and 76 percent, respectively).

In addition, rural students are less likely than their more urban counterparts to go to a four-year college. Compared to an average of 32 percent of all students, about 29 percent of rural students were seeking a bachelor's degree a year after graduation. In the West, only 18 percent of rural graduates did so.

These differences in college attendance are not entirely unexpected, at least from parent perspectives. Looking again at the PFI survey, lower percentages of parents of 6<sup>th</sup> through 12<sup>th</sup> grade students in rural areas expected their children to earn a graduate degree or a bachelor's

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degree than parents in urban or suburban locales. In contrast, higher percentages of rural parents expected their students would only graduate from high school or attend a vocational or technical school. Parents living in towns had similar or lower educational expectations for their students. While not all these data are statistically significant, the pattern is consistent both with lower expectations for educational attainment among rural families, and their lower rates of college-going.

These may seem like small differences in college-going and the pursuit of bachelor's degrees. However, these differences are all the more important for rural students because the prospects for those students without further education are direr in rural areas. According to America Community Survey<sup>23</sup> data, the share of adults aged 18 to 24 that are idle—that is, neither in work nor attending school—is higher in rural areas than in other locales, and this rural idleness is getting worse over time. Between 2006 and 2016, about 10.5 percent of all American 18- to 24-year-olds were idle. The percentage of idle adults in urban areas was roughly the same in both years, at about 10 percent. In contrast, 12 percent of rural 18- to 24-year-olds were idle in 2006, which grew to 15 percent ten years later. In both years, female 18- to 24-year-olds had higher rates of idleness than males, and this was decidedly more pronounced in rural areas.

The growth in idleness was also more pronounced for certain groups. In 2006, about 8 percent of rural 18- to 24-year-old males were idle, which increased by half to over 12 percent ten years later. However, the growth in rural idleness is primarily driven by white 18- to 24-year-olds, as percentages of idle non-Hispanic black and Hispanic rural adults this age actually dropped. Of course, white adults make up a much larger share of the overall rural population compared to other localities, which is reflected in the relatively lower minority populations in rural schools noted above. The percentage of 18- to 24-year-olds that were idle was also

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markedly higher for those living below the poverty line, at 29 percent, and for those living in the South and West, at 16 and 22 percent respectively. The most dramatic difference, however, was evident for rural high school dropouts, 45 percent of whom were idle, up 13 percentage points over just ten years.

### Conclusion

This statistical portrait combines a wide array of data to depict how rural education differs from education in other locales. However, it may be unsatisfying for those looking for a simple description. Overall, three points are worth considering in summary. First, while there are clear relative differences between rural education and that in other locales in terms of inputs and outcomes, there remain considerable absolute differences *within* rural areas. Second, some of the challenges of providing education for rural students lead to different kinds of operations and offerings. Finally, for all the challenges rural education faces, rural students enjoy a number of advantages, and perhaps less inequality, than do their more urban peers.

Rural schools differ systematically from urban and town schools, enjoying higher SES, parental engagement and involvement, test scores beginning at school entry and extending throughout, and graduation rates. For the most part, these advantages place them above average, but below their suburban peers. These relative advantages are consistent over multiple measures, but they are not absolute. While rural schools differ from other locales, they don't look the same across regions, as rural areas in the South and West differ dramatically from those in the Northeast and Midwest across a number of demographic and outcome measures. Like the descriptions of what "rural" is in the introduction, it's easier to describe how rural education contrasts to that in suburbs and cities than to describe what it looks like as a unified idea.

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Rural schools face challenges, most of which are related to the lack of density and scale, that affect their nature and operations. These schools are small, and thus have a hard time offering specialized programs, courses, services, and staff. These challenges are not going away, and in some areas, such as advanced course taking, rural schools have found ways to offer their students alternative opportunities. In other areas, solutions are harder to come by. Their remoteness brings infrastructure challenges that leave them behind the technological curve, especially in terms of internet access and all the possibilities it has brought or will bring. This also leaves them with greater costs, such as transportation costs, which take up a higher percentage of the resources available to rural schools and districts. The challenges that come with minimal scale will remain and rural schools will have to continue to find ways to make the most of their resources to serve students.

Despite these challenges, overall, rural schools and students enjoy many advantages. These may include headwinds from family structure, support, and involvement, and certainly include outcomes such as test scores across the board and the highest graduation rates across locales. Again, these average advantages are due in some part to the composition of rural schools. But that composition is not the whole story, as the gaps between demographic groups—gaps which prove to be large and stubborn in more urban areas—are smaller in rural areas.

This portrait captures the advantages and challenges rural education faces, and also shows how varied educational inputs and outputs are within the rural category. Such a broad context is essential grounding for considering the present and future of the education of rural students.

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